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Analysis of Digital Money Usage Patterns in Modern Society Transaction Behavior

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Abstract

The rapid expansion of financial technology has fundamentally altered transaction behavior in modern society, with digital money emerging as a dominant payment instrument. This study examines digital money usage patterns among 69 respondents in Dumai, Indonesia, employing a quantitative descriptive approach with a structured questionnaire instrument. The questionnaire comprised fourteen items organized across three analytical segments: (1) Preference and Convenience, (2) Shopping and Financial Behavior, and (3) Security and Technology. Data were analyzed through frequency distribution and percentage calculations aligned with a seven-point Likert scale. Results reveal an overwhelmingly positive disposition toward digital money across all segments. In the Preference and Convenience segment, 96.0% of respondents expressed positive responses, with 100% agreement that ease of top-up constitutes a primary adoption driver. The Shopping and Financial Behavior segment recorded 95.9% positive responses, with transaction history features and promotional incentives identified as key behavioral influences. The Security and Technology segment achieved the highest positive rate of 97.1%, indicating strong trust in biometric and PIN-based authentication systems. The majority of respondents were private employees (43.5%), aged 22–27 years (37.7%), and held university-level education (53.6%). Findings suggest that convenience, promotional stimuli, transaction transparency, and security trust collectively shape digital money adoption in the Indonesian urban context. These results carry significant implications for financial technology providers, policymakers, and digital financial literacy programs.

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1. Introduction

The proliferation of financial technology (FinTech) has catalyzed a paradigm shift in how individuals and institutions conduct monetary transactions. Across the globe, digital money instruments encompassing electronic wallets, QR-code payment systems, and mobile banking applications have displaced traditional cash as the preferred medium of exchange in numerous economic contexts (Islam et al., 2024; Monir et al., 2025). In Indonesia, this transition has been propelled by the rapid growth of smartphone penetration, expanded internet infrastructure, and regulatory support from Bank Indonesia through its National Payment System Blueprint (Rahmadhani, 2025). The convenience afforded by digital payment platforms such as GoPay, OVO, DANA, and ShopeePay has transformed everyday consumption behavior, particularly among urban populations actively engaged in the digital economy (Gunibala & Maharani, 2025; Karthika et al., 2024; Rahmelia et al., 2026).

Unlike single-purpose instruments such as prepaid telephone cards, digital money platforms offer versatile functionality spanning bill payments, online shopping, peer-to-peer transfers, and investment products (Fikri et al., 2025; Sary & Hermawan, 2025; Soriano & Mamac, 2026). This versatility has accelerated adoption rates across diverse demographic segments, from students to working professionals, creating new dynamics in consumer financial behavior that merit systematic academic inquiry (Sari et al., 2026; Putrantona & Pasaribu, 2024).

While existing literature has documented factors driving digital payment adoption, comparatively fewer studies have conducted a segment-based analysis of usage patterns that

distinguishes between preference formation, financial behavior modification, and security perception within a single cohort (Ramayanti et al., 2025; Jain & Jain, 2024). This gap is particularly pronounced in the context of mid-sized Indonesian cities such as Dumai, where digital financial adoption is accelerating but remains understudied.

Beyond the availability of digital payment infrastructure, the sustained adoption of digital money is strongly influenced by how users evaluate the usefulness, simplicity, reliability, and overall benefits of the technology. Digital wallet users are more likely to develop positive adoption intentions when payment applications are perceived as easy to operate and capable of providing tangible advantages such as transaction efficiency, convenience, and incentives. Trust, perceived risk, and system security also remain relevant considerations because users must be confident that digital financial platforms can protect their transactions and personal information while providing consistent service performance (Ishak et al., 2025).

The expansion of digital money also occurs within a broader digital consumer environment in which technology increasingly shapes the way individuals search for information, interact with businesses, evaluate offers, and make purchasing decisions. Digital technologies enable businesses to analyze consumer behavior, personalize marketing communication, and deliver promotional information more efficiently, thereby strengthening consumer engagement within digital ecosystems. At the same time, increasing reliance on data-driven digital interaction creates challenges related to privacy, ethical data utilization, transparency, and consumer trust, indicating that technological convenience must be balanced with responsible digital practices (Syam, 2025).

From the merchant perspective, the expansion of digital economic activities is also closely connected with the digitalization of micro, small, and medium enterprises. Government-supported MSME empowerment initiatives increasingly incorporate digitalization alongside training and financing as mechanisms for improving business competitiveness and strengthening participation in contemporary markets. Digital-based economic empowerment programs such as E-Peken further demonstrate how digital platforms can be integrated into local economic development strategies to facilitate MSME participation and broaden opportunities for economic transactions, although their effectiveness continues to depend on appropriate program management, technological capability, and sustained institutional support (Salsabella et al., 2026; Meihani et al., 2026).

Nevertheless, increasing access to digital services does not necessarily indicate that all demographic groups possess equal levels of digital readiness. Evidence from the implementation of online public services in Makassar indicates that younger users tend to demonstrate greater familiarity with digital systems, whereas some users still experience difficulties in completing online procedures and require direct assistance. These differences suggest that the continued expansion of digital financial services should be accompanied by inclusive digital literacy strategies that recognize variations in technological capability across age, educational, and socioeconomic groups, thereby reinforcing the importance of examining digital money adoption through multiple behavioral dimensions rather than treating users as a homogeneous population (Asriana et al., 2024).

The present study seeks to address this gap by analyzing digital money usage patterns among residents of Dumai, Riau Province, Indonesia, with specific attention to three behavioral dimensions: (1) preference and convenience, (2) shopping and financial management behavior, and (3) security and technology perception. Through a structured questionnaire survey administered to 69 respondents, this research employs quantitative descriptive methods to produce an empirically grounded profile of digital money adoption in the modern transactional context. The findings are expected to contribute theoretically to consumer behavior and FinTech adoption literature, and practically to the design of digital financial literacy programs and payment system policy (Fikri et al., 2025).

2. Literatur Review

2.1 Digital Money Theory

Digital money, in its foundational conceptualization, refers to monetary value stored and transmitted through electronic media, bypassing the need for physical currency exchange. Digital money encompasses stored-value or prepaid instruments embedded in chip-based cards or server-based platforms,

wherein the stored value diminishes automatically upon each transaction (Abidin et al., 2023). This architecture distinguishes digital money from conventional banking instruments by enabling real-time, multi-purpose payment without requiring direct bank account authorization at the point of sale. Scholars have further characterized digital money as an innovation within the broader monetary system, occupying a strategic position in the transition toward a cashless economy (Srouji & Torre, 2022; Bludnik, 2023; Syarifuddin, 2024).

Contextualizes digital money within the broader framework of digital finance a transformation of the financial sector characterized by the deployment of digital technologies to deliver financial services more efficiently, securely, and accessibly (Rahmadhani, 2025). This transformation encompasses not only traditional banking institutions but also emerging FinTech entities, e-wallet providers, and mobile banking applications that integrate payment, savings, and investment functionalities into unified digital ecosystems. The evolution from physical currency to digital money thus represents not merely a change in payment medium but a fundamental reorganization of financial service delivery architecture.

Consumer Transaction Behavior

Consumer transaction behavior in digital contexts is shaped by a convergence of psychological, social, and technological factors. The motivation to adopt digital payment instruments is driven by both intrinsic drivers such as personal convenience preferences and financial management goals and extrinsic incentives including promotional cashback schemes, loyalty points, and peer influence (Fauzan et al., 2023). Research consistently demonstrates that perceived ease of use and perceived utility are primary antecedents of behavioral intention in digital payment adoption, consistent with foundational frameworks in consumer technology research.

The phenomenon of impulsive purchasing behavior heightened spending propensity associated with digital payment methods represents a critical dimension of digital consumer behavior (Bakar et al., 2025; Fania & Paramita, 2025; Aryadipura et al., 2025). When transactional friction is reduced, as occurs with one-tap digital payments, consumers are more likely to engage in unplanned spending. Concurrently, digital money platforms offer countervailing financial management tools such as transaction history logs and spending categorization features, which can support budgeting discipline and financial self-regulation (Djiwono et al., 2025)

2.2 Technology Acceptance Theory (TAM)

The Technology Acceptance Model (TAM), originally proposed by Davis (1989) and subsequently extended by numerous scholars, posits that technology adoption is primarily determined by two cognitive constructs: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). In the context of digital payment systems, PU corresponds to the degree to which users believe digital money enhances their transactional efficiency, while PEOU reflects the extent to which the payment interface is regarded as intuitive and effortless. Both constructs exert direct influence on behavioral intention to use a given technology, which in turn determines actual usage behavior.

Extended TAM formulations have incorporated additional constructs particularly relevant to digital financial services, including perceived security (Ramayanti et al., 2025). social norm, and trust. The integration of biometric authentication fingerprint scanning, facial recognition and multi-factor PIN systems has substantially enhanced the security perception of digital money applications, reducing hesitancy among users who might otherwise remain committed to cash-based transactions. Security perception thus functions as both a TAM extension variable and an independent predictor of sustained digital money usage.

2.3 Digital Financial Literacy

Digital financial literacy is defined as the capacity of an individual to understand, effectively utilize, and critically evaluate digital financial services and instruments (Rahmadhani, 2025). This construct extends conventional financial literacy by incorporating the technical competencies required to navigate digital payment platforms, interpret transaction records, assess cybersecurity risks, and make informed decisions in digital financial environments. As digital money platforms increasingly integrate complex financial products insurance, micro-investments, buy-now-pay-later services the demand for high-order digital financial literacy among users intensifies.

Empirical evidence indicates a positive association between digital financial literacy and adoption breadth of digital money services:

individuals with higher literacy levels demonstrate more sophisticated usage patterns, including active utilization of budgeting tools, better comprehension of terms and conditions, and higher awareness of fraud prevention measures (Fikri et al., 2025) Conversely, limited digital financial literacy constitutes a structural barrier to equitable financial inclusion, particularly among rural and older demographics who face compounded disadvantages of infrastructure deficits and reduced digital competence.

2.4 Financial Technology (FinTech)

Financial technology, commonly abbreviated as FinTech, denotes the application of innovative digital technologies to the design, delivery, and improvement of financial products and services. FinTech encompasses a broad spectrum of innovations including digital payment systems, peer-to-peer lending platforms, robo-advisory investment services, blockchain-based asset management, and open banking application programming interfaces. In the payment subsector most directly relevant to the present study FinTech has produced QR-code-based payment systems, near-field communication (NFC) transactions, and real-time interbank payment rails that collectively enable instantaneous, low-cost monetary transfers (Rahmadhani, 2025)

In Indonesia, the FinTech payment sector has witnessed exponential growth, with the total transaction value of digital wallets increasing substantially in consecutive years. Regulatory frameworks promulgated by Bank Indonesia—including the National Payment Systems Act and the Interoperability of QR Payments (QRIS) mandate—have further accelerated the convergence of payment platforms, fostering a competitive yet interoperable digital payment ecosystem. This regulatory-technological confluence has lowered the barriers to digital money adoption while simultaneously expanding the potential user base across socioeconomic strata (Jain & Jain, 2024; Abidin et al., 2023)

3. Metode Penelitian

3.1 Research Design and Analytical Framework

This study employs a quantitative research method with a descriptive approach. The descriptive approach is used to provide a systematic, factual, and accurate representation of digital money usage patterns without manipulating variables or establishing causal relationships. The analytical framework of this study is constructed based on the Technology Acceptance Model (TAM) and consumer behavior theory, adapted to the context of digital money usage in modern transactional environments.

The research framework is organized into three analytical segments. The first segment is Preference and Convenience (U1), which examines respondents' attitudes toward digital money compared with cash, as well as the perceived ease and usefulness of digital payment systems, including top-up convenience. The second segment is Shopping and Financial Behavior (U2), which focuses on respondents' behavioral patterns in using digital money, including impulsive purchasing tendencies, responsiveness to promotional incentives, use of transaction history, and routine bill payment behavior. The third segment is Security and Technology (U3), which evaluates respondents' perceptions of data security, technical reliability, authentication mechanisms, and smartphone dependence in digital money usage.

Based on these three segments, this study analyzes digital money usage descriptively by comparing respondents' positive response tendencies across the Preference and Convenience, Shopping and Financial Behavior, and Security and Technology dimensions.

3.2 Population and Sample

The population of this study consists of adult members of the general public who actively use digital money in their daily transactions in Dumai, Riau Province, Indonesia. The sample consists of 69 respondents who voluntarily completed the survey instrument. The sampling technique used in this study was purposive sampling, with the inclusion criterion that respondents must actively use at least one digital payment platform.

3.3 Data Collection Technique

Data were collected using a structured questionnaire. The questionnaire consisted of two sections. The first section collected respondents' demographic information, including age, gender, educational background, and employment status. The second section consisted of fourteen attitudinal statements arranged into three thematic segments based on the research framework: Preference and Convenience, Shopping and Financial Behavior, and Security and Technology.

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3.4 Research Instrument and Measurement Scale

The measurement scale used in this study was a seven-point Likert scale, ranging from Strongly Disagree (STS = 1) to Strongly Agree (SS = 7). The response options consisted of Strongly Disagree (STS), Disagree (TS), Somewhat Disagree (CTS), Neutral (N), Somewhat Agree (CS), Agree (S), and Strongly Agree (SS). The use of a seven-point Likert scale allows respondents to express their level of agreement more precisely and provides greater response variation compared with a five-point scale.

3.5 Data Analysis Technique

The data were analyzed using descriptive statistical techniques, including frequency distribution and percentage analysis for each questionnaire item. Positive responses were defined as the combined percentage of Somewhat Agree, Agree, and Strongly Agree responses (CS + S + SS). The analysis was then aggregated by segment to compare the relative strength of digital money adoption across the three dimensions: Preference and Convenience, Shopping and Financial Behavior, and Security and Technology.

4. Result and Conclusion

4.1 Result

Table 1. Distribution of respondents by gender

Gender	Frequency	Percentage (%)
Male	25	36.2%
Female	44	63.8%
Total	69	100.0%

Table 1 presents the gender distribution of the 69 survey respondents. Female respondents constitute the majority at 63.8% (n = 44), while male respondents account for 36.2% (n = 25). This distribution is consistent with reported trends in digital commerce and e-wallet usage in Southeast Asia, where female consumers have demonstrated higher engagement rates with mobile payment platforms, partly attributable to the association of digital shopping ecosystems particularly social commerce with female consumer demographics (Djiwono et al., 2025).

Table 2. Distribution of respondents by age group

Age Group	Frequency	Percentage (%)
10 – 15 Years	0	0.0%
16 – 21 Years	12	17.4%
22 – 27 Years	26	37.7%
28 – 34 Years	19	27.5%
35 – 40 Years	12	17.4%
Total	69	100.0%

Table 2 illustrates the age distribution of the sample. The largest cohort comprises respondents aged 22–27 years (37.7%, n = 26), followed by those in the 28–34 age bracket (27.5%, n = 19). Respondents aged 16–21 and 35–40 each account for 17.4% (n = 12), while no respondents fell within the 10–15 age group. The concentration of respondents in the 22–34 age range aligns with theoretical expectations, as this demographic constitutes the primary working-age population most actively engaged in digital financial transactions and is characterized by high smartphone literacy and comfort with mobile applications (Rahmadhani, 2025).

Table 3. Distribution of respondents by educational background

Educational Background	Frequency	Percentage (%)
Elementary School (SD)	0	0.0%
Junior High School (SMP)	0	0.0%
Senior High School / Vocational (SMA/SMK)	32	46.4%
University (S1, S2, S3)	37	53.6%
Total	69	100.0%

The educational profile of respondents (Table 3) reveals that all participants possess at minimum a senior high school education. University graduates represent the slight majority at 53.6% (n = 37), while senior high school and vocational school graduates account for 46.4% (n = 32). The absence of respondents with elementary or junior high school education is consistent with the purposive sampling criteria, which required active digital money usage a behavior associated with higher educational attainment and greater digital financial literacy (Fikri et al., 2025). Higher educational levels are linked to greater capacity to evaluate and trust digital financial platforms, which in turn facilitates adoption.

Table 4. Distribution of respondents by employment status

Employment Status	Frequency	Percentage (%)
Student / University Student	14	20.3%
Civil Servant / State-Owned Enterprise	11	15.9%
Entrepreneur / Self-Employed	14	20.3%
Private Sector Employee	30	43.5%
Unemployed / Not Working	0	0.0%
Total	69	100.0%

Table 4 shows that private sector employees constitute the dominant occupational group (43.5%, n = 30), reflecting the prevalence of digital payment adoption

within the formal private employment sector. Students and entrepreneurs each represent 20.3% (n = 14), while civil servants and BUMN employees account for 15.9% (n = 11). The notable representation of entrepreneurs is particularly significant, as self-employed individuals frequently utilize digital money for both personal and business transactions, leveraging QR-code payment acceptance to serve increasingly cashless customers. No unemployed respondents were included, consistent with the sample's digital money usage criterion, which presupposes access to financial resources and digital devices.

Table 5. Respondent responses: segment 1 preference and convenience (U1)

Item	STS	TS	CTS	N	CS	S	SS	Positif (%)
P1	1	0	0	2	13	28	25	95,7
P2	1	1	0	1	13	23	30	95,7
P3	2	1	0	2	26	21	17	92,8
P4	0	0	0	0	20	30	19	100,0
U1	4	2	0	5	72	102	91	96,0

Table 5 presents the frequency and percentage distribution of responses to the four items comprising the Preference and Convenience segment. Across all four items, the positive response rate (CS + S + SS) exceeds 90%, with the aggregate segment positive rate reaching 96.0% (n = 265 out of 276 total responses).

Item P1, assessing preference for digital money over cash, yielded a positive response from 95.7% of respondents, with 76.8% selecting Agree (S) or Strongly Agree (SS). This finding indicates that the overwhelming majority of respondents have internalized digital money as their default payment modality, reflecting a behavioral shift consistent with technology acceptance theory specifically the transition from intention to actual and habitual usage behavior.

Item P2, concerning the perceived practicality and efficiency of digital money relative to physical wallets, yielded the highest proportion of Strongly Agree responses (43.5%), resulting in an identical positive rate of 95.7%. The high concentration in the Strongly Agree category suggests that practicality perception is not merely a mild preference but a strongly held conviction among digital money users. This aligns with the Perceived Ease of Use construct within TAM (Ramayanti et al., 2025) wherein user perceptions of esffortlessness are foundational to technology adoption.

Item P3, examining whether respondents experience difficulty when transacting at cash-only venues, produced a positive response from 92.8% of participants, indicating that digital money dependency has become sufficiently entrenched that cash-only environmhents are perceived as a friction point rather than the norm. This dependency pattern carries implications for merchant digitalization policies, suggesting that consumers expect digital payment acceptance as a baseline transactional service.

Most remarkably, Item P4 assessing whether ease of top-up constitutes a primary adoption driver achieved a unanimous 100.0% positive response rate with zero neutral or negative responses recorded. This result unambiguously identifies the top-up mechanism as the most universally recognized adoption enabler within the sample, consistent with the observation that transactional convenience at the point of account replenishment is critical to the seamlessness of the overall digital money user experience (Abidin et al., 2023).

Table 6. Respondent responses: segment 2 shopping and financial behavior (U2)

Item	STS	TS	CTS	N	CS	S	SS	Positif (%)
P5	1	1	1	1	18	30	17	94,2
P6	1	1	0	1	17	23	26	95,7
P7	0	1	0	1	14	26	27	97,1
P8	0	0	0	1	19	32	17	98,6
P9	1	0	0	3	12	33	20	94,2
U2	3	3	1	7	80	144	107	95,9

Segment 2 responses (Table 6) reveal a nuanced but consistently positive behavioral profile of digital money usage in shopping and financial management contexts. The aggregate positive rate across all five items is 95.9% (n = 331 out of 345 responses).

Item P5 addresses impulsive spending tendencies associated with digital money usage. A positive response from 94.2% of respondents confirms that digital money disinhibits spending compared to cash transactions. This phenomenon is well-documented in behavioral economics literature, wherein the abstraction of value in digital payment reduces the psychological "pain of paying" associated with cash transactions, thereby lowering the psychological barrier to expenditure (Fauzan et al., 2023).The practical implication is that digital money providers and consumer advocates must balance convenience promotion with financial wellness education.

Item P6, concerning the influence of promotional incentives discounts, cashback, and loyalty points on digital money usage

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decisions, registered a positive response of 95.7%. Notably, the Strongly Agree category received the highest individual response frequency (37.7%), indicating that promotional mechanisms function not merely as supplementary attractions but as primary behavioral drivers. This finding carries significant marketing strategy implications: FinTech providers that sustain competitive promotional offerings are likely to maintain higher user engagement and transaction volumes.

Item P7 assessed the role of transaction history features in expenditure monitoring, yielding the highest positive rate within this segment at 97.1%. The combined Agree and Strongly Agree responses account for 76.8% of all responses, demonstrating that the majority of users actively leverage transaction logs as a financial self-monitoring tool. This finding supports the argument that digital money platforms function simultaneously as payment instruments and financial management aids, contributing positively to financial literacy outcomes (Rahmadhani, 2025).

Item P8, on the use of digital money for routine bill payments including electricity, water, internet, and mobile credit, achieved a positive rate of 98.6% the second highest individual item response in the entire study. This near-universal adoption of digital money for recurring payments suggests that utility bill digitalization has effectively normalized e-wallet usage as a habitual, recurrent behavior rather than an occasional transactional supplement.

Item P9, measuring whether digital money facilitates monthly budget management, received a positive response from 94.2% of participants, with 47.8% selecting Agree the highest frequency for any single response option on this item. This result reinforces the dual functionality of digital money platforms: while they may enable impulsive spending (P5), they simultaneously provide the technological infrastructure to enable budget oversight and spending discipline, a dual-role dynamic with important implications for financial wellness program design (Fikri et al., 2025)

Table 7. Respondent responses: segment 3 security and technology (U3)

Item	STS	TS	CTS	N	CS	S	SS	Positif (%)
P10	0	0	0	1	14	39	15	98,6
P11	0	1	1	1	14	26	26	95,7
P12	0	0	0	1	21	29	18	98,6
P13	1	0	0	1	17	31	19	97,1
P14	0	0	1	2	14	34	18	95,7
U3	1	1	2	6	80	159	96	97,1

The Security and Technology segment (Table 7) yielded the highest aggregate positive rate of the three research segments at 97.1% (n = 335 out of 345 responses), indicating that respondents' security perceptions and technology trust toward digital money platforms are robustly favorable.

Item P10, assessing confidence in the safety of personal data and stored balance within digital money applications, achieved a 98.6% positive response tied for the highest individual item rate in the study with zero negative responses recorded. The dominance of the Agree category (56.5%) suggests a strong, stable positive security perception. This result reflects the progressive maturation of digital money security architectures, wherein encryption, tokenization, and two-factor authentication mechanisms have succeeded in building robust user trust (Ramayanti et al., 2025).

Item P11, addressing the absence of concern over technical errors or system failures during payment, recorded a positive response from 95.7% of respondents. The equal distribution between Agree and Strongly Agree categories (both 37.7%) indicates a well-distributed confidence across the positive spectrum. While a small proportion (2.9%) expressed some residual concern regarding technical reliability, the data overall suggest that FinTech providers have successfully communicated system reliability through stable user experiences, consistent platform performance, and effective error-recovery mechanisms.

Item P12, evaluating trust in the sufficiency of security features including PIN, fingerprint, and facial recognition, yielded a 98.6% positive response with zero negative responses. The combination of Somewhat Agree, Agree, and Strongly Agree with no dissenting views represents the highest consensus on any security-related item. Biometric authentication has evidently established itself as a credible security paradigm in the perception of Indonesian digital money users, aligning with global trends in mobile payment security adoption where biometric features are associated with heightened perceived security (Rahmadhani, 2025)

Item P13, measuring anxiety when separated from one's smartphone or digital

money access even while carrying cash, registered a positive response from 97.1% of respondents. This result reveals a profound dimension of digital money adoption: smartphone dependency has become psychologically embedded to the extent that the mere absence of digital payment access induces anxiety, regardless of alternative payment availability. This finding reflects a behavioral lock-in phenomenon wherein digital money has transcended its status as a convenient option to become a perceived necessity in daily mobility.

Item P14, concerning active promotion of digital money usage to friends and family, received a positive response from 95.7% of respondents. Nearly half of respondents (49.3%) selected Agree, indicating a strong social advocacy disposition. This peer promotion behavior is consistent with social influence mechanisms in TAM extended models, where satisfied technology adopters become informal evangelists who accelerate adoption within their social networks (Djiwono et al., 2025). The practical significance is that organic word-of-mouth remains a powerful diffusion channel for digital money adoption, supplementing formal marketing campaigns.

Table 8. Comparative Analysis Across Research Dimensions

Dimensi	Total	Positif n (%)	Netral n (%)	Negatif n (%)
U1: Preferensi & Kemudahan	276	265 (96,0)	5 (1,8)	6 (2,2)
U2: Perilaku Belanja & Keuangan	345	331 (95,9)	7 (2,0)	7 (2,0)
U3: Keamanan & Teknologi	345	335 (97,1)	6 (1,7)	4 (1,2)
Total Keseluruhan	966	931 (96,4)	18 (1,9)	17 (1,8)

Table 8 provides an integrative comparative view of respondent responses across all three analytical segments. The overall positive response rate of 96.4% across 966 individual responses is remarkably consistent, with between-segment variation of merely 1.2 percentage points. This inter-segment consistency suggests that favorable attitudes toward digital money are not domain-specific but reflect a holistic positive orientation spanning preference formation, behavioral outcomes, and security trust.

The Security and Technology segment achieved the highest positive rate (97.1%) and the lowest negative rate (1.2%), underscoring that security architecture long cited as a primary barrier to digital payment adoption has evolved sufficiently to no longer constitute a meaningful impediment among the study population. The Preference and Convenience segment closely follows at 96.0%, while the Shopping and Financial Behavior segment, at 95.9%, exhibits slightly greater variability, which may reflect the heterogeneity of individual spending behaviors and financial management practices within the sample.

Neutral responses across all segments remain consistently low (1.7%–2.0%), and negative responses are minimal (1.2%–2.2%), confirming that the study sample represents a cohort of committed digital money adopters whose attitudes across preference, behavior, and security dimensions are uniformly positive. These findings collectively indicate that digital money has achieved a stage of normalized adoption within the studied population, transcending early-adopter dynamics to represent a mainstream transactional behavior.

4.2 Discussion

The results of this study present a coherent and empirically rich portrait of digital money usage patterns in the modern transactional context. The following discussion addresses each principal finding in relation to established theory and prior research, synthesizing the analytical insights derived from the segment-by-segment data analysis.

Preference for Digital Money Over Cash

The near-universal preference for digital money over cash (95.7% positive on P1) confirms the theoretical proposition that perceived utility is the primary driver of technology adoption in the payment domain (Abidin et al., 2023). The cognitive reframing of digital money from a supplemental payment option to a primary transactional modality reflects the normalization phase of technology adoption, wherein usage transitions from deliberate choice to habitual behavior. This transition has significant implications for traditional retail and service businesses, which must now treat digital payment acceptance not as a value-added feature but as a table-stakes operational requirement.

The strong preference for digital money can also be understood through the interaction between perceived usefulness and the practical benefits experienced during everyday transactions. Consumers are more likely to maintain the use of digital payment services when the technology provides clear advantages, including transaction efficiency, convenience, accessibility, and incentives. Previous research

examining GoPay consumer acceptance also indicates that perceived usefulness and perceived ease of use consistently contribute to consumers' intention to adopt digital wallet services (Ishak et al., 2025).

The transition from preference to habitual use further indicates that digital money adoption should not be interpreted solely as a technological decision but also as a broader behavioral adaptation. Continuous interaction with digital services may gradually reshape consumers' expectations regarding speed, accessibility, and convenience in everyday economic activities. The increasing importance of digital environments in shaping consumer engagement also demonstrates that digital technologies are becoming integral components of contemporary consumer decision-making processes (Syam, 2025).

The Relationship Between Convenience and Usage Behavior

The finding that ease of top-up commands a unanimous 100% positive response (P4) reveals that the perceived convenience of digital money is inseparable from the user experience of account replenishment. When the process of loading funds onto a digital wallet is frictionless facilitated by linked bank accounts, ATM networks, convenience store partners, and automated payroll crediting the psychological barriers associated with maintaining digital money balances are eliminated. This convenience-utility chain is central to the Perceived Ease of Use dimension of TAM, wherein effortlessness is not merely a desirable attribute but a sine qua non of sustained technology engagement (Jain & Jain, 2024). The practical implication is that FinTech providers must continue to expand and simplify top-up channels as a core retention strategy.

Ease of use becomes particularly important when consumers evaluate whether a digital payment service can be integrated into their routine transactions without creating additional technical or procedural burdens. Consumers generally demonstrate stronger acceptance of digital wallet services when applications are intuitive and provide clear benefits in terms of efficiency and convenience (Ishak et al., 2025). Convenience may also reinforce continued usage by reducing both the time cost and cognitive effort associated with financial transactions. Digital services that combine balance replenishment, payments, transfers, and transaction monitoring within a single platform can simplify everyday financial activities. However, access to digital services does not necessarily imply equal ability to use them, as evidence from online public services in Makassar indicates that younger users generally adapt more easily to digital systems while older individuals may require additional assistance (Asriana et al., 2024).

The Influence of Promotions and Cashback

The strong positive response to Item P6 (95.7%) and the dominant concentration of responses in the Strongly Agree category (37.7%) establish promotional incentives as a high-salience adoption driver. This finding corroborates the behavioral economics literature on loss aversion and reward sensitivity: cashback and discount mechanisms activate the reward circuitry of consumer decision-making, transforming functional payment transactions into value-generating activities (Fauzan et al., 2023). The implication for FinTech strategy is that promotional spending while representing a short-term cost generates behavioral conditioning that sustains platform loyalty beyond the promotional period. However, this dependency also implies potential vulnerability: if promotional incentives are withdrawn or reduced, adoption motivation may attenuate, highlighting the need for FinTech providers to develop complementary intrinsic value propositions including superior user experience, exclusive merchant partnerships, and financial management features.

Promotional incentives may strengthen adoption because consumers perceive an immediate economic benefit from choosing digital payment instead of conventional payment methods. Discounts, cashback, loyalty points, and transaction vouchers increase the perceived value of a platform, while incentives are also identified as one of the tangible benefits contributing to consumer interest in GoPay services (Ishak et al., 2025). Digital promotional strategies are becoming increasingly sophisticated as businesses utilize consumer data and digital technologies to improve customer targeting and engagement. Digital marketing technologies can strengthen consumer engagement through personalization and more targeted delivery of information, although their implementation must also consider privacy, ethical issues, and consumer trust (Syam, 2025).

The Role of Transaction History in Budgeting

The 97.1% positive response to Item P7 and the 94.2% positive response to Item P9 collectively establish that digital money platforms serve a dual function: facilitating transactions and enabling financial self-monitoring. Transaction history features which automatically record, categorize, and present expenditure data effectively externalize the cognitive burden of budget tracking, converting what would otherwise require deliberate record-keeping effort into a passive, automated financial monitoring process.

This functionality represents a significant contribution of digital money to digital financial literacy outcomes, as users who regularly review transaction histories develop clearer mental models of their spending patterns and are better positioned to make informed financial decisions (Rahmadhani, 2025). This dual function spending enabler and spending monitor reconciles the apparent paradox observed between Items P5 (digital money promotes impulsive spending) and P9 (digital money helps manage budget), suggesting that the platform affords both behaviors, with the net outcome determined by individual financial literacy levels and behavioral self-regulation capacity.

The availability of automatically recorded transaction information can improve users' ability to review previous expenditures and identify recurring spending patterns. Digital wallets can therefore support personal financial management through automatic transaction recording, spending notifications, and other monitoring functions that reduce reliance on manual financial records (Djiwono et al., 2025).

Nevertheless, the existence of digital financial information does not automatically result in better financial decisions. Effective use of transaction records still requires users to interpret financial information and convert it into appropriate spending, saving, and budgeting decisions. More broadly, effective financial decision-making depends on the availability and appropriate interpretation of relevant financial information (Sulawati et al., 2025).

Security Perceptions Toward Digital Money

The Security and Technology segment achieving the highest aggregate positive rate (97.1%) and producing zero negative responses across two security-specific items (P10 and P12) signals a fundamental shift in the security perception landscape of digital financial services in Indonesia. Previous research in Indonesia has shown that security remains an important consideration in digital payment adoption, particularly due to risks associated with account hacking, fraud, phishing, and unauthorized access to personal information, which may influence users' trust in digital payment applications (Rabbani et al., 2023). Furthermore, older adults may face greater digital security vulnerabilities because limited digital literacy can reduce their awareness of threats such as identity theft and online fraud (Nisak et al., 2025).

The current findings suggest that a combination of enhanced security technology, regulatory oversight, and growing user familiarity with digital payment security protocols has effectively reduced these concerns within the study population. Trust, perceived risk, and system security nevertheless remain relevant supporting factors that can influence consumer acceptance of digital wallet services (Ishak et al., 2025).

The high security scores observed in this study should therefore not be interpreted as evidence that security risks have disappeared. Digital literacy remains an important prerequisite for navigating technology-based services, particularly because users from different age groups may possess different levels of familiarity with online systems. Evidence from digital public services in Makassar indicates that younger users generally demonstrate greater familiarity with online services, whereas some older users require direct assistance to complete digital procedures (Asriana et al., 2024).

Dependence on Smartphones in Modern Transactions

The finding that 97.1% of respondents experience anxiety when separated from their smartphones, even while carrying cash (P13), reveals the depth of behavioral integration that digital money has achieved within respondents' daily routines. This psychological dependency extends beyond instrumental utility to encompass a form of existential digital financial anxiety the perception that without smartphone access, one is effectively financially incapacitated despite possessing physical cash. This phenomenon reflects the concept of technology entrenchment, wherein a technology becomes so deeply embedded in behavioral routines that its absence is experienced as a functional disability rather

than a mere inconvenience (Djiwono et al., 2025).

From a consumer welfare perspective, this level of dependence warrants attention: while it reflects successful adoption from a FinTech industry standpoint, it also creates vulnerability to service outages, battery failure, and device loss, underscoring the continued importance of maintaining cash infrastructure as a fallback transactional option in parallel with digital ecosystems.

Smartphone dependence can also be interpreted as a consequence of the increasing concentration of financial and commercial functions within a single mobile device. Digital wallets, mobile banking applications, online shopping platforms, transportation applications, and authentication services are increasingly interconnected within digital ecosystems. The growing integration of digital technologies into organizational and economic activities demonstrates how digital transformation can simultaneously improve efficiency while increasing dependence on technological infrastructure (Firdaus & Mariana, 2026).

The findings also highlight the need to strengthen digital resilience among consumers. Users should understand account recovery procedures, password protection, alternative authentication mechanisms, and backup transaction methods so that temporary loss of a smartphone does not completely interrupt access to financial services. Differences in users' ability to adapt to online services also reinforce the importance of providing assistance and accessible digital interfaces for groups with lower technological familiarity (Asriana et al., 2024).

Implications for Modern Society

The collectively overwhelming positive orientation documented across all three research segments with an overall positive rate of 96.4% carries broad implications for modern Indonesian society. First, at the individual level, the widespread adoption of digital money's transaction history and budgeting features suggests a potential uplift in practical financial management behavior among urban working populations, contributing incrementally to household financial resilience. Second, at the societal level, the peer advocacy behavior documented in Item P14 (95.7% positive) indicates that digital money adoption is self-amplifying through social networks, implying that formal digital financial literacy programs can leverage existing social diffusion dynamics to accelerate adoption among currently underserved populations (Fikri et al., 2025).

Third, at the policy level, the findings suggest that regulatory investment in digital payment infrastructure and interoperability such as the QRIS standard has successfully cultivated a population-level disposition favorable to digital money. Future policy priorities might therefore shift from adoption stimulation toward adoption quality: ensuring that the financial management tools embedded in digital money platforms are actively utilized, that digital financial literacy education accompanies technological proliferation, and that consumer protection frameworks evolve in step with emerging security challenges including phishing attacks and social engineering fraud schemes (Rahmadhani, 2025).

The broader economic implications of digitalization extend beyond individual consumers because digital platforms can also improve market access and strengthen participation in the digital economy. The E-Peken program in Surabaya demonstrates how digital-based initiatives can support MSME empowerment and expand access to markets, although implementation continues to face challenges related to technological understanding, internet access, and consistency in platform utilization (Meihani et al., 2026).

Government intervention therefore remains important in ensuring that digital transformation generates inclusive economic benefits rather than widening existing technological disparities. MSME empowerment programs have increasingly incorporated training, financing, and digitalization, but effective implementation still requires stronger coordination, monitoring, and human-resource capacity (Salsabella et al., 2026).

Digital transformation should consequently be approached as both a technological and an institutional process. Organizations and policymakers need to combine technological innovation with managerial capability, adaptability, and effective decision-making because digital transformation can improve operational efficiency and organizational responsiveness when supported by appropriate management capacity (Firdaus & Mariana, 2026).

At the same time, inclusive digital transformation requires continued attention to differences in technological competence among

population groups. Evidence from online public services indicates that younger populations may adapt relatively easily to digital systems while some elderly users continue to experience difficulties, demonstrating the need for assistance mechanisms and accessible service design (Asriana et al., 2024).

Taken together, the findings indicate that the transition toward digital money should not focus solely on increasing transaction volume or reducing cash usage. Sustainable digital financial development requires a balanced approach that integrates convenience, security, financial literacy, inclusive access, institutional support, and continuous improvement in digital infrastructure. Digitalization can contribute to wider economic development when technological innovation is complemented by appropriate management capabilities and inclusive development strategies (Firdaus & Mariana, 2026).

5. Conclusion

This study systematically analyzed digital money usage patterns among 69 respondents in Dumai, Indonesia, across three behavioral dimensions: Preference and Convenience (Segment U1), Shopping and Financial Behavior (Segment U2), and Security and Technology (Segment U3). The quantitative descriptive analysis of a seven-point Likert scale questionnaire instrument yielded the following principal conclusions. First, digital money adoption has attained a stage of normalization within the study population, with an overall positive response rate of 96.4% across all research items. Respondents demonstrate consistent, high-magnitude favorable attitudes toward digital money across all analytical dimensions, indicating that adoption has progressed from early majority to a late majority and potentially laggard-inclusive phase.

Second, the ease of top-up mechanism constitutes a universal adoption driver (100% positive), establishing transaction loading convenience as the foundational pillar of digital money usability. Promotional incentives and cashback schemes function as powerful extrinsic behavioral motivators, while transaction history features simultaneously support financial self-monitoring and budget management. Third, security perceptions toward digital money are robustly positive, with biometric and PIN-based authentication systems achieving near-unanimous trust (98.6%). The neutralization of security concerns as an adoption barrier represents a significant evolution in the digital payment landscape and reflects the cumulative success of technology investment, regulatory oversight, and user experience design in building consumer confidence.

Fourth, the psychological dependency on smartphones as a conduit for digital money access (97.1% reporting anxiety without phone/digital access) signals the deep behavioral entrenchment of digital money in modern daily routines, with implications for both consumer resilience and service infrastructure design. This study contributes to the digital money adoption literature by providing a multi-dimensional, segment-based empirical analysis grounded in actual survey data from an Indonesian urban context. Future research should explore causal relationships between digital financial literacy levels and specific usage behavior outcomes, investigate cross-demographic variations in adoption patterns particularly across age cohorts and educational levels and examine the longitudinal stability of security perceptions as new threat vectors emerge in the digital payment ecosystem.

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