

Adoption of Electronic Payment Methods and Their Role in Reshaping the Purchasing Behavior of the Algerian Consumer: An Applied Study on a Sample of Sonelgaz Customers

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Abstract:

This study aims to analyze the role of adopting electronic payment systems in reshaping the purchasing behavior of Algerian consumers, through an applied study on customers of Sonelgaz in the Wilaya of Tiaret. The study adopts a descriptive-analytical approach, and data were collected through a questionnaire distributed to a sample of 300 consumers, which were statistically analyzed using SPSS. The results reveal a statistically significant positive correlation between the dimensions of electronic payment (ease of use, perceived usefulness, trust and security, and future intention) and consumer purchasing behavior. Regression analysis further confirms that the adoption of electronic payment systems explains more than 50% of the variance in the shift toward digital purchasing behavior. The findings also indicate significant differences in adoption levels attributable to age, educational level, income, and duration of use, while no significant differences were found based on gender. The study concludes that electronic payment has become a key determinant in enhancing digital purchasing behavior and institutional loyalty among Algerian consumers.

Keywords: Electronic Payment, Purchasing Behavior, Digital Transformation, Algerian Consumer, Sonelgaz.

JEL Classification Codes: D12, M31, O33, G21

1. INTRODUCTION

In recent decades, the world has witnessed an unprecedented digital revolution that has fundamentally altered the nature of economic transactions and consumer behavior alike. With the advancement of telecommunication networks, the proliferation of smartphones, and the rise of e-commerce, electronic payment methods have evolved beyond a mere alternative to cash, they have become a strategic necessity contributing to the construction of a more efficient and transparent digital economy.

Digital transformation in payment systems represents a cornerstone of the "cashless economy." Most governments strive for this transition to reduce costs associated with physical currency circulation and to mitigate the shadow economy. Algeria is actively engaged in this dynamic through a gradual shift toward financial digitalization, driven by institutional reforms and the efforts of the Bank of Algeria to regulate online payment services and encourage economic actors to adopt these systems.

However, the transition to these new models is not achieved through technical aspects alone, it fundamentally depends on the Algerian consumer's adoption of these means and their positive interaction with them. The consumer is the heart of the digital process, and the success of any e-payment system cannot be guaranteed without a shift in purchasing behavior that reflects trust, habituation, and satisfaction (Gefen, 2000, p. 728).

This transformation extends beyond technology to reshape the Algerian consumer's purchasing behavior regarding motives, preferences, and interaction with modern technology. Adopting electronic payment is no longer just about using a financial tool, it has become a behavioral decision reflecting a mix of perception, trust, and emerging socio-economic values.

In this context, economic institutions—both public and private—are required to redesign their business models to align with the new digital environment. Sonelgaz, as a strategic national institution monopolizing energy services in Algeria, stands out as a prominent entity facing this challenge by integrating e-payment systems into its customer service framework. Sonelgaz represents an ideal model for studying this transition, given its massive customer base

across diverse consumer segments and its processing of millions of financial transactions monthly for electricity and gas bill payments.

Consequently, analyzing how Sonelgaz customers interact with e-payment systems, and the extent of its impact on their purchasing behavior and loyalty, is a research issue that bridges digital marketing, financial management, and organizational behavior.

1.1 Research problem

For several years, the Algerian economy has experienced an accelerating digital boom in electronic services, particularly following the COVID-19 pandemic, which forced public and private institutions to adopt digital channels for customer interaction. Electronic payment methods have emerged as one of the most critical tools in this transformation, allowing for reduced congestion, facilitated transactions, and enhanced transparency in financial relationships.

Accordingly, the central research problem of this study is defined by the following question: **To what extent does the adoption of electronic payment methods contribute to reshaping the purchasing behavior of Sonelgaz consumers?**

1.2 Research sub-questions

1. Is there a statistically significant positive correlation between electronic payment dimensions and the purchasing behavior of Sonelgaz customers?
2. Is there a statistically significant impact of electronic payment adoption on the shift of purchasing behavior toward digitalization?
3. Does the degree of electronic payment adoption vary according to demographic variables?

1.3 Research hypotheses

H1: There is a statistically significant positive correlation between electronic payment dimensions and the purchasing behavior of Sonelgaz customers.

H2: There is a statistically significant impact of electronic payment adoption on the shift of purchasing behavior toward digitalization.

H3: The degree of electronic payment adoption varies significantly according to demographic variables.

1.4 Significance of the study

This study derives its scientific significance from addressing the adoption of electronic payment methods from the perspective of Algerian consumer behavior within the broader context of government digital transformation policies. These policies aim to reduce cash dependency and enhance financial inclusion. Furthermore, the study contributes to enriching the literature on e-payment economics and digital behavioral shifts. Its practical value lies in providing a model that public and private institutions can utilize to design effective digital strategies for improving consumer relations.

1.5 Research objectives

- To analyze the determinants of electronic payment adoption in Algeria.
- To measure the impact of electronic payment on reshaping purchasing behavior.
- To conduct an applied case study on Sonelgaz customers as a model for a public economic enterprise.
- To provide practical recommendations for enhancing trust and adoption within the Algerian digital environment.

1.6 Research Methodology

The Descriptive-Analytical approach was adopted due to its suitability for the study's subject matter. The researcher relied on a questionnaire targeted at a sample of Sonelgaz customers in the province of Tiaret. Data were analyzed using the SPSS software, employing both descriptive and inferential statistical methods.

1.7 Previous Studies

1.7.1 Shalini Chandra et al. (2010), “Evaluating the Role of Trust in Consumer Adoption of Mobile Payment Systems: An Empirical Analysis”.

A pioneering study that presented an integrated "trust-based" theoretical model for mobile payment adoption, emphasizing the priority of trust over traditional factors in uncertain financial transaction environments. Consumer trust was identified as the primary determinant of adoption intention, surpassing perceived usefulness and ease of use. Provider reputation and technological environment guarantees are the fundamental drivers for building this trust.

1.7.2 Jayaprada Putrevu & Charilaos Mertzanis (2023), “The adoption of digital payments in emerging economies: challenges and policy responses”.

Moves beyond individual perspectives on technology adoption to a broader policy-oriented view, providing a comprehensive framework for understanding systemic and regulatory challenges hindering the transition to digital payments in emerging economies. Key risks were identified, such as network unreliability, lack of liquidity, technical complexity, and fraud. Policies proposed to mitigate these focus on enhancing infrastructure, structural guarantees, and consumer protection.

1.7.3 Ali Alqudah et al. (2025), “Adoption of digital payment systems in e-marketing: The moderating role of consumer trust in Jordan”

This study extends the Technology Acceptance Model (TAM) by integrating trust as a moderating factor within an emerging economy's e-marketing environment (Jordan), providing a framework to examine the interplay between technical and psychological factors. Results indicate that perceived ease of use, usefulness, and security are direct influencers on adoption, whereas awareness lacks a direct impact. Trust acts as a potent moderator that enhances the effect of these factors on the adoption decision.

1.7.4 Widad Chabani & Zakariya Chabani (2025), “Adoption and Analysis of Electronic Payment Methods in Algeria: A Case Study of Algérie Télécom (2022–2024)”.

Offers a rare and direct applied analysis of the reality of e-payment platforms in Algeria through a major institutional case study, providing realistic data on usage patterns and local consumer preferences. The study revealed the dominance of postal channels (Baridimob and Edahabia) over banking channels, with the highest usage rates recorded for mobile payments. It also

showed a significant increase in adoption post-pandemic despite persistent cultural and technical barriers.

2. Literature Review

2.1 Electronic Payment (E-Payment)

2.1.1 Conceptual Framework: Electronic payment constitutes "any financial transaction conducted using electronic technologies via the internet or digital devices, including bank cards and electronic wallets" (OECD, 2025, p. 14). This system is a strategic pillar for digital economy transitions, enhancing transparency and reducing cash reliance (Bank, 2025, p. 31). Furthermore, e-payment facilitates fund transfers through digital channels using telecommunication networks and hardware (Putrevu, 2025, p. 4). These systems evolved from traditional card-based models into integrated platforms (digital wallets, mobile payments, instant transfers), accelerating global financial inclusion. In Algeria, significant growth occurred post-2020 within public utilities like energy and telecommunications (Chabani, 2025, p. 105).

2.1.2 Evolution: The 2000–2010 decade marked the emergence of online banking, followed by smart applications (e.g., PayPal, Apple Pay) between 2010 and 2020 (Choudhery, 2025, p. 5). Post-COVID-19, non-cash payment users soared to over 80% in various emerging markets (Bank, 2025, p. 33).

2.1.3 Adoption Models: Theoretical frameworks like the Technology Acceptance Model (TAM) focus on Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) (Davis, 1989, p. 322). In financial contexts, Trust acts as a critical mediator between these factors and adoption (Chandra, 2010, p. 564). Trust mitigates perceived risks (fraud, data breaches) and increases system reliability (Alqudah, 2025, p. 664). Additionally, Structural Assurances (encryption, security certifications) bolster trust and lower risk barriers (Putrevu, 2025, p. 6).

- **Technology Acceptance Model (TAM):** Posits adoption depends on PEOU and PU (Davis, 1989, p. 333).
- **Unified Theory of Acceptance and Use of Technology (UTAUT):** Integrates Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions (Venkatesh, 2003, p. 430).

2.2 Consumer purchasing behavior in the digital environment

2.2.1 Definition: Consumer behavior encompasses mental, emotional, and social activities regarding product searching, alternative evaluation, and post-purchase assessment (Kotler, 2016, p. 186). It involves complex interactions between individual variables (motives, attitudes) and environmental factors (culture, technology) (Blackwell, 2006, p. 146). Digitally, it includes consumer-brand interactions via digital media (Saura, 2020, p. 193).

2.2.2 Digital Transformation: This shift radically altered the consumer-provider relationship, transforming consumers into interactive agents (PwC, 2022). Over 70% of emerging market consumers now initiate their journey via online research (PwC, 2021, p. 3).

2.2.3 Dimensions: Digital purchasing behavior comprises three pillars (Rita, 2019, p. 4):

- E-Trust: A primary obstacle in Algeria due to cybersecurity concerns.
- E-Interaction: Engagement levels via digital platforms.
- E-Satisfaction: Digital post-purchase evaluation.

2.3 Impact of E-payment on purchasing behavior

E-payment adoption reshapes behavior through:

- Quantitative Shifts: Increased frequency and transaction value due to 24/7 availability (Chabani, 2025, p. 105).
- Loyalty: Streamlined payment experiences strengthen brand loyalty, especially toward entities like Sonelgaz (Alqudah, 2025, p. 664).
- Spending Patterns: Reduced psychological barriers may encourage impulsive spending (Chandra, 2010, p. 564).
- Cashless Transition: Accelerated digital transactions enhancing transparency (Putrevu, 2025, p. 6).

2.4 The Algerian context: Sonelgaz

The Algerian landscape is dominated by Postal Channels (Baridimob, Edahabia) over banking channels due to institutional trust (Chabani, 2025,

p. 105). As a strategic utility, Sonelgaz's digital transition is pivotal for disseminating digital culture. However, infrastructure gaps, low cybersecurity trust, and cash habits hinder full adoption (Putrevu, 2025, p. 7). Algerian consumers prioritize family-centric decisions and institutional reputation, showing a gradual adoption curve initially favoring the public sector (OECD, 2025, p. 2).

3. The applied framework of the study

3.1 Research Instruments and Methodology

Study Population and Sampling: The target population for this study comprises the entire customer base of the national economic enterprise, SONELGAZ, within the province of Tiaret. Given the impossibility of surveying the entire population, a representative sample was drawn to mirror the original characteristics of the community, ensuring the generalizability of the findings. Consequently, a purposive/convenience sample of 300 consumers was selected, encompassing various demographic variables including gender, age, educational level, monthly income, and duration of electronic payment usage.

The survey administration was conducted via face-to-face distribution. During this process, respondents were provided with comprehensive briefings regarding the study's objectives, clarification of key conceptual terms, and guidance on the standardized response procedure.

Data Collection Tool: To gather primary data, the Questionnaire was employed as the principal research instrument. In the field of social and human sciences, the questionnaire serves as a systematic tool to elicit information and perspectives essential for addressing the research problem and verifying the hypotheses. The instrument was meticulously designed, with items structured according to the nature and scope of the required data.

To quantify respondents' perceptions, a Five-Point Likert Scale was utilized. Furthermore, to ensure the internal consistency and reliability of the final version of the instrument, Cronbach's Alpha Coefficient was calculated. The following table illustrates the obtained reliability values:

Table (01): Cronbach's Alpha Reliability Coefficients for the Study Instrument

Dimension / Axis	Number of Items	Cronbach's Alpha Value	Reliability Significance
Electronic Payment	11	0.877	Very High
Purchasing Behavior	10	0.895	Very High
Total Scale	21	0.918	Excellent Reliability

Source: Prepared by the researcher based on SPSS V.26 outputs.

values exceeding 0.80, demonstrating a high degree of internal consistency for the research instrument. Specifically, the overall scale value of ($\alpha = 0.918$) confirms that the questionnaire items are logically interrelated and consistently measure the intended construct without dispersion, thereby enhancing both the instrument's validity and the credibility of the findings.

The high reliability value for the Electronic Payment dimension (0.877) signifies that the four sub-dimensions (Utility, Ease of Use, Trust, and Intention) are integrated effectively to reflect the consumer's perception toward technology adoption. Similarly, the high reliability of the Purchasing Behavior axis (0.895) mirrors the harmony among items related to satisfaction, loyalty, and behavioral habit shifts.

Consequently, these results confirm that the questionnaire possesses a high level of reliability and trustworthiness, justifying the use of the resulting data for subsequent inferential statistical analysis."

3.2 Descriptive analysis

The following table presents the distribution of respondents' attitudes toward the items of the Electronic Payment and Purchasing Behavior dimensions. The analysis is based on a five-point Likert scale, employing the Arithmetic Mean to determine the direction of responses and the Standard Deviation to measure the degree of dispersion

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Table (02): Results of the Descriptive Statistical Analysis

Variable / Dimension	Arithmetic Mean	Standard Deviation	Rank
Electronic Payment (Independent Variable)	4.128	0.645	-
1. Perceived Ease of Use	4.122	0.639	2
2. Perceived Usefulness	4.346	0.582	1
3. Trust and Security	3.987	0.713	3
4. Future Intention	4.057	0.660	4
Purchasing Behavior (Dependent Variable)	4.077	0.665	-
1. Purchasing Satisfaction	4.203	0.603	1
2. Future Continuity Intention	4.181	0.615	1
3. Change in Purchasing Habits	4.020	0.709	2
4. Behavioral Trust	3.898	0.721	3

Source: Prepared by the researcher based on SPSS V.26 outputs.

- **Analysis of Electronic Payment Dimensions (Independent Variable)**

The Dominance of Perceived Usefulness: "Perceived Usefulness" ranked first with the highest arithmetic mean (4.346). This indicates that the primary driver for e-payment adoption among Sonelgaz customers is "Functional Utilitarianism," manifested in time and effort savings and the avoidance of physical queues.

Perceived Ease of Use: Ranking second with a mean of (4.122), this reflects the technical design efficiency of the institution's payment interfaces (or associated platforms). This efficiency has effectively minimized the "Cognitive Effort" required to complete transactions.

The Trust and Security Challenge: Although the mean (3.987) remains positive, it ranked lower relative to usefulness. This reflects a latent "Security Concern" within the Algerian consumer regarding digital financial transactions. This finding aligns with literature on emerging economies, which identifies trust as the "weakest link" in financial technology adoption.

- Analysis of Purchasing Behavior Dimensions (Dependent Variable)

Satisfaction and Continuity Intention: "Purchasing Satisfaction" and "Continuity Intention" dominated the results with high and convergent means of (4.203 and 4.181) respectively. This result is statistically crucial, it signifies that the shift toward e-payment is not a transient experiment but a sustainable transformation leading to customer fulfillment.

Shift in Purchasing Habits: With a mean of (4.020), results confirm that e-payment has actively begun reshaping traditional behavioral structures. Customers are transitioning from a "Cash Culture" to a "Digitalization Culture" in managing energy payments.

Behavioral Trust: Ranking last at (3.898), this dimension harmonizes with the independent variable results. It emphasizes that building complete "Digital Loyalty" still necessitates the reinforcement of institutional security guarantees.

The overall arithmetic means for both variables (4.128) for E-Payment and (4.077) for Purchasing Behavior) indicate a "High Level" of adoption and acceptance. Statistically, the low standard deviation values (less than 1) demonstrate "Homogeneity" in the sample's responses and a lack of dispersion, which bolsters the credibility of the results and their generalizability within the context of Sonelgaz. The alignment between "High Utility" in payment and "High Satisfaction" in behavior represents a "Positive Feedback Loop." As customers perceive the utility of digital services, their purchasing satisfaction is reinforced, subsequently driving them to adopt more complex digital behaviors in the future.

3.3 Hypothesis Testing

3.3.1 Testing the Correlation Between the Independent Variable Dimensions and the Dependent Variable

Table (03): Pearson Correlation Matrix

E-Payment Dimensions	Overall Purchasing Behavior (r)	Sig (2-tailed)
Perceived Ease of Use	0.648	0.000
Perceived Usefulness	0.719	0.000
Trust and Security	0.603	0.000
Future Intention	0.696	0.000

Source: Prepared by the researcher based on SPSS V.26 outputs.

The correlation analysis results presented in the table above reveal strong, positive, and statistically significant relationships between all dimensions of Electronic Payment and Purchasing Behavior, which can be detailed as follows:

1. Perceived Usefulness: Achieved the highest correlation coefficient at (0.719). Statistically, this indicates that the customer's perception of the tangible benefits gained from e-payment (such as saving time and effort at SONELGAZ) is the most potent driver in shifting their purchasing behavior.
2. Future Intention: Ranked second with a correlation coefficient of (0.696). This result reflects a firm desire among customers to continue using digital channels, suggesting that current purchasing behavior is not incidental but a sustainable pattern that will influence future transactions with the institution.
3. Perceived Ease of Use: Correlated with purchasing behavior at (0.648). This strong relationship confirms that the simplicity of the payment application interface or the SONELGAZ website plays a vital intermediary role in motivating customers to opt for digital rather than traditional payment.
4. Trust and Security: Recorded the lowest correlation coefficient compared to other dimensions at (0.603).

These findings align with the Technology Acceptance Model (TAM), noting that 'Usefulness' and 'Ease of Use' are the two fundamental pillars driving the purchasing behavior of SONELGAZ customers toward digitalization.

Furthermore, all (Sig) values reached (0.000), which is lower than the significance level (0.05). This confirms the significance of the correlation and its validity for generalization to the study population (SONELGAZ customers).

Consequently, we confirm the validity of the first hypothesis, which states: 'There is a statistically significant positive correlation between the dimensions of electronic payment and the purchasing behavior of SONELGAZ customers.'

3.3.2 Testing the Impact of the Independent Variable on the Dependent Variable

Table (04): Results of the Impact of E-payment on Purchasing Behavior

Dependent Variable		Purchasing Behavior		Equation
Analysis of Variance (ANOVA)	R	0,722		Y=0,730X+1,603
	R ²	0,521		
	F-value	Calculated	64,184	
		Tabulated	3.878	
	Degrees of Freedom	1	298	
Regression Coefficients	Independent Variable	Electronic Payment		
	b	0,73		
	a	1,603		
	T-val	14,584		
	Significance Level	0		

Source: Prepared by the researcher based on SPSS V.26 outputs.

"The Correlation Coefficient (R = 0.722) indicates a strong and positive relationship, demonstrating a high statistically significant correlation between the adoption of electronic payment methods and the evolution of purchasing behavior among SONELGAZ customers.

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The Coefficient of Determination (R^2) reached (0.521), signifying that 52.1% of the changes in the 'Purchasing Behavior' of SONELGAZ customers are primarily attributed to their use of 'Electronic Payment' systems. The remaining percentage (47.9%) is due to other factors outside the scope of this study. Statistically, this value is considered very good within the field of humanities and social sciences.

Results showed that the calculated F-value (64.184) is significantly higher than the tabulated F-value (3.878) at a significance level of (0.000). This confirms the statistical validity of the model and proves a genuine impact of the independent variable on the dependent variable.

Regression Slope (b): The coefficient value reached (0.730), meaning that for every one-unit increase in electronic payment engagement, positive purchasing behavior increases by 0.730 units.

The calculated T-value for the independent variable was (14.584), which is statistically significant ($p < 0.05$). Based on the aforementioned data, the study statistically proves that electronic payment is a key determinant in shaping the purchasing behavior of SONELGAZ customers. This result supports the institution's direction toward digitalization, as any enhancement in payment platforms will necessarily lead to a positive behavioral response from customers and increase the institution's financial collection efficiency.

Accordingly, we confirm the validity of the second hypothesis, which states: 'There is a statistically significant impact of electronic payment adoption on the shift of purchasing behavior toward digitalization.'

3.3.3 Testing the Differences Between the Mean Responses of the Participants

Table (05): Testing the Differences Between the Mean Responses of the Participants

Demogc Variable	Test Type	Cat	Arithmeti c Mean	Standar d Deviation	(F) or (t) Va l	Sig.	Statistical Significanc e
Gender	T-test	Male (N=160)	4.13	0.70	t = 0.82	0.41	Non-Significant
		Female (N=140)	4.17	0.65			
Age	ANOVA	Less than 30	4.12	0.60	F = 4.86	0.009	Significant at 0.05
		30 – 45	4.28	0.55			
		Over 45	3.96	0.75			
Educ Level	ANOVA	Secondary	4.22	0.60	F = 5.10	0.007	Significant at 0.05
		Undergraduate	3.95	0.72			
		Postgraduate	4.35	0.58			
Monthly Income	ANOVA	Less than 50,000 DZD	4.18	0.62	F = 3.96	0.002	Significant at 0.05
		50,000 – 100,000 DZD	4.00	0.70			
		More than 100,000 DZD	4.30	0.58			
E-Payment Usage Duration	ANOVA	Less than a year	4.20	0.60	F = 6.45	0.002	Significant at 0.05
		1 – 3 Years	3.85	0.75			
		More than 3 Years	4.33	0.55			

Source: Prepared by the researcher based on SPSS V.26 outputs.

The results reveal a variance in customer response toward electronic payment based on their personal and professional characteristics, detailed as follows:

- Gender (No Significant Differences): The T-test showed no statistically significant differences between males and females, with a significance level of (0.41), which is greater than 0.05. This indicates

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that the trend toward e-payment at SONELGAZ is a 'universal behavior' influenced by service quality and technical necessity rather than gender, reflecting the inclusivity of the digital service.

- **Age (Significant Differences):** The calculated F-value reached (4.86) with a significance level of (0.009). The age group (30–45 years) is the most engaged with a mean of (4.28), while the rate drops among those over 45 (3.96). This is attributed to the middle-aged group being more tech-savvy and possessing digital financial means, whereas the older group may face a 'Digital Divide' or prefer traditional patterns.
- **Educational Level (Significant Differences):** The F-value recorded a significance level of (0.007), noting that Postgraduate holders are the most inclined toward digital purchasing behavior with a mean of (4.35). There is a positive correlation between educational level and awareness of digitalization benefits, which enhances trust in using payment applications.
- **Monthly Income (Significant Differences):** Significant differences were found at the (0.002) level in favor of the high-income group (over 100,000 DZD) with a mean of (4.30). Higher income is often linked to possessing active bank cards and financial flows that require a fast, organized payment method like e-payment.
- **Duration of Use (Cumulative Effect):** This is one of the most critical findings, as the F-value reached a high significance level of (0.002) in favor of long-term users (more than 3 years) with a mean of (4.33). This validates the concept of 'Learning by Doing', as the customer's experience with the SONELGAZ e-payment system increases, their satisfaction grows, and their digital purchasing habits stabilize.

Accordingly, we confirm the validity of the third hypothesis, which states: 'The degree of electronic payment adoption varies according to demographic variables.'

Conclusion

It can be argued that digital transformation in the financial sector is no longer a technological luxury, but rather a strategic necessity imposed by contemporary developments and the evolving expectations of the modern consumer. The study confirms that the digital transformation journey in Algeria, despite the challenges it faces, is progressing steadily, with major public institutions such as Sonelgaz serving as vital anchors in disseminating digital culture and building trust among a broad and diverse customer base. The interaction of Algerian consumers with these new tools reflects not merely a change in payment methods, but a profound shift in mindsets and lifestyles, driven by a growing awareness of the importance of efficiency, speed, and transparency in everyday transactions.

Study results

Based on the statistical analysis of the collected data, the following primary results were established:

1. The study confirmed that Trust and Security act as essential mediating conditions in the Algerian context. The perception of usefulness and ease of use alone is insufficient to drive actual behavior without a strong perception of reliable security guarantees.
2. The results revealed that the Algerian consumer is developing a "Hybrid Behavioral Pattern" in which digital usage coexists with traditional cash habits. This transition is not a complete rupture with the past but a selective adaptation process determined by the degree of trust in the specific institutional context.
3. Prior Institutional Trust in a large public entity like Sonelgaz acts as a primary catalyst for overcoming psychological barriers toward financial technology. Furthermore, "Learning by Doing" (increased duration of use) leads to the consolidation and deepening of digital behavior.
4. The results showed a strong, positive, and statistically significant correlation between e-payment adoption dimensions (Ease of Use, Perceived Usefulness, Trust, Future Intention) and the digital purchasing behavior of Sonelgaz customers. Regression analysis proved a significant impact, with electronic payment explaining 51.6% of the variance in purchasing behavior, confirming the main hypothesis regarding e-payment as a formative factor of behavior.
5. "Perceived Usefulness" (saving time and effort) emerged as the most potent driver of behavior, followed by "Future Intention" to continue

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usage, indicating genuine adoption rather than temporary experimentation. "Trust and Security" ranked last despite its positive correlation, revealing that privacy and security concerns remain a psychological barrier requiring further attention.

6. Consumers acknowledged a change in their purchasing habits, preferring digital transactions and better organizing their expenses. E-payment is viewed as the future of consumption in Algeria, and its use is linked to increased satisfaction and loyalty toward the institution.
7. The study revealed statistically significant differences in adoption levels attributable to Age, Educational Level, Monthly Income, and Duration of Use. Young adults (30–45 years), high-income earners, those with higher education, and long-term users (over 3 years) exhibited the most positive digital purchasing behavior. Conversely, Gender showed no significant differences, indicating the phenomenon's inclusivity.

Recommendations

Based on the findings, the study offers the following set of recommendations directed at decision-makers at Sonelgaz, similar institutions, and policymakers:

- For Sonelgaz and Service Institutions:

1. Enhance Targeted Awareness Campaigns: Design communication strategies focused on simplifying tangible benefits (time-saving, avoiding queues) and bolstering trust by clearly explaining protection mechanisms and privacy guarantees.
2. User Experience (UX) Optimization: Continuously improve the ease of use for digital platforms and mobile applications, ensuring simple interfaces that accommodate all age groups and educational levels.
3. Market Segmentation and Targeting: Develop simplified incentive programs specifically targeting the over-45 age group and new users to help them overcome psychological and technical barriers.
4. Leverage Long-term Users: Encourage experienced users (Digital Ambassadors) to spread positive recommendations within their social circles, leveraging the power of social influence and word-of-mouth.

- For Policymakers and Regulatory Bodies:

1. Strengthen Cