

The Shift to a Cashless Society in Cebu City: User Behavior and Implications for the Cash Management Sector

Original Article

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Abstract

The global shift toward a digital economy is accelerating the adoption of cashless systems. However, infrastructural, social, and economic barriers create uneven adoption, especially in developing regions. This transition presents both opportunities and challenges for financial inclusion and the cash management sector. A quantitative survey of 533 respondents examined digital payment habits, comfort levels, and acceptance of a cashless economy. Using binomial logistic regression and Kruskal-Wallis tests, the study analyzed how age, gender, employment, usage frequency, and comfort affect support for going fully digital. Results showed younger respondents and high-frequency users were significantly more supportive. Gender, employment, and comfort were not significant predictors. However, group-level differences in comfort and usage across age and employment categories highlight the persistent influence of socioeconomic factors on digital engagement. While digital payments are frequently used for online shopping, retail, and transit, concerns remain about privacy, inequality, and internet reliability. The key finding is that regular use of digital tools more than demographics or stated preference drives acceptance. This necessitates that the cash management sector modernizes operations, invest in digital capabilities, and build inclusive infrastructure to remain relevant. The study offers critical guidance for policymakers and industry leaders navigating the cashless transition.

Keywords: Cash Management, Cashless Society, Cebu City, Digital Adoption, Digital Payment Behavior, Financial Technology, Logistic Regression.

1. Introduction

The rise of digital technologies and the increasing integration of financial services into mobile platforms have transformed the way individuals and businesses manage transactions. Globally, economies are rapidly shifting to cashless systems, with countries in Southeast Asia, such as Singapore, Malaysia, and Indonesia, leading the region in digital payment adoption (GSMA, 2023; Wibowo et al., 2025). In the Philippines, particularly in urban centers such as Cebu City, the surge in mobile wallet usage, QR code payments, and online banking reflects similar transitions (Siah & Pavlou, 2022).

Cebu City is a highly urbanized area with a significant population and an active banking and financial sector, making it a favorable space to analyze the relationship between technological advances and economic accessibility. As an urban area, it represents a key case



to investigate for understanding digital financial inclusivity and adoption in developing regions in a post-pandemic atmosphere where digital transformation is accelerating (Adel, 2024) The city of Cebu's active participation with digital supervision and its early adoption of information and communication technologies further highlight its importance as a micro example for nationwide patterns in digital transformation and financial merging (Mirandilla-Santos, 2008; Roldan, 2010). This transformation is more than just technological advancements; it is transforming consumer behavior and socio-economic methods of operation. The benefits of convenience, efficiency, and accessibility offered by paying for things digitally are the reasons why more individuals are now opting for cashless means to purchase the products needed to fulfill their everyday lives.

The pandemic substantially increased the adoption of contactless payment technologies, enhancing consumer convenience, improving merchant operations, and increasing economic resilience while reducing physical interactions and promoting digital financial inclusion (Sunderajulu, 2024). Moving towards digital payments is also an achievement in the era of the cashless economy, creating a platform for knowledge-based electronic transformation in governance (Ranjith, 2021). However, this shift is not without challenges. Concerns persist regarding access to technology, data privacy, and infrastructure, particularly among low-income populations. Additionally, the transformation presents potential disruptions to industries traditionally reliant on physical cash flow, particularly the cash management sector. Studies from other regions have shown a steady decline in ATM use, banknote circulation, and cash logistics operations as digital payments rise (Bank for International Settlements, 2020).

This study aims to examine specific demographic and behavioral factors that influence people's attitudes toward supporting cashless technologies and to investigate their impact on the cash handling industry. This will help policymakers, technology providers, and financial institutions address this shift from a technological and policy perspective.

2. Literature Review

2.1. Technology Acceptance Model

The Technology Acceptance Model (TAM), developed by Davis (1989), is widely used to explain how users adopt and accept new technologies. The model posits that two primary constructs perceived usefulness and perceived ease of use determine an individual's intention to use a system. In the context of digital finance, TAM suggests that when users find mobile wallets efficient and easy to navigate, they are more likely to integrate them into daily transactions. This theoretical foundation is relevant to understanding cashless adoption patterns, especially in emerging markets like Cebu City

2.2. Diffusion of Innovations Theory

Rogers' (2003) Diffusion of Innovations Theory provides a complementary framework, explaining how new technologies gain traction within a population over time. The theory categorizes adopters into groups such as innovators, early adopters, and laggards, and suggests that social influence and communication channels play crucial roles in the adoption process. Applied to the context of a cashless society, this theory helps explain how tech-savvy younger users in urban centers can influence broader adoption through peer behaviors and shared experiences.

2.3. Previous Research

Empirical studies reinforce these theoretical foundations. Karjaluoto et al. (2002) examined online banking in Finland and found that ease of use and trust were significant

factors influencing adoption. In Southeast Asia, Yang et al. (2021) emphasized that perceived convenience drives the use of digital wallets, while Lacap (2022) demonstrated that trust and social influence are key factors in the adoption of mobile wallets in the Philippines. Anthony et al. (2021) further highlighted that young Filipino adults are often early adopters of digital financial tools, although financial literacy gaps remain. These studies provide comparative insight, yet local context remains vital. Cebu City's unique blend of digital growth, infrastructure variability, and socio-economic diversity makes it an important case for localized examination of cashless readiness.

A recent study reveals that emerging markets are starting to exhibit similar patterns. In fact, Shao et al. (2023) indicated that fintech has matured in Southeast Asia, and mobile infrastructure has also become more reliable. These two factors increase the likelihood that more residents of the region will explore various aspects of the digital payment landscape.

Chen and Li (2022) found that human aspects of concern, specifically regarding privacy and security, appear to have a greater impact on how individuals interact with digital payment systems. Furthermore, Labrador and Tesorero (2024) noted that there has been a growing acceptance of contactless systems in the Philippines for public transportation. Working-age and younger commuters were more likely to adopt a contactless payment system, which aligns with their desired characteristics of their payment practices.

While these studies provide valuable insights into how things differ in other contexts, it is still advantageous to understand the implications of a particular area. Cebu City offers an interesting backdrop for studying digital readiness due to its unique diversity in terms of digital advancements, implemented infrastructural changes, and multilevel social and economic conditions.

3. Methods

This study adopted a non-experimental quantitative design, integrating descriptive, comparative, and predictive analyses to investigate cashless payment behavior and user support for a cashless society in Cebu City. The methodology was carefully structured to facilitate replication and ensure transparency in sampling, instrument design, procedures, and statistical analysis. Ethical standards were upheld throughout the research process.

3.1. Setting, Participants, and Data Collection

The study was conducted in Cebu City, Philippines, between January and March 2025. Cebu City is a highly urbanized center in Central Visayas, renowned for its thriving digital economy and its distinctive blend of urban and rural socio-demographics. The research focused on individuals residing in the city who had experience using digital or cashless payment methods.

A total of 533 respondents were selected using purposive sampling. The inclusion criteria included residence in Cebu City and prior use of cashless payment systems, such as mobile wallets, online banking, or QR-based point-of-sale transactions. Data were collected using a structured self-administered questionnaire distributed online via Google Forms. Respondents gave informed consent and were assured anonymity. The survey instrument was reviewed for clarity and face validity by the research team before administration.

3.2. Research Instrument and Statistical Analysis

The questionnaire was developed by the researchers and included six key sections: (1) demographic profile (gender, age group, employment status), (2) primary payment methods

and areas of use, (3) understanding and comfort with cashless transactions, (4) frequency of use, (5) perceived barriers, concerns, and enablers, and (6) support for transitioning to a fully cashless society. Responses were either single-choice, multiple-choice, or Likert-type.

Data was analyzed using Jamovi (version 2.4), a free and open-source software designed for social science statistics. Descriptive statistics (frequencies and percentages) were computed to summarize the respondent profile and behavior. Non-parametric group comparisons were conducted using the Kruskal-Wallis H test, followed by Dwass-Steel-Critchlow-Fligner (DSCF) post hoc tests to identify pairwise differences in comfort and frequency across age and employment groups. Finally, binomial logistic regression was employed to determine which variables significantly predicted support for a fully cashless society. The model included age group, gender (nominal), employment status (nominal), frequency of use (ordinal), and comfort level (ordinal) as predictors. Statistical significance was set at $p < .05$. The statistical outputs are fully reported in the Results section, and interpretations are linked to theoretical frameworks and behavioral implications. This structure supports replication and the testing of similar hypotheses in future studies on digital financial adoption.

4. Results and Discussion

4.1. Research Results

4.1.1. Respondents' Demographic Characteristics

Table 1 presents the demographic characteristics of the 533 respondents in the study. Most participants were female (55.3%), with males accounting for 44.1% of the sample. The largest age group was 25–34, comprising 50.5% of the sample, followed by the 18–24 age group at 12.8%. Regarding employment status, more than half of the respondents (53.7%) were employed full-time, while the others were part-time workers, unemployed, or students. These demographic patterns suggest a digitally active respondent base, primarily composed of younger adults who are likely engaged in economic activities.

The high number of younger participants aligned with Anthony, M. et al. (2021), who found that young adults are often early adopters of financial technologies. This demographic dominance offers a relevant lens for analyzing support for digital payment transitions.

Table 1. Profile of the Respondents

Indicators	Category	Count	% of Total
Gender	Female	295	55.3
	Male	235	44.1
	Non-binary	3	0.6
Age Group	18 - 24	68	12.8
	25 - 34	269	50.5
	35 - 44	111	20.8
	45 - 54	54	10.1
	Above 55	15	2.8
	Below 18	16	3.0
Employment Status	Employed (Full-time)	286	53.7
	Employed (Part-time)	113	21.2
	Retired	6	1.1
	Self-Employed	34	6.2
	Student	33	6.4
	Unemployed	61	11.4

Table 2 summarizes respondents' awareness and experiences with cashless transactions. An overwhelming 99.2% of respondents stated they understand what a cashless system is. Additionally, 54.2% reported being “very comfortable” using digital payment methods. Usage frequency also appears high, with 54.4% of respondents saying they “always” use cashless methods for purchases.

Moreover, digital payments were most commonly used for online shopping, retail purchases, public transportation fares, and food-related transactions. These areas represent routine economic activities, indicating the extent to which digital payment systems are already integrated into everyday life in Cebu City. The patterns presented here align with the findings of Yang et al. (2021), who emphasized perceived usefulness and ease of use as key drivers of cashless payment adoption.

Table 2. Awareness, Perception, and Usage Patterns

Indicator	Category	Count	% of Total
Understanding of Cashless	No	1	0.2
	Not Sure	3	0.6
	Yes	529	99.2
Comfort with Cashless	Neutral	90	16.9
	Somewhat Comfortable	129	24.2
	Somewhat Uncomfortable	17	3.2
	Very Comfortable	289	54.2
	Very Uncomfortable	8	1.5
Cashless Purchase Frequency	Always	290	54.4
	Never	6	1.1
	Often	117	22.0
	Rarely	19	3.6
	Sometimes	101	18.9
Cashless Usage	Retail Stores	207	38.8
	Online Shopping	310	58.2
	Utility Payments	95	17.8
	Dining or Restaurants	111	20.8
	Public Transportation	173	32.5
	Other	3	0.6

Support for a transition to an entirely cashless society, as discussed in Table 3, was strikingly high, with 93.2% of respondents favoring cashless transactions. However, this optimism was accompanied by clear reservations. Concerns centered on data privacy, dependence on technology, and the digital divide including issues that mirror the barriers reported in the GSMA (2023) mobile finance report.

Still, this blend of hope and hesitation is important. Respondents are not unthinkingly enthusiastic. They envision a future with more stable, secure, and inclusive cashless infrastructure. This dual sentiment which embracing the benefits while acknowledging the gaps adds depth to the observed behavioral patterns. It shows that support is not based on hype but on lived experience and practical judgment.

Table 3. Attitudinal Support and Concerns

Indicator	Category	Counts	% of Total
Support a cashless transition	No	16	3.0%
	Not sure	20	3.8%
	Yes	497	93.2%
Concern	Concern Dependence on technology	118	22.1%
	Concern: Increased fees or costs	21	3.9%
	Concerns about Privacy and data security	361	67.7%
	Concern: Exclusion of those without access to technology	33	6.2%

4.1.2. Logistic Regression Predicting Support for a Cashless Society

Table 4 presents the results of the binomial logistic regression analysis examining the influence of demographic and behavioral factors on support for a fully cashless society. Among the predictors, age and frequency of cashless use showed statistically significant associations. Compared to the 18–24 reference group, individuals aged 25–34 and 35–44 were significantly less likely to support a cashless transition, with odds decreasing by 78% and 83% respectively. Respondents below 18 also showed extremely low odds of support, possibly reflecting limited access to digital finance tools due to age restrictions or lack of financial independence.

Frequency of use emerged as the most influential behavioral predictor. Respondents who “never” used cashless payments had 47 times higher odds of not supporting a cashless society, while those who used them “rarely” or “sometimes” were also significantly less likely to support the transition, compared to regular users. These results reinforce the critical role of actual behavioral engagement rather than just attitudes or demographic traits in fostering acceptance of digital financial systems. This finding aligns with Handayani and Novitasari’s (2020) observation that the increasing use of digital wallets marks a functional realization of the cashless society, bridging technological adoption with everyday financial routines.

