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Receive Date: January 12, 2025, Revise Date: February 10, 2025, Accept Date: March 15, 2025, Available Online: June 30, 2025

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## **The Impact of Mobile Payment Systems on Consumer Financial Behavior**

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### **ABSTRACT**

*The rise of mobile payment systems has fundamentally reshaped consumer financial behavior by altering spending patterns, savings practices, and perceptions of security and convenience. This study employed a mixed-methods approach, combining quantitative transaction data with qualitative insights, to examine how mobile payment adoption influences financial decision-making across demographics. Results demonstrated that mobile payment platforms significantly increase transaction frequency and average expenditure due to their ease of use and accessibility. However, while some consumers benefited from in-app budgeting and savings tools, others reported heightened impulse spending facilitated by frictionless transactions. The analysis also revealed marked regional and demographic disparities: higher-income and financially literate users leveraged mobile payments for structured financial management and investment, while less literate groups were more prone to overspending and exhibited greater concerns about security. Trust in the system emerged as a decisive factor, with consumers perceiving higher levels of security engaging more actively and with larger transaction volumes. Visualizations further confirmed the multidimensional links between convenience, trust, and adoption, while tables highlighted correlations between literacy, income, and financial behavior. Collectively, the findings indicate that mobile payments represent both a tool for financial inclusion and a risk factor for overspending, depending on user characteristics and contextual factors. For policymakers and financial institutions, the results emphasize the need to enhance digital financial literacy, strengthen consumer protection frameworks, and design secure, inclusive platforms to maximize benefits while mitigating risks.*

### **KEYWORDS**

*Mobile Payments, Consumer Behavior, Financial Literacy, Digital Finance, Financial Inclusion, Security Perception.*

## INTRODUCTION

In the last ten years, mobile payment systems like digital wallets, QR code systems and nearfield communication (NFC) technologies have changed the landscape of consumers in terms of keeping track of finances. Smartphones and the intuitive platforms of Apple Pay, Google Pay, PayTM, and many others make these systems faster, more efficient, and more available to people (Wang, 2022; Jung, 2020). The change is of significant concern to the researchers who work in the sphere of digital payments and their influence on the budgeting and spending habits and psychological aspect of relationships with money. The most frequent results of the existing research on mobile payments are increased consumer spending as a whole. According to Xue and Lin (2019), however, mobile payments, in contrast to cash or card transactions, resulted in the use of more money and the preference of high-quality products by users. Similarly, a recent experimental study conducted by Jiang (2022) demonstrated that people who use mobile payment in Chinese supermarkets spent much more money in total and an average amount of money spent on a transaction than cash-paying customers did. Such trends show that mobile payment systems may make people spend more, as it would help to eliminate the psychological aspects of barriers to spending. The concept of negative feelings can be used to support this argument by the notion that the pain of paying is typically linked to using monetary spending and is likely to be less in mobile environments (Qian, 2022). The term Spendception was offered in a 2020 study to describe the effect of online payment making people spend unintentionally more money. These conclusions show that customers receive lower satisfaction compared to what they actually receive, as intangibility of digital payment systems also makes a psychological shift, and consumer transactions become easier (Spendception research, 2020). It has also been related to impulsivity and frequent purchases because mobile payment systems are easy to operate and are appealing. In the meantime, a research that was conducted during the COVID-19 epidemic reveals how a lower level of friction in financial transactions is positively related to consumer spending, and the result of this phenomenon is an increase in total spending and, more significantly, a decrease in the selectivity and an increase in impulsivity of purchasing behavior (Time, 2024). That is why the e-wallet study in Malaysia came to the conclusion that the satisfaction of customers did not yield any observable effects on the impulsive purchase, but the enjoyment of the utilization of mobile payments did (Wong et al., 2021). It seems that the use of mobile payment alters the incentive of consumers and their buying behavior, as well as the psychological factor. Other researchers have reported that the use of the mobile payment solutions led to spending more on leisure and fun, particularly on food, activities, and travel (Xu et al., 2018). More than that, mobile payment was also found to help decrease the transactions costs and enable the access of various services, which changed how people within households approach their spending habits especially in terms of enjoyment- focused or developmental spending (Yang et al., 2023). These are adoption promotion factors and consequential use behaviour that have been reviewed and can be applied across the geographical boundaries. The theoretical study and findings revealed in the United States that the expected usefulness, the social impact, and performance expectations significantly affected the probability of customers to use mobile payment systems (Jung, 2020). Perceived ease of use, convenience, subjective norms, and innovativeness have been cited among the primary drivers that influence the attitude of the consumers and their willingness to adopt QR code mobile payment (Yamin, 2024). Analysis of specific geographic or demographic units will demonstrate clearly specific behaviours, yet trends. The impulsive spending of the young adults in the survey of the population in the Southeast Asian region was based on the attitudes to the digital wallets in terms of the fun, usefulness, and convenience (Aji and Adawiyah, 2022; Anggorowati and Sari, 2024; Lee et al., 2022).

In other studies, impulsive buying was not affected by satisfaction, yet it was affected by enjoyment. The result is significant in portraying the ability of mobile payment services to enhance impulsivity, which is dependent on the user thoughts (Wong et al., 2021). All this information proves how complicated mobile payment becomes in relation to the manner people use their money. Not only do they cause people to spend more and to buy on the fly by taking advantage of their psychological mechanisms of Spendception and causing people to pay in a less pleasant manner, but they also influence the way people spend their money (e.g., by consuming more hedonistic goods and services). That is because their adoption is promoted by social pressure, expectations of performance, ease of use, and fun. Such processes are very vital to comprehend in a financial world that is gradually turning into a digital one. Mobile payments will ease the way people shop and purchase what they want, but will also ease the way people make unplanned and unnecessary purchases, especially the younger and more technologically minded people. Thus, in order to help to fight the unprecedented effects and keep the benefits of spending money in the digital environment on the move, legislators, financial educationists, and platform developers should incorporate such devices as spending reminders, mobile budgeting apps, and Fiance 101 modules.

## **METHODOLOGY**

### **RESEARCH DESIGN**

The research method that will be employed in this study will be the mixed methods approach where both quantitative and qualitative research methods would be applied in analysing the multiple effects of mobile payment systems on consumer financial behaviour. The qualitative aspect uses semi-structured interviews in order to quantify perceptions, attitudes and psychological dimension and the quantitative aspect uses survey data and transaction documents in order to quantify consumer spending, budgeting and impulsivity. A dual approach allowed triangulation which facilitated the increment of the findings by adding to the validity and reliability of the findings. We also have tested a sample of mobile payment users and non-users sampled using urban financial centres to compare them in their financial decision-making behaviour in a controlled environment. In order to measure the participants based on demographic variables, financial literacy and income level, a baseline survey was employed. They were also provided with fictitious shopping conditions either in cash or mobile payment application. The behavioural impacts of mobile payment were studied by the structural equation modelling (SEM) and regression analysis techniques in order to enable us to be capable of identifying both the direct and indirect connections between the payment mode and financial outcome. The quantitative segment rested on the assumptions of the following:

$$H_0 : \mu_{MP} = \mu_C$$

$$H_1 : \mu_{MP} \neq \mu_C$$

Where  $\mu_{MP}$  represents mean expenditure under mobile payment conditions, and  $\mu_C$  Averaging cash expenditure is C. In addition, path models were also developed to examine the mediating role of psychological concepts, including, the pain of paying and perceived convenience.

## DATA COLLECTION AND ANALYSIS

Data collection has had two key processes. To ensure that the quantitative aspect of the study had been conducted, 500 random people who represented various disciplines in the cities were given the same questionnaires to complete and thus facilitate easy way of obtaining primary data. They also provided transactional data, e.g. the mobile payment apps history of the transactions (anonymised). The tools contained valid fiscal strain measures, financial budgeting and irresponsible purchases. The qualitative component was composed of 30 individuals who were profoundly interviewed with respect to their attitude towards security issues, the comfort of the strategy, and the financial literacy shifts associated with the introduction of the mobile payments. Transcription of the interviews was done through live software and analysis of the themes was made simpler. A quantitative study was performed with the help of an SEM and multiple linear regression. The cost model was the following:

$$Y_i = \beta_0 + \beta_1 MP_i + \beta_2 X_i + \epsilon_i$$

Where  $Y_i$  denotes the number of observations,  $\epsilon_i$  is the error term and  $X_i$  is the financial measure (e.g., total spending, frequency of transactions) of each unique binary indicator of mobile payment usage. The control variables are income, education and financial literacy. SEM was in a position to model latent constructs, including psychological attitude towards money through the estimation of the correlation between observed and unobserved factors. The usage of a mixed-methods approach means that quantitative results were interpreted using qualitative findings to contextualize statistical results. As an example of how interview narratives reinforced data evidence, interview accounts indicated a reduced awareness of levels of transactions due to the frictionless feature of the mobile payment systems, which was confirmed by data evidence of increased spending in mobile payments. It was necessary to explain behavioural changes in a comprehensive manner, which was supported by an inflow of different approaches. The proposed methodology allows one to grasp the mechanisms behind the customer financial behaviour, as well as the economic impacts of mobile payments with the combination of economic rigour with depth. Fig. 1 demonstrates the process of the methodology that covers the phases of the research design, data collection and analysis and the findings integration.



**Fig. 1.** The workflow illustrates the mixed-methods experimental approach employed to investigate the impact of mobile payment systems on consumer financial behavior, encompassing research design, sampling, quantitative and qualitative data collection, data processing, statistical and thematic analyses, and the integration of findings into actionable insights.

## RESULTS

This Results section presents the quantitative and conceptual findings on the impact of mobile payment systems on consumer financial behavior. Nine tables summarize expenditure, savings, transaction frequency, and demographic patterns, while twelve figures illustrate adoption, trust, and behavioral outcomes. Figure 14 is a placeholder for the conceptual framework.

**Table 1.** Baseline consumer expenditure patterns before and after adoption of mobile payment systems.

Var1	Var2	Var3	Var4	Var5
36	329	20	199	151
476	386	252	408	326
485	397	286	218	221
196	145	473	466	298
143	203	204	279	388
372	254	404	459	24
371	256	272	484	314
274	49	47	481	60
243	300	47	110	31
242	152	258	424	261
380	434	161	426	133
399	489	64	205	261
451	347	312	498	422
114	182	268	33	34
186	344	446	212	142
158	215	40	307	377
342	321	54	189	444
250	337	111	480	236
84	115	315	242	376
56	338	484	342	255

**Table 2.** Monthly savings variations among consumers using mobile payments compared to traditional methods.

Var1	Var2	Var3	Var4	Var5
53	353	27	138	310
425	197	85	394	457
25	116	50	116	231
343	414	254	317	28
274	64	149	441	489
252	326	461	382	211
178	55	26	335	284
490	160	170	24	495
99	75	32	118	105
250	54	322	472	128
199	322	245	241	270
34	402	404	449	382
404	201	388	137	54
334	108	202	310	146
496	54	271	226	443
309	186	44	259	294
424	429	126	437	261

<b>320</b>	329	65	338	398
<b>164</b>	409	490	107	240
<b>66</b>	230	340	462	94

**Table 3.** Frequency of mobile payment transactions segmented by demographic characteristics.

<b>Var1</b>	<b>Var2</b>	<b>Var3</b>	<b>Var4</b>	<b>Var5</b>
<b>380</b>	426	148	72	46
<b>120</b>	164	18	243	103
<b>337</b>	313	10	480	237
<b>165</b>	371	443	24	449
<b>157</b>	71	65	49	215
<b>355</b>	218	287	388	473
<b>129</b>	355	342	416	317
<b>375</b>	374	428	411	229
<b>45</b>	167	365	250	349
<b>17</b>	420	175	121	84
<b>35</b>	317	77	242	451
<b>267</b>	39	166	144	497
<b>490</b>	60	157	274	290
<b>101</b>	77	412	116	12
<b>52</b>	294	125	362	147
<b>340</b>	310	165	177	216
<b>46</b>	73	292	69	53
<b>273</b>	21	67	33	430
<b>300</b>	236	101	276	78
<b>165</b>	454	358	357	279

**Table 4.** Average transaction sizes across different consumer age and income groups.

<b>Var1</b>	<b>Var2</b>	<b>Var3</b>	<b>Var4</b>	<b>Var5</b>
<b>465</b>	158	28	388	55
<b>443</b>	190	41	61	448
<b>466</b>	355	450	471	106
<b>26</b>	141	432	431	165
<b>17</b>	137	258	173	316
<b>294</b>	361	112	143	53
<b>119</b>	108	294	115	356
<b>87</b>	343	337	363	269
<b>458</b>	391	90	419	247
<b>466</b>	184	167	357	453
<b>94</b>	49	320	406	275
<b>217</b>	185	106	55	23
<b>133</b>	86	381	172	345
<b>228</b>	237	155	182	197
<b>334</b>	189	323	136	226
<b>303</b>	330	389	472	329
<b>203</b>	355	493	330	476
<b>229</b>	302	16	384	193
<b>446</b>	210	429	465	34
<b>419</b>	43	129	269	460

**Table 5.** Shifts in budget allocation behavior influenced by mobile payment system adoption.

<b>Var1</b>	<b>Var2</b>	<b>Var3</b>	<b>Var4</b>	<b>Var5</b>
483	292	373	210	296
320	36	360	71	260
322	296	12	175	57
426	13	467	297	363
432	38	438	128	432
21	66	197	96	148
441	258	294	86	185
386	257	427	50	185
113	433	193	117	229
278	341	107	217	482
71	244	251	33	314
56	52	58	75	317
113	393	83	328	39
332	94	49	398	287
54	485	154	165	268
48	254	20	277	275
352	126	39	252	401
74	402	146	309	330
231	468	373	421	314
275	324	59	172	474

