

Examining the Drivers of Digital Purchase Intention in the Philippines Through Multiple Linear Regression Analysis

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Abstract

The continuous advancement of technology has deeply integrated payment systems into the everyday financial practices of Filipinos. These systems now shape how consumers manage their money and perform transactions, making it important to understand the factors that influence their purchase intentions. The study used multiple linear regression to investigate the factors influencing Filipino consumers' intention to use digital payment methods. Data was collected through a nationwide online survey. Results showed that Information Literacy (IL), Financial Knowledge (FK), Perceived Risk (PR), and Financial Security (FS) significantly influence Filipino consumers' intention to use digital payments. Meanwhile, Digital Innovativeness (DI) was found to be an insignificant predictor of Use Intention (UI). Furthermore, the study revealed that the Filipino consumers' demographic information influences their intention to use digital payment methods. The findings provided significant insights into the behavioral drivers of digital payment use in the Philippine context.

Keywords

Digital Payments, Information Literacy, Consumer Purchase, Multiple Linear Regression

1. Introduction

In recent years, digital payment methods have become an integral part of everyday financial activities, driven by rapid technological advancements and changing consumer behavior. In the Philippines, the growing availability of technology and payment methods such as GCash, Maya, and GoTyme, as well as online banking applications, enables users to make bill payments, retail purchases, and e-commerce transactions seamlessly. While these technologies offer speed and convenience, they also pose significant Perceived Risk (PR), such as data privacy concerns and vulnerability to fraud. These risks often challenge the user's sense of Financial Security (FS), a critical determinant of continued adoption of such digital platforms. Limited internet connectivity and technological barriers, such as a lack of high-speed broadband connections, further restrict effective use, particularly in rural areas and among individuals with lower levels of technological proficiency (Kibinda et al., 2025). Furthermore, adoption patterns may vary significantly across various age groups, particularly among older consumers who tend to balance technological familiarity with heightened risk awareness.

These digital alternatives offer varying levels of convenience, accessibility, and efficiency, making them attractive to most consumers; however, their actual usage is often dictated by an individual's Digital Innovativeness (DI), or their inherent willingness to embrace new technologies. Consumers and business owners across generations perceive digital payment methods differently, often influenced by their foundational Financial Knowledge (FK).

Information literacy plays a critical role in shaping financial habits, technological adoption, and risk perception. Consumers with higher levels of information literacy are better equipped to evaluate digital payment systems, understand security measures, and make informed financial decisions. On the other hand, limited knowledge and unfamiliarity with digital platforms may increase hesitation and resistance to adoption. Therefore, as digital payments increasingly handle sensitive financial information, fostering trust and confidence in these systems becomes an essential factor influencing consumers' intention to use them.

By examining the relationship between Information Literacy, Digital Innovativeness, Financial Knowledge, Financial Security, and Perceived Risks, this study investigates the following factors influencing Generation X's intention to use digital payment methods. The resulting insights provide a strategic framework for businesses and regulatory bodies to align their monetary policies and digital interventions with the specific socio-technical requirements of the demographic.

1.1 Objectives

This study aimed to statistically identify the factors influencing Filipino consumers' purchase intention and to examine how their demographics affect their consumer purchase intention for digital payment methods, using multiple linear regression analysis. This study generated meaningful insights that can guide modern businesses and regulatory bodies in aligning their monetary policies and strategies with the needs of the demographic. Specifically, the study has:

- Examined how Filipino consumers perceived digital payment methods.
- Identified which factors significantly influence the use intention of digital payments.
- Interpreted the statistical analysis and generated insights on what drives consumers to use digital payment methods.
- Provided practical implications for digital payment providers, businesses, and policymakers.

2. Literature Review

The rapid expansion of digital payment technology has reshaped consumer financial habits, particularly in developing countries like the Philippines. Mobile payment methods like E-wallets have become increasingly embedded in consumers' everyday transactions in the Philippines, offering convenience and efficiency. However, adoption remains uneven and influenced by cognitive, behavioral, and demographic factors. According to Nguyen et.al. (2024), Information Literacy (IL) plays a foundational role in digital payment adoption by enabling consumers to fully understand a platform's functionality, security features, and privacy policies. Existing studies in emerging markets demonstrate that individuals with higher digital and information literacy exhibit greater confidence in using mobile payments (Beheri et al., 2025). As a result of increased literacy, consumers' uncertainty was reduced, and users' capacity to assess risks improved. Beyond the capacity to process information, the internal predisposition of a consumer toward new technology significantly determines adoption rates. Digital Innovativeness (DI) represents an individual's tendency to experiment with and adopt emerging digital solutions earlier than others. Irimia-Diéguez et al. (2023) in the field of financial innovation demonstrate that innovation acceptance, attitudes, and social norms significantly influence adoption intention, highlighting the role of consumers' openness to technological advancement.