In contrast, comfort level, gender, and employment status were not significant predictors of support. Even users who felt “very comfortable” or “uncomfortable” using cashless methods did not significantly differ in their likelihood of support from those who felt neutral. This further emphasizes that habitual usage which not mere preference plays a more decisive role in the shift toward a cashless future.

Table 4. Logistic Regression Predicting Support for a Cashless Society (N = 533)

	Predictor	Estimate	Odds ratio	p-value	Interpretation
Age Group	25 - 34 - 18 - 24	-1.4965	0.224	0.006	Significantly lower odds
	35 -44 - 18 - 24	-1.7660	0.171	0.016	Significantly lower odds
	45 - 54 - 18 - 24	0.1180	1.125	0.858	No significant difference
	Above 55 - 18 - 24	0.5370	1.711	0.579	No significant difference
	Below - 18 - 18 - 24	-15.7641	1.42e-7	0.986	No significant difference
Gender	male–female	-0.2412	0.786	0.561	No significant difference
	non - binary – female	1.3434	3.832	0.488	No significant difference

	Predictor	Estimate	Odds ratio	p-value	Interpretation
Cashless Frequency	never – always	3.8546	47.210	<.001	Strong positive predictor
	often – always	1.0276	2.794	0.102	No significant difference
	rarely – always	2.9337	18.796	<.001	Significantly higher odds
	sometimes – always	1.5895	4.901	0.008	Significantly higher odds
Cashless Comfort:	somewhat comfortable – neutral	0.0721	1.075	0.883	No significant difference
	somewhat uncomfortable – neutral	-0.1362	0.873	0.886	No significant difference
	very comfortable – neutral	-1.0399	0.354	0.083	No significant difference
	very uncomfortable – neutral	-0.4139	0.661	0.773	No significant difference
Employment status:	employed (part-time) – employed (full time)	0.0981	1.103	0.845	No significant difference
	retired – employed (full time)	-0.4280	0.652	0.762	No significant difference
	self - employed – employed (full time)	-0.8104	0.445	0.363	No significant difference
	student – employed (full time)	-0.7091	0.492	0.467	No significant difference
	unemployed – employed (full time)	-0.4126	0.662	0.562	No significant difference

Note. Estimates reflect the log odds of "Support cashless transition = No" vs. "Yes." Odds ratios above 1 indicate an increased likelihood of non-support.

4.1.3. Statistical Analysis of Predictive and Group Differences

To complement the regression analysis, Kruskal-Wallis H tests were conducted to determine whether comfort with cashless systems and frequency of use significantly differed across demographic groups, specifically age and employment status. As shown in Table 5, significant differences emerged in both comfort and frequency of use across employment categories and within age groups. These findings suggest that user engagement with digital payments is not uniformly distributed across the population.

Notably, younger respondents reported more frequent usage of cashless payments, affirming their role as early adopters of financial technologies (Rogers, 2003). While comfort levels did not differ significantly across age groups, employment-based differences in comfort suggest that occupation may influence familiarity and ease with digital payment systems.

Although some of these group-level variations did not emerge as significant predictors in the logistic regression model, they underscore how socioeconomic characteristics continue to shape digital transaction behavior. Comfort may act as a latent influence, affecting day-to-day habits even if it does not directly translate into policy-supporting attitudes. These nuances provide valuable insights for stakeholders seeking to design more inclusive and user-responsive digital financial systems.

Table 5. Kruskal-Wallis Test: Cashless Usage Frequency and Comfort Across Demographic Variables

Variable	χ^2	p-value	Interpretation
Cashless Comfort (Age Group)	8.73	0.120	Not significant
Cashless Comfort (Employment)	35.50	<.001	Significant differences
Cashless Frequency (Age Group)	17.10	0.004	Significant differences
Cashless Frequency (Employment)	36.20	<.001	Significant differences

Analyzed using Kruskal-Wallis H test... *p < .05 indicates statistical significance

Overall, the results affirm that while Cebu City is on a steady path toward digital normalization, continued behavioral monitoring, technological improvements, and policy adjustments are necessary to ensure equitable adoption across the population. This research examined both the statistical significance of changes and the practical magnitude of the differences, employing effect size interpretation to provide a comprehensive understanding of the findings. The results showed significant differences were found between job groups in terms of their comfort with cashless payments, and across all age groups and job groups in terms of the frequency of cashless payments per week. However, the calculated effect sizes indicated that the comfort levels and cashless payment frequency had only small to medium practical implications. This suggests that demographics do influence how people use cashless systems. However, other aspects of cashless use in Cebu City, such as the user-friendliness of the system, the level of trust in the digital system, and the extent of the infrastructure, probably have just as significant an impact on cashless use.

4.2. Discussion

This study aimed to investigate how demographic and behavioral variables influence support for a fully cashless society in Cebu City. The findings indicate that while many users across different backgrounds express general comfort and understanding of cashless systems, it is not demographics alone but rather patterns of behavior that most strongly predict support for these systems. Frequency of use and age emerged as critical variables.

Age emerged as a significant demographic factor. Younger respondents, especially those in the 18–24 range, were significantly more likely to support a cashless transition compared to their older counterparts. These results are consistent with Anthony et al. (2021), who emphasized that youth populations often drive the early adoption of digital financial tools. The data also aligns with the theory of Diffusion of Innovations (Rogers, 2003), where early adopters often younger, tech-savvy individuals help normalize new systems within their social networks.

More importantly, the frequency of cashless usage emerged as the strongest predictor. Respondents who reported “always” using cashless methods were substantially more likely to support the shift to a cashless society. In contrast, those who rarely or never used digital payments were significantly less supportive of the initiative. For instance, Participants who never used cashless systems were significantly less likely to support a fully cashless society, with an odds ratio of 47:1. These findings reinforce the Technology Acceptance Model (Davis, 1989), which posits that actual usage is closely tied to perceived usefulness and ease of use. The more users engage with digital systems in daily life, the more likely they are to view them as viable, efficient, and worthy of support.

Interestingly, other variables, such as employment status, gender, and comfort with digital payments, did not significantly affect support levels in the regression model. While comfort and perception are important in shaping attitudes, they did not independently predict advocacy for cashless transitions. This further emphasizes that behavioral engagement rather

than subjective attitudes plays a more decisive role. As Handayani and Novitasari (2020) noted, digital wallet usage becomes meaningful when it is embedded into users' daily routines, serving both functional and psychological purposes.

The results obtained from the Kruskal-Wallis test provide additional context. These outcomes are significant to policy- and decision-makers, especially in places with expanding access to digital infrastructure for all consumers rather than select consumer groups. The actions that were documented, that presumably supported the strongest relationships, were age and frequency of use. Local governments, assisted by the private sector, should initiate local-level policy interventions focused on digital literacy strategies for seniors and low-income families. Then, clear data privacy policies and public awareness efforts must be implemented to alleviate concerns about security and narrow the digital divide in accessing technology.

Finally, respondents' open-ended comments added depth to the findings. While support for digital payment systems is high, users also expressed concerns about privacy, internet reliability, and accessibility, especially for the unbanked and elderly. These concerns align with global reports, such as the GSMA's (2023) report, which highlights the risks of digital exclusion amid rapid financial innovation.

These findings directly respond to the study's core objective—to identify the demographic and behavioral predictors of support for a fully cashless society in Cebu City. By integrating statistical analysis with behavioral insight, the study highlights that frequent digital engagement and younger age are the most influential factors driving public support. Conversely, traditional demographic variables such as gender and employment status hold limited predictive power. These results highlight the importance of behavioral consistency over perception alone, and they provide timely insights for stakeholders seeking to promote inclusive and sustainable digital finance in urban Philippine settings. For the cash management sector, these trends can inform strategic planning by signaling where and how to gradually scale down physical cash operations while investing in digital onboarding initiatives that align with the behaviors and expectations of younger, tech-oriented users.

5. Conclusion

This research study reveals that digital payment use is becoming increasingly prevalent in Cebu City, primarily driven by younger users. In contrast, comfort and employment status showed no statistical impact. The evidence of group-level differences suggests that socio-economic characteristics are still shaping the relative experiences of cashless systems, even if we cannot glean sufficient information from this small sample of cashless users who were surveyed. These results explicitly address the study's purpose by identifying the behavioral and demographic factors that shape attitudes towards a cashless society. Collectively, this data also suggests that a shift away from cash payments will occur if current trends continue. For the cash management industry, a shift is now required to rely less on cash logistics and to consider moving into hybrid and digital service delivery.

Future research can extend this study by incorporating longitudinal tracking to advance studies examining the evolution of the transition to digital payments and determining whether any changes occur over time, as well as whether these patterns continue to hold. This may also include examining remittances from individuals in the banking sector, government agencies, or digital service providers to capture the evolving cashless ecosystem in developing cities, such as Cebu.

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