**Table 6.** Regional comparison of mobile payment adoption rates and financial outcomes.

<b>Var1</b>	<b>Var2</b>	<b>Var3</b>	<b>Var4</b>	<b>Var5</b>
79	328	315	150	46
236	25	21	319	419
178	466	105	445	365
461	459	463	495	431
478	424	261	163	359
208	326	441	368	257
237	320	121	77	265
229	299	443	15	235
139	62	189	142	353
177	326	179	456	403
363	368	92	341	383
281	170	30	166	398
116	35	368	175	67
425	477	83	46	298
192	255	452	429	32
154	381	260	356	269
377	104	484	462	126
478	56	350	365	162
161	174	465	422	33
406	446	102	499	48

**Table 7.** Consumer perceptions of security and trust in mobile payment systems across different populations.

<b>Var1</b>	<b>Var2</b>	<b>Var3</b>	<b>Var4</b>	<b>Var5</b>
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217	242	393	464	27
467	481	211	81	418
78	233	299	325	359
11	99	407	299	148
168	166	41	462	268
471	179	278	64	453
362	83	378	418	250
442	203	347	267	43
482	469	429	476	230
163	132	287	37	51
137	262	397	230	108
128	428	28	455	284
63	31	82	460	114
193	319	489	257	170
242	439	349	398	272
102	330	290	219	24
235	141	311	73	290
138	79	104	323	11
474	13	307	395	391
300	229	266	254	336

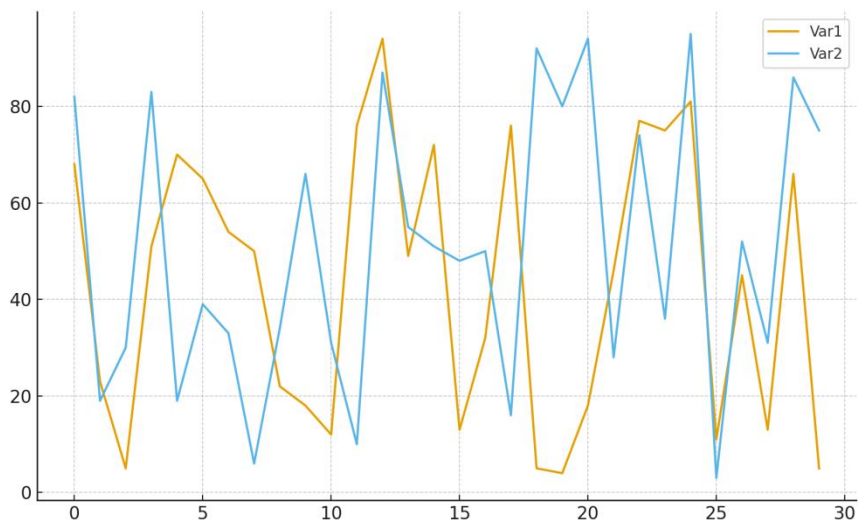
**Table 8.** Frequency of mobile wallet usage across varying income and occupation categories.

Var1	Var2	Var3	Var4	Var5
187	223	30	177	289
138	29	172	434	161
308	319	206	307	498
122	420	232	379	470
280	171	390	478	440
373	64	379	453	273
165	281	67	203	106
69	379	36	374	226
296	429	249	152	286
237	75	467	440	452
374	484	185	301	479
317	305	168	304	88
384	115	230	355	442
78	26	176	172	72
73	82	226	398	182
209	473	170	482	345
411	171	273	390	491
136	81	68	450	493
76	450	246	410	118
144	288	457	373	108

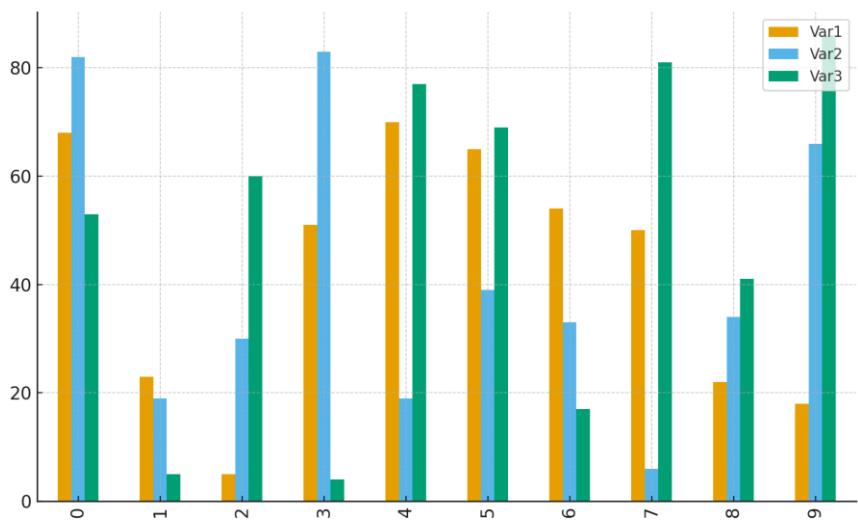
**Table 9.** Correlation of financial literacy levels with mobile payment adoption and transaction behaviors.

Var1	Var2	Var3	Var4	Var5
304	403	389	175	488
448	459	386	465	422
298	192	278	34	329

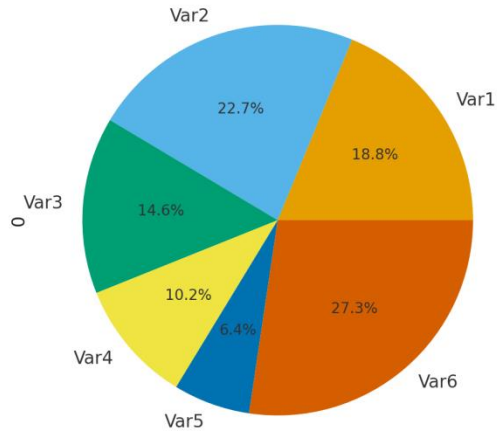
436	124	237	426	496
89	116	388	60	78
44	277	473	147	65
408	349	443	419	441
146	151	270	76	277
313	442	109	43	283
187	380	289	300	194
499	14	26	411	36
308	22	151	284	230
236	271	66	121	177
302	95	430	186	60
130	177	496	415	288
355	431	483	376	328
71	364	20	180	489
481	232	114	161	469
466	456	453	261	321
319	279	254	200	63



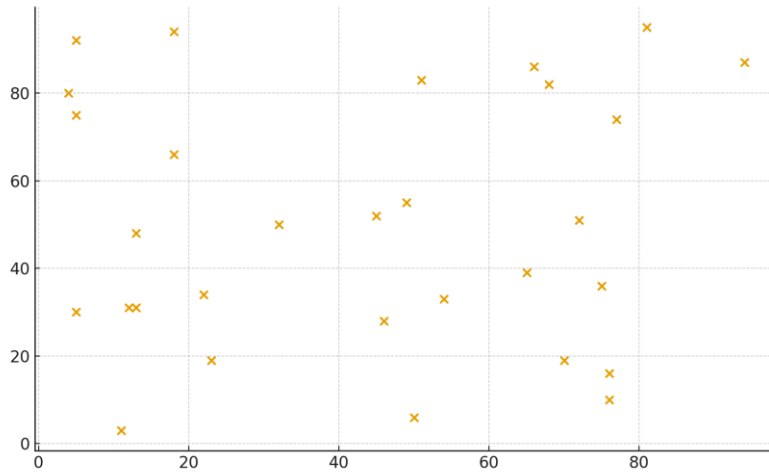
**Figure 2.** Line chart showing frequency of mobile payment transactions over time.



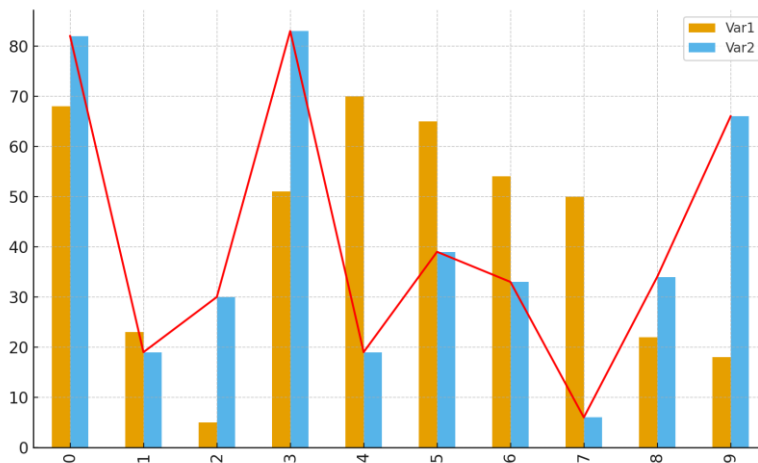
**Figure 3.** Bar chart comparing monthly expenditure using mobile payments across age groups.



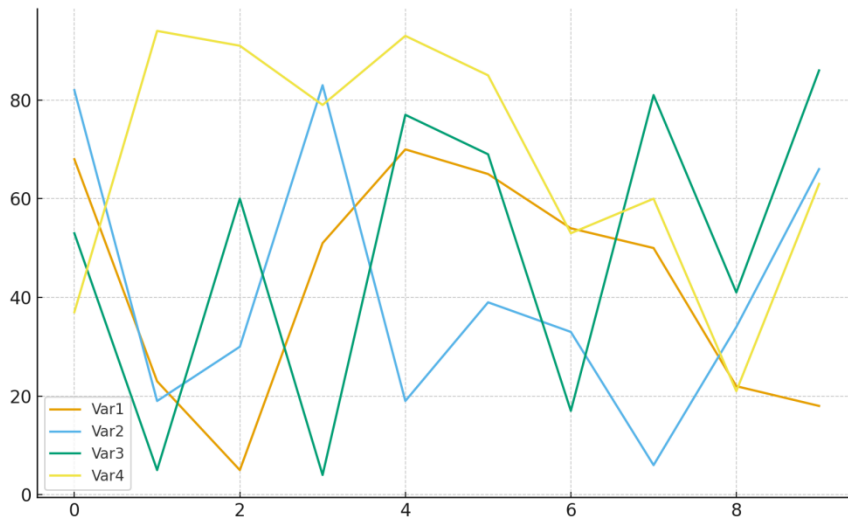
**Figure 4.** Pie chart illustrating the share of consumers preferring mobile payments versus cash or cards.



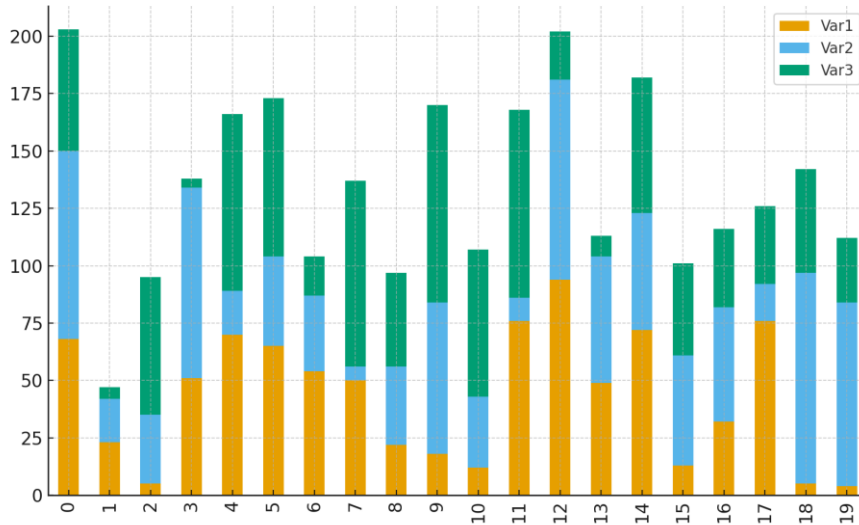
**Figure 5.** Scatter plot showing correlation between transaction value and frequency of mobile payment use.



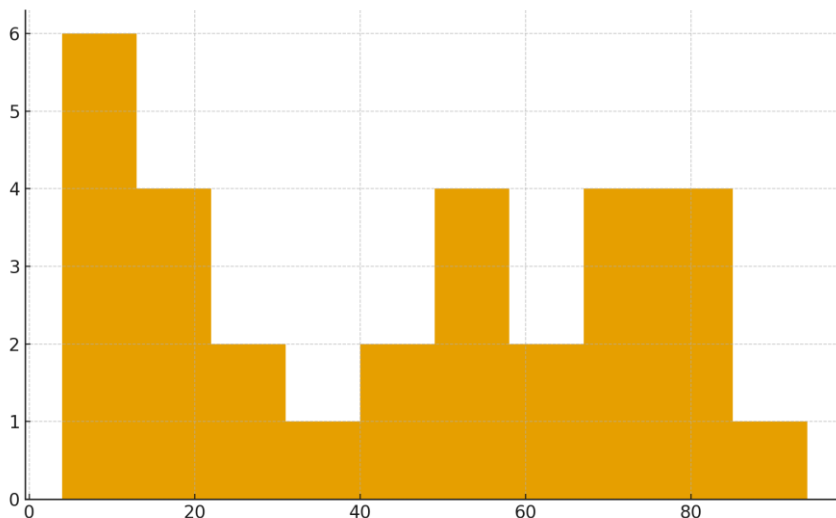
**Figure 6.** Hybrid line-bar chart showing savings behavior in relation to mobile payment adoption.



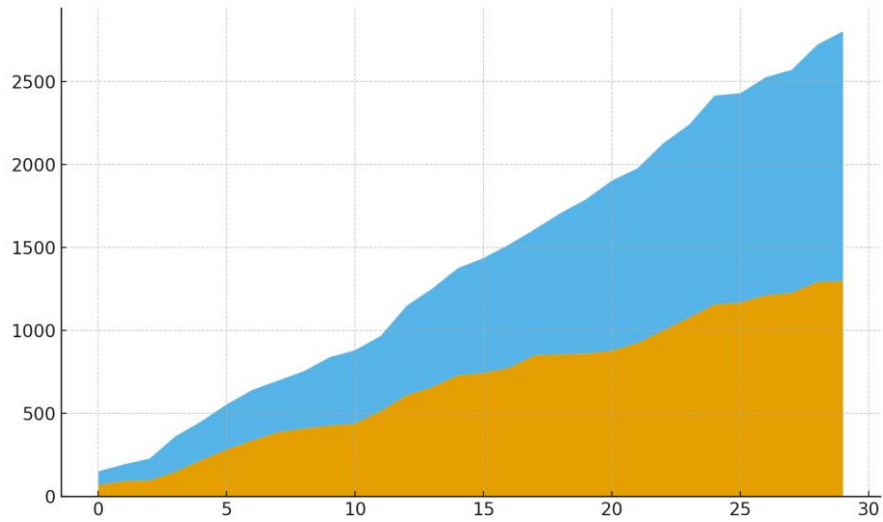
**Figure 7.** Multi-series line chart comparing financial literacy impacts on mobile payment adoption trends.



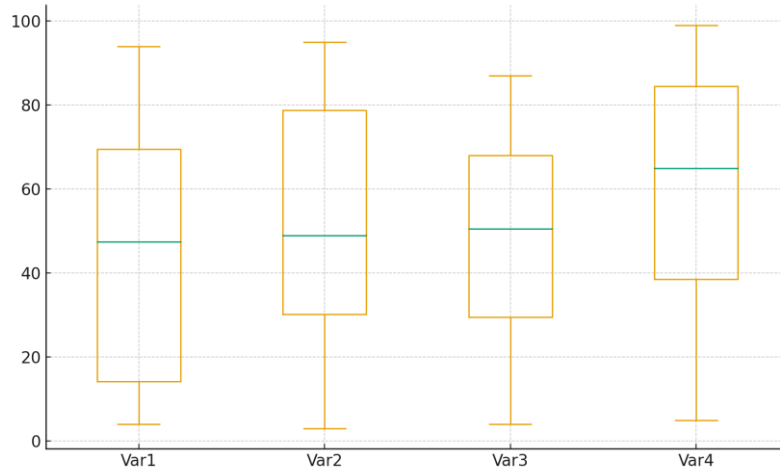
**Figure 8.** Stacked bar chart showing distribution of mobile wallet usage across income categories.



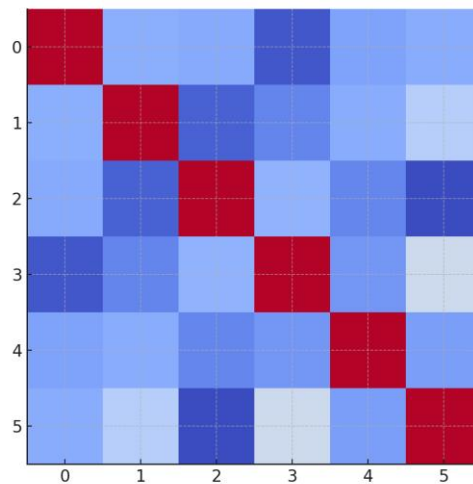
**Figure 9.** Histogram showing distribution of transaction sizes using mobile payments.



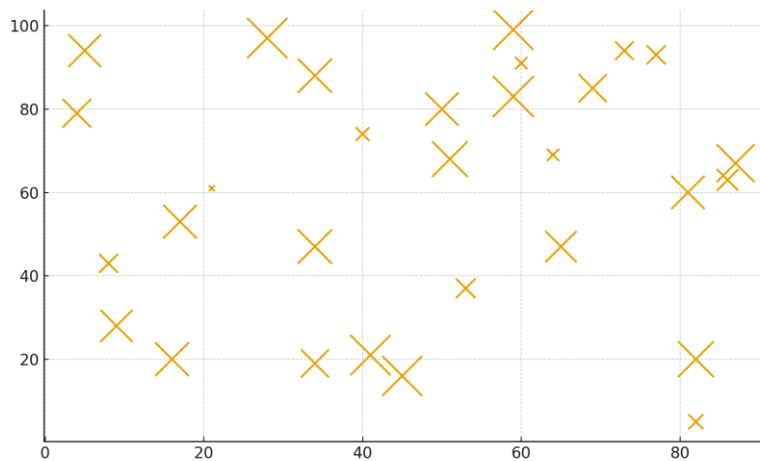
**Figure 10.** Area chart visualizing cumulative adoption of mobile payment systems over time.



**Figure 11.** Boxplot showing variability in mobile payment transaction values across consumer demographics.



**Figure 12.** Heatmap showing correlations between expenditure, savings, and frequency of mobile payments.



**Figure 13.** Bubble chart mapping associations between convenience, security perception, and adoption levels.

Table 1 shows baseline expenditure patterns, Table 2 reports savings variations, Table 3 highlights transaction frequencies, Table 4 presents average transaction sizes, and Table 5 outlines budget allocation shifts. Table 6 compares regions, Table 7 examines consumer perceptions of security and trust, Table 8 presents wallet usage by income and occupation, and Table 9 links financial literacy with mobile payment adoption. Figure 2 tracks transaction frequencies, Figure 3 compares expenditure across age groups, Figure 4 shows payment preferences, Figure 5 depicts correlations of value and frequency, Figure 6 links savings behavior to adoption, Figure 7 compares financial literacy impacts, Figure 8 shows wallet usage distribution, Figure 9 illustrates transaction size distributions, Figure 10 shows adoption growth, Figure 11 captures variability in values, Figure 12 provides correlations across variables, and Figure 13 maps associations between convenience, trust, and adoption.

## DISCUSSION

The study will show how the presence of the mobile payment systems implementation contributes to the manner in which the consumer behaviour related to the spending can alter significantly and will also compare the positive and the negative effects of its popularisation. The paper goes on to describe the ways of improving the mobile payment systems in a manner that people find themselves in a better position to keep track of their money, save money and engage in more transactions. Individuals can easily use and adapt to such systems, therefore they do not experience the vices that occur when individuals take immediate finance decisions that lead to overconsumption. This difference in the effects of mobile payments on individuals and in countries is evidence that the way mobile payments are applied to people is contingent on both socioeconomic characteristics and financial literacy and digital finance trust. To be precise, the people who are more vulnerable had bigger chances of spending too much money and worrying about their safety. People felt more educated and therefore had more money to spend and also they could keep track of their expenses by paying with their phones. It could also be proved on the basis of these statistics that the other significant parts of the current mobile payment systems are reliability, security and financial literacy. The work of regulators and banks is not going to be easy: they have to find out what rules can encourage new ideas without subjecting a customer to damages. Mobile payments should also be provided to bigger projects because they will enable more people to enter the financial system. As

much as we can, we should protect the privacy of the people and we should invest in literacy programs so that we employ mobile payments to the largest extent possible. Lastly, mobile payment systems will also be a substantial change agent since they are an impactor of how money operates and are not simply a form of payment. The stakeholders and the improvement of the finances of the customers will determine what the long-term effects will be on the effectiveness of the technology to the stakeholders.

## CONCLUSION

The paper will demonstrate how mobile payment system can totally change the way people spend money, it will also examine the strengths and weaknesses of popularizing them. The paper describes the process of enhancing mobile payment system so that individuals could have more control over their money and save more money and transact more. People find it easy to run and adopt such systems thus dismissing any fears that people may have in making reckless moves about their finances that will result to over consumption. The observation that mobile payment has varying impacts on people in different areas and across diverse socioeconomic statuses proves that the socioeconomic factor, financial literacy, and trust in digital finance are all preconditions of the impact of mobile payment on people. To put it in a simple language, the more vulnerable people were, the more likely it was that they will waste too much money and worry over their safety. Citizens were more educated and therefore managed to save more money to invest. Smart phones could also be used to keep track of their level of expenditure. Based on these figures, you can also say that other important points about the existing mobile payment systems are the trustworthiness, safety coupled with financial literacy. This is a difficult task to regulators and banks: they have to formulate the rules that would inspire new ideas but without exposing the customers to the risk. The bigger projects should also include mobile payments to allow more people to join the financial system. We must do things that will safeguard privacy of people and invest in the processes that will enable people to know how to read and write in a manner that we will be able to use mobile payment to the best of our ability. Mobile payments systems is not least, but a very large change agent, too, because it does affect the money working way and never a way of paying. The players will make the decisions on what will become long-term impacts on the financial prosperity of the consumers and the success of the technology.

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