Financial Knowledge (FK) also plays a crucial role in shaping digital payment behaviors. A study by Yang et al. (2023) shows that financial knowledge significantly increases participation in digital financial services, particularly by enhancing individuals' ability to understand and manage financial tools. Perceived Risk (PR), on the other hand, remains a central inhibiting variable in digital finance adoption models. While most studies identify perceived risk as a barrier to adoption, some findings suggest that its negative effect may be reduced among highly innovative users or those with greater financial knowledge, indicating that risk perception is not uniform across all age groups. Xie et al. (2021) found that perceived value positively influences technology adoption, whereas perceived risk, particularly security and privacy concerns, negatively affects behavioral intention. Additionally, a systematic analysis of cybersecurity threats and digital banking adoption highlights that concerns about fraud, data breaches, and transaction failures substantially hinder user acceptance of digital financial services (Md. Waliullah et al., 2025).

Moreover, Financial Security (FS), often discussed within the broader framework of financial well-being, also influences technology-related financial decisions. A study by Seldal and Nyhus (2022) on financial vulnerability and digital payment use indicates that individuals who perceive themselves as financially stable are more willing to engage with digital payment technologies, as they demonstrate greater confidence in managing potential financial uncertainties. This suggests that perceived financial stability may increase risk tolerance and facilitate experimentation with digital financial tools. Demographic characteristics further shape both financial knowledge levels and digital financial engagement. Silakari and Priti Goswami (2025) stated that variables such as age, gender, education, and income are significantly associated with differences in digital financial literacy, highlighting the influence of demographic contexts on individuals' financial capabilities.

Aside from the variables mentioned, the study also highlights demographic characteristics as important contextual factors that shape digital payment adoption. Prior studies (Khan et al., 2025) indicate that variables such as age, education, income, and gender significantly affect levels of information literacy and financial knowledge, which in turn influence individuals' ability to evaluate digital financial platforms.

Despite the growing body of literature on digital payment adoption, much of it examines cognitive, behavioral, and risk-related factors in isolation. Limited research has explored how other factors, such as information literacy, financial knowledge, digital innovativeness, perceived risk, and financial security, interact within a single framework, particularly in the context of a specific generation, Generation X, in the Philippines. This gap highlights the need for a more comprehensive model that captures the combined effects of these variables in explaining digital payments adoption.

2.1 Conceptual framework

The study analyzed the factors influencing Filipino consumers aged 45-60 years' intention to use digital payments, including information literacy, digital innovativeness, financial knowledge, perceived risk, and financial security, as well as their demographic information.

The demographic information included the person's age, gender, and current region of residence. The framework showed that age, gender, and location can be determinants of consumers' use intention. According to Manguilimotan et al. (2025), rural areas face challenges such as limited internet access, high data costs, and a lack of digital literacy. For instance, people living in rural areas with lower connectivity may not use digital payments, while those with easier access to connectivity are more likely to use them (Figure 1).

Information Literacy enables consumers to recognize how information is used in the digital world, which influences their drive to adopt digital payment methods and shapes their behavior towards technology-based financial systems. While digital innovativeness helps overcome traditional barriers to tools and platforms (Cordova et al., 2025), it drives the adoption of digital payment methods. Financial knowledge supported their ability to make informed financial decisions to protect themselves (Nogueira et al., 2025). Conversely, perceived risk and financial security affect trust and users' intent to behave, influencing their adoption of digital payments (Sarwar et al., 2024).

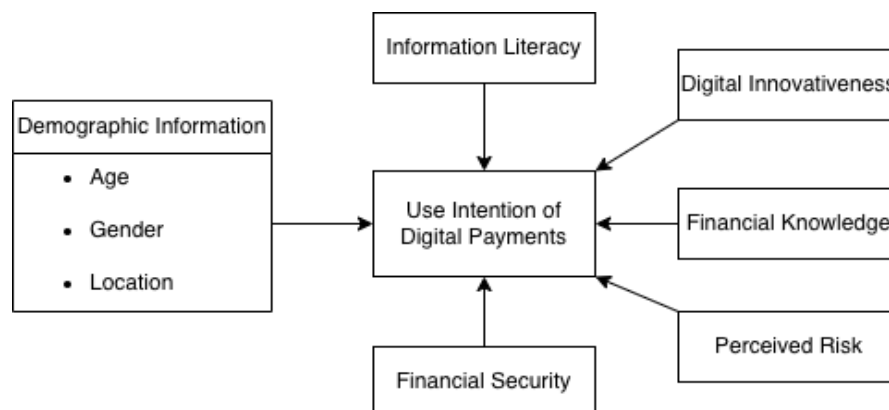


Figure 1. Conceptual Framework

3. Methods

3.1 Research Design

This study utilized a quantitative explanatory research design to examine the relationships between selected independent variables and consumers' intention to use digital payment methods. This allowed for systematic testing of hypothesized relationships and determination of cause-and-effect associations using statistical analysis.

3.2 Assumptions of the Model

Before conducting a multiple linear regression analysis, several assumptions were satisfied to ensure valid results. The model assumes linearity between the independent and dependent variables, independence of observations, normal distribution of residuals, and homoscedasticity. It also requires the absence of multicollinearity among predictors and the absence of significant outliers.

3.3 Statistical criteria

The group used Minitab to conduct the statistical analysis. A significance level of 0.05 was adopted as the criterion for hypothesis testing. Factors with p-values less than 0.05 were considered statistically significant predictors of consumers' intention to use digital payment methods. The regression results were evaluated using coefficient estimates, F-values, p-values, and model fit indicators to determine the strength and significance of the concluded relationships.

4. Data Collection

The study surveyed 421 respondents who met specific eligibility requirements, including Filipino citizenship and residency, age 45 to 60, and prior experience with digital payment platforms. Data were gathered through a self-administered questionnaire hosted on digital platforms. This instrument captured participant demographics and employed 5-point Likert scales (1 - strongly disagree; 5 - strongly agree) to quantify consumer perceptions across the five variables: Information Literacy (IL), Digital Innovativeness (DI), Financial Knowledge (FK), Perceived Risk (PR), and Financial Security (FS). Given this, the study employed Multiple Linear Regression to analyze the collective and individual impact of the six variables on the intention to use digital payments. The technique was specifically chosen because it effectively manages complexity, providing a clear understanding of which factors most significantly drive the financial behaviors of Filipino consumers in the given age bracket.

4.1 Sample

The sampling technique used was purposive, focusing on individuals who actively engaged in consumer purchasing and were experienced with digital payments. However, the sampling method followed a structured approach to ensure the representation of various demographics across the Philippines' 18 regions. The respondents of this study are Filipino consumers aged 45 to 60 years who use digital payment methods. A total of 421 respondents participated in this study.

According to Green's (1991) rule for multiple regression analysis, the minimum required sample size for six predictors is 98. Following this equation:

$$N = 50 + 8m$$

Where: N = total sample size
m = number of predictors (independent variables)

$$N = 50 + 8(6)$$
$$N = 98$$

The group collected 421 responses, exceeding the recommended minimum and ensuring sufficient statistical power. The respondents' demographics are summarized in the table below in Table 1.

Table 1. Respondents' demographics

	Variables	Frequency	Percentage
Gender	<i>Male</i>	145	34.44%
	<i>Female</i>	276	65.56%
Age	<i>45 years old</i>	32	7.60%
	<i>46 years old</i>	31	7.36%
	<i>47 years old</i>	30	7.13%
	<i>48 years old</i>	21	4.99%
	<i>49 years old</i>	32	7.60%
	<i>50 years old</i>	22	5.23%
	<i>51 years old</i>	19	4.51%
	<i>52 years old</i>	20	4.75%
	<i>53 years old</i>	33	7.84%
	<i>54 years old</i>	29	6.89%
	<i>55 years old</i>	27	6.41%
	<i>56 years old</i>	27	6.41%
	<i>57 years old</i>	29	6.89%
	<i>58 years old</i>	17	4.04%
	<i>59 years old</i>	23	5.46%
	<i>60 years old</i>	29	6.89%
Location	<i>Region I – Ilocos Region</i>	26	6.18%
	<i>Region II – Cagayan Valley</i>	17	4.04%
	<i>Region III – Central Luzon</i>	30	7.13%
	<i>National Capital Region (NCR)</i>	85	20.19%
	<i>Region IV A- CALABARZON</i>	51	12.11%
	<i>Region IV B – MIMAROPA Region</i>	18	4.28%
	<i>Region V – Bicol Region</i>	31	7.36%
	<i>Region VI – Western Visayas</i>	19	4.51%
	<i>Negros Island Region (NIR)</i>	11	2.61%
	<i>Region VII – Central Visayas</i>	19	4.51%
	<i>Region VIII – Eastern Visayas</i>	15	3.56%
	<i>Region IX – Zamboanga Peninsula</i>	16	3.80%
	<i>Region X – Northern Mindanao</i>	11	2.61%
	<i>Region XI – Davao Region</i>	14	3.33%
	<i>Region XII – SOCCSKSARGEN</i>	17	4.04%
	<i>Region XIII – Caraga</i>	13	3.09%
	<i>CAR – Cordillera Administrative Region</i>	18	4.28%
	<i>BARMM – Bangsamoro Autonomous Region in Muslim Mindanao</i>	14	3.33%

5. Results and Discussion

This section presents the findings obtained from the multiple linear regression analysis. The numerical results, including summary model statistics, analysis of variance, and regression coefficients, are first examined to determine the significance and explanatory power of the model. Then, the graphical diagnostics are presented to assess the underlying regression assumptions. Based on these results, practical implications are proposed, followed by validation to confirm the model's reliability and robustness.

5.1 Numerical Results

The regression model demonstrates an excellent fit, with a standard error of 0.127 (Table 2). It explains 96.44% of the variance in intention to use digital payment methods ($R^2 = 0.9644$) and 94.98% after adjusting for the number of predictors (adjusted R^2). This implies that the model may be approaching near-complete explanatory saturation of the dependent construct. In practical terms, this indicates that the behavioral determinants included in the model are highly sufficient in capturing the drivers of adoption, suggesting strong theoretical alignment. The predicted R^2 of 91.73% indicates good predictive accuracy, while the AICc (-192.56) and BIC (-0.15) values support the model's adequacy and parsimony (Table 3).

Table 2. Model Summary

S	R-Sq	R-Sq (adj)	PRESS	R-sq(pred)	AICc	BIC
0.126838	96.44%	94.98%	6.47243	91.73%	-192.56	-0.15

Table 3. Analysis of Variance

Source	DF	Seq SS	Contribution	Adj SS	Adj MS	F-Value	P-Value
Regression	71	75.4656	96.44%	75.4656	1.06290	66.07	0.000
AGE	1	0.2623	0.34%	0.1630	0.16301	10.13	0.002
GENDER	1	0.2728	0.35%	0.1545	0.15451	9.60	0.002
LOCATION	17	5.9899	7.65%	1.4307	0.08416	5.23	0.000
IL_AVE	15	47.3903	60.56%	6.1863	0.41242	25.64	0.000
FK_AVE	8	5.7476	7.35%	2.7631	0.34539	21.47	0.000
PR_AVE	14	14.0717	17.98%	9.2386	0.65990	41.02	0.000
FS_AVE	15	1.7311	2.21%	1.7311	0.11541	7.17	0.000
Error	173	2.7832	3.56%	2.7832	0.01609		
Lack of Fit	170	2.7832	3.56%	2.7832	0.01637	*	*
Pure Error	3	0.0000	0.00%	0.0000	0.00000		
Total	244	78.2488	100.00%				

The ANOVA results indicate that the overall regression model is statistically significant, $F(71,173) = 66.07$, $p < 0.001$. This suggests that the set of independent variables collectively explains variation in the intention to use digital payment methods. The model accounts for 96.44% of the total variance, indicating a strong explanatory capability.

Further analysis of the individual predictors shows that Information Literacy ($F = 25.64$, $p < 0.001$), Financial Knowledge ($F = 21.47$, $p < 0.001$), Perceived Risk ($F = 41.02$, $p < 0.001$), and Financial Security ($F = 7.17$, $p < 0.001$) significantly influence intention to use digital payment methods. Among these, Information Literacy contributed the most significant proportion to the regression sum of squares (60.56%), highlighting its dominant role in shaping consumers' adoption of digital payments.

The findings also indicate that demographic variables contribute significantly to predicting use intention. Age ($F = 10.13$, $p = 0.002$), Gender ($F = 9.60$, $p = 0.002$), and Location ($F = 5.23$, $p < 0.001$) were all found to have significant effects, suggesting that consumer characteristics remain important determinants of digital payment adoption among Filipino consumers (Table 4).

Table 4. Data Coefficients

Term	Coef	SE Coef	95% CI	T-Value	P-Value	VIF
Constant	4.055	0.221	(3.619, 4.491)	18.36	0.000	
AGE	-0.00654	0.00205	(-0.01059, -0.00248)	-3.18	0.002	1.39
GENDER						
2	-0.0609	0.0196	(-0.0997, -0.0221)	-3.10	0.002	1.32
LOCATION						
2	0.0586	0.0675	(-0.0746, 0.1918)	0.87	0.386	1.66
3	-0.0453	0.0473	(-0.1387, 0.0481)	-0.96	0.339	2.67
4	-0.0482	0.0389	(-0.1250, 0.0285)	-1.24	0.217	3.63
5	-0.0770	0.0413	(-0.1585, 0.0045)	-1.86	0.064	3.33
6	-0.0837	0.0570	(-0.1961, 0.0287)	-1.47	0.143	1.75
7	-0.0297	0.0509	(-0.1301, 0.0707)	-0.58	0.560	2.26
8	0.0359	0.0527	(-0.0681, 0.1398)	0.68	0.497	2.12
9	0.1831	0.0832	(0.0188, 0.3474)	2.20	0.029	1.69
10	0.0452	0.0548	(-0.0630, 0.1534)	0.82	0.411	2.13
11	-0.1620	0.0634	(-0.2872, -0.0369)	-2.56	0.011	1.93
12	-0.1232	0.0633	(-0.2482, 0.0018)	-1.94	0.053	1.93
13	-0.0394	0.0596	(-0.1571, 0.0783)	-0.66	0.510	1.71
14	0.0491	0.0557	(-0.0608, 0.1590)	0.88	0.379	1.85
15	0.2082	0.0583	(0.0932, 0.3231)	3.57	0.000	1.83
16	-0.0983	0.0694	(-0.2352, 0.0387)	-1.42	0.159	1.75
17	-0.0815	0.0591	(-0.1982, 0.0352)	-1.38	0.170	2.08
18	-0.4993	0.0880	(-0.6729, -0.3257)	-5.68	0.000	1.89
IL_AVE						
3.00	-0.2941	0.0987	(-0.4888, -0.0994)	-2.98	0.003	8.52
3.14	0.899	0.107	(0.688, 1.110)	8.41	0.000	3.47
3.29	0.200	0.108	(-0.013, 0.412)	1.86	0.065	4.90
3.43	0.441	0.103	(0.239, 0.644)	4.31	0.000	6.27
3.57	0.534	0.102	(0.333, 0.734)	5.25	0.000	7.90
3.71	0.4126	0.0979	(0.2194, 0.6059)	4.21	0.000	10.45
3.86	0.403	0.101	(0.203, 0.602)	3.99	0.000	7.24
4.00	0.4307	0.0913	(0.2505, 0.6108)	4.72	0.000	22.65
4.14	0.5415	0.0961	(0.3518, 0.7312)	5.64	0.000	7.07
4.29	0.3805	0.0990	(0.1851, 0.5759)	3.84	0.000	9.64
4.43	0.458	0.107	(0.247, 0.668)	4.29	0.000	6.77
4.57	0.619	0.103	(0.417, 0.822)	6.04	0.000	6.87
4.71	0.959	0.107	(0.747, 1.170)	8.93	0.000	6.20
4.86	1.094	0.108	(0.882, 1.306)	10.17	0.000	5.56
5.00	0.5007	0.0983	(0.3067, 0.6948)	5.09	0.000	17.59
FK_AVE						
3.25	-0.7571	0.0748	(-0.9048, -0.6094)	-10.12	0.000	3.66
3.50	-0.3608	0.0689	(-0.4967, -0.2248)	-5.24	0.000	3.63

3.75	-0.2460	0.0708	(-0.3858, -0.1062)	-3.47	0.001	6.24
4.00	-0.1960	0.0627	(-0.3198, -0.0722)	-3.13	0.002	12.90
4.25	-0.2114	0.0679	(-0.3455, -0.0774)	-3.11	0.002	6.44
4.50	-0.0869	0.0722	(-0.2294, 0.0555)	-1.20	0.230	4.84
4.75	-0.1537	0.0781	(-0.3078, 0.0004)	-1.97	0.051	4.67
5.00	-0.2205	0.0696	(-0.3578, -0.0832)	-3.17	0.002	11.79
PR_AVE						
2.4	0.140	0.107	(-0.071, 0.350)	1.31	0.192	2.10
2.6	-0.273	0.104	(-0.477, -0.068)	-2.63	0.009	2.63
2.8	-0.149	0.101	(-0.349, 0.051)	-1.47	0.142	3.73
3.0	-0.2864	0.0739	(-0.4323, -0.1405)	-3.88	0.000	8.16
3.2	0.0831	0.0792	(-0.0733, 0.2394)	1.05	0.296	5.49
3.4	-0.1384	0.0724	(-0.2813, 0.0045)	-1.91	0.058	5.71
3.6	0.0547	0.0713	(-0.0860, 0.1954)	0.77	0.444	6.58
3.8	0.3096	0.0752	(0.1612, 0.4580)	4.12	0.000	5.56
4.0	0.0967	0.0682	(-0.0379, 0.2313)	1.42	0.158	11.67
4.2	0.4620	0.0775	(0.3090, 0.6150)	5.96	0.000	4.93
4.4	0.4262	0.0759	(0.2764, 0.5761)	5.61	0.000	6.28
4.6	0.1146	0.0809	(-0.0451, 0.2742)	1.42	0.158	4.27
4.8	0.8955	0.0934	(0.7112, 1.0798)	9.59	0.000	3.17
5.0	0.9239	0.0822	(0.7617, 1.0861)	11.24	0.000	9.09
FS_AVE						
2.67	-0.139	0.143	(-0.421, 0.144)	-0.97	0.335	3.77
2.83	0.127	0.126	(-0.123, 0.377)	1.00	0.317	4.87
3.00	-0.022	0.131	(-0.281, 0.237)	-0.17	0.867	20.52
3.17	-0.210	0.132	(-0.470, 0.050)	-1.59	0.113	7.32
3.33	0.045	0.126	(-0.203, 0.293)	0.36	0.720	10.33
3.50	-0.127	0.120	(-0.364, 0.109)	-1.06	0.289	14.10
3.67	-0.345	0.124	(-0.589, -0.101)	-2.79	0.006	9.12
3.83	-0.064	0.123	(-0.306, 0.178)	-0.52	0.602	13.16
4.00	0.025	0.119	(-0.210, 0.260)	0.21	0.834	37.53
4.17	0.091	0.123	(-0.153, 0.334)	0.74	0.463	10.77
4.33	0.025	0.123	(-0.217, 0.267)	0.21	0.837	16.38
4.50	0.006	0.121	(-0.232, 0.245)	0.05	0.958	15.90
4.67	0.030	0.123	(-0.213, 0.273)	0.24	0.808	10.73
4.83	0.392	0.158	(0.080, 0.705)	2.48	0.014	3.09
5.00	0.141	0.126	(-0.108, 0.389)	1.12	0.265	29.47

Continuous predictors show clear patterns in adoption. AGE has a small negative effect (Coef = -0.00654, $p = 0.002$), indicating that older respondents are slightly less likely to use digital payments. IL_AVE is a strong positive driver: low IL_AVE (3.00: -0.294, $p = 0.003$) decreases adoption, while high IL_AVE (4.86: 1.094, $p < 0.001$) greatly increases it. FK_AVE also matters: low scores (3.25: -0.757, $p < 0.001$) reduce adoption, and moderate-to-high scores show more minor positive effects. PR_AVE has mixed effects, e.g., 3.0: -0.286, $p < 0.001$, discouraging adoption, whereas 4.8: 0.896, $p < 0.001$, increases it. FS_AVE generally has weak effects, significant only at extremes (3.67: -0.345, $p = 0.006$; 4.83: 0.392, $p = 0.014$).

For the categorical predictors, GENDER results show that females (category 2) have lower adoption (Coef = -0.0609, $p = 0.002$). LOCATION is mostly insignificant, except for the Negros Island Region or NIR (location 9: 0.183, $p = 0.029$) and Region VIII – Eastern Visayas (location 11: -0.162, $p = 0.011$), indicating small but notable regional differences in adoption.

5.2 Graphical Results

The residual plots for UI_AVE were examined to assess the assumptions of multiple linear regression (Figure 2). The Normal Probability Plot shows that the standardized residuals closely follow the reference line, indicating that the residuals are approximately normally distributed. The Histogram of standardized residuals further supports this, as it exhibits a roughly symmetric, bell-shaped distribution around zero. The Residuals vs. Fits plot shows a visible pattern of parallel diagonal lines, attributed to the categorical predictors included in the study. Nonetheless, there are no other patterns or symmetric trends, suggesting that the assumptions of linearity and homoscedasticity are met. Finally, the Residuals vs. Order plot shows random scatter around zero, indicating independence of the observations.

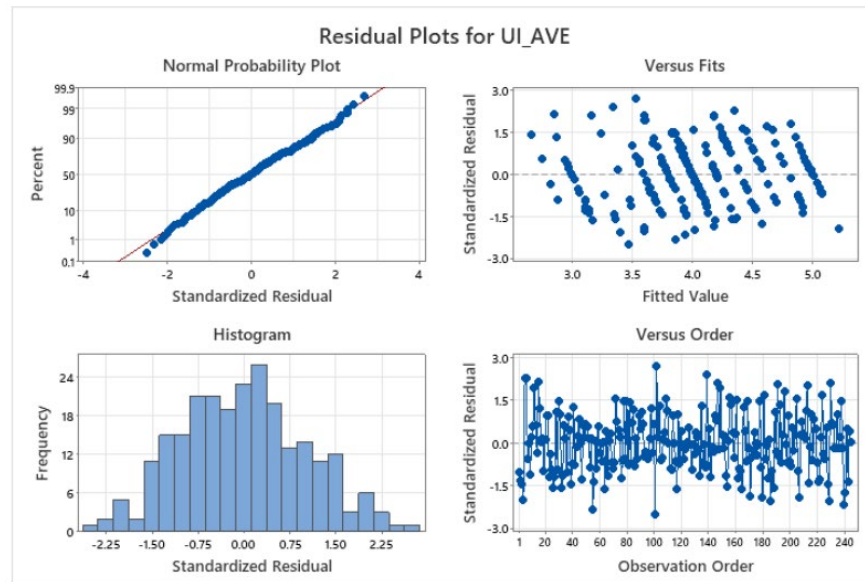


Figure 2. Residual Plots for Mean Use Intention

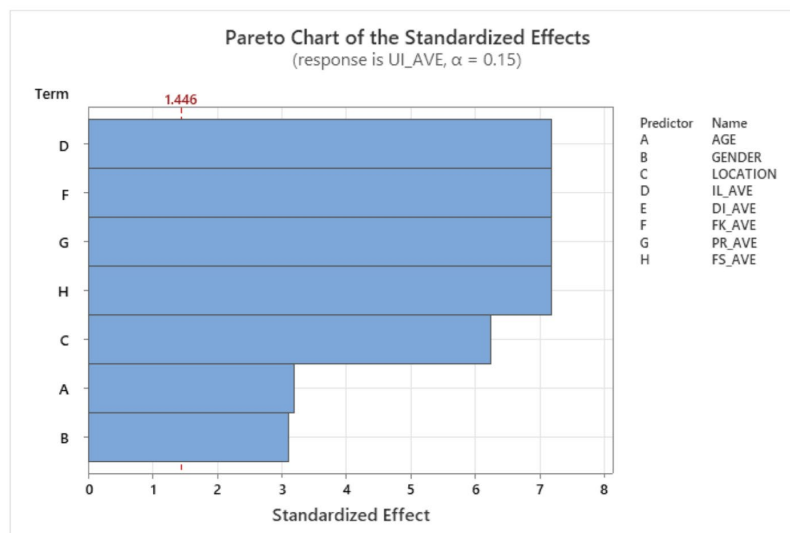


Figure 3. Pareto Chart of the Standardized Effects

The Pareto chart of standardized effects illustrates the relative contribution of each predictor to UI_AVE at a significance level of $\alpha = 0.15$ (Figure 3). The reference line at 1.446 indicates the critical value for statistical

significance. All predictors exceed this threshold, signifying that each variable has a statistically significant effect on the response variable. The most potent effects are observed for Information Literacy (IL_AVE)(D), Financial Knowledge (FK_AVE)(F), Perceived Risk (PR_AVE)(G), and Financial Security (FS_AVE)(H), each with a standardized effect value of 7.17789. This indicates that these variables have the strongest influence on the intention to use digital payment systems. Moreover, Location (C) follows with a standardized effect of 6.24083, suggesting that contextual factors also play a substantial role, although slightly lower than the cognitive and perceptual variables. In contrast, demographic variables show comparatively smaller effects. Age (A) and Gender (B), with a standardized effect value of 3.18317 and 3.09904, respectively, remain statistically significant but demonstrate a weaker influence relative to the other predictors. These findings suggest that cognitive, behavioral, and contextual factors exert a stronger impact on the use intention than demographic characteristics, emphasizing their importance in explaining variations in the outcome variable.

5.3 Proposed Improvements

The multiple linear regression results showed that Information Literacy (IL) is the strongest predictor of digital payment use intention, contributing 60.56%. Thus, digital payment providers and policymakers should prioritize information literacy through simplified user guides, step-by-step tutorials, and localized education programs for consumers aged 45 to 60. These initiatives can help consumers understand platform features and security mechanisms, directly increasing their likelihood of adoption.

The Influence of Perceived Risk (PR) on platforms should enhance security transparency by explicitly communicating fraud-prevention measures, data privacy policies, and consumer protection mechanisms. Features such as real-time alerts and streamlined resolution processes may reduce risk perception and, in the future, improve trust.

The significance of Financial Knowledge (FK) suggests that integrating basic financial education tools within digital payment platforms, such as spending summaries and transaction explanations, is meant to support informed use. Since Digital Innovativeness (DI) was insignificant, the adoption strategies should focus on usability, clarity, and reliability rather than introducing more complex features. Age, gender, and location have significant effects, highlighting the need for targeted demographic and regional implementation, especially in areas with limited digital access.

5.4 Validation

The assumptions of multiple linear regression were assessed through residual diagnostics. The residual plots indicate no significant violations of linearity, normality, or homoscedasticity. Moreover, multicollinearity was examined using VIF values, which were within acceptable limits, indicating that the predictor variables are not highly correlated with one another. Furthermore, the small difference between Adjusted R^2 and Predicted R^2 suggests good model stability and minimal overfitting.

The significant ANOVA results further confirm that the regression model provides a statistically reliable fit. Overall, the validation results indicate that the model is appropriate and statistically sound for explaining use intention.

5.5 Generalizability Beyond the Studied Age Group

Although the study focuses on Filipino consumers aged 45–60, the underlying mechanisms of Information Literacy, Financial Knowledge, Perceived Risk, and Financial Security are theoretically relevant across these age cohorts. Younger users may have exhibited higher Digital Innovativeness, which was insignificant in our model, suggesting that for older populations, practical literacy and security matter more. Conversely, the strong effects of IL and PR are likely even stronger among older adults. Interventions focused on literacy and risk reduction are likely to be effective across ages, but their relative weight may diminish among digitally native users. Future cross-generational studies are needed to empirically validate this generalization.

6. Conclusion

As the country is slowly adopting technological changes across industries, there has been a restraint in the financial sector, as people still use traditional payment systems like cash. People across the Philippines perceive emerging digital payment methods differently; some use them, whilst others don't. Therefore, the study identified the factors (i.e., demographic information, information literacy, digital innovativeness, financial knowledge, perceived risk, and financial security) that drive the intention to use digital payment methods among Filipino consumers aged 45 to 60 years.

Results revealed that Information Literacy, Financial Knowledge, Perceived Risk, and Financial Security significantly affected the intention to use digital payments. Among these factors, Information Literacy ($F = 25.64$, $p < 0.001$) is the dominant predictor of use intention of digital payments, which signifies that people are motivated to use digital payments when they have sufficient knowledge of how the information is being used, such as the platform's functionality, security features, and privacy policies. While Financial Knowledge ($F = 21.47$, $p < 0.001$) also proved influential, it enables individuals to assess their financial use for short- and long-term purposes, and to learn how to use financial tools. Moreover, their adoption decisions are influenced by their trust in these digital platforms, as demonstrated by Perceived Risk ($F = 41.02$, $p < 0.001$), suggesting that consumers are more likely to use digital payment methods when platforms offer security features that mitigate financial threats. Likewise, Financial Security ($F = 7.17$, $p < 0.001$) indicates that their use of digital payment methods makes them feel financially secure. Aside from these factors, the results also showed that demographic variables were significant predictors of the consumers' intent to use digital payment methods. Age ($F = 10.13$, $p = 0.002$) was significant, indicating that their adoption depends on age. Gender ($F = 9.60$, $p = 0.002$) indicated that adoption may vary by gender. And lastly, location ($F = 5.23$, $p < 0.001$) shows that use intention for digital payments varies across locations, driven by environmental factors such as infrastructure availability and internet accessibility.

Generally, this study offers practical insights for digital payment providers, businesses, and policymakers to design a more inclusive, literacy-driven, and risk-aware strategy that encourages sustainable digital payment adoption in the Philippines. However, the study is limited by its focus on consumers aged 45 to 60 and the use of purposive sampling, which may affect generalizability and the ability to capture changes over time. Future research may include broader age groups and explore additional factors and approaches to better understand evolving digital payment behavior.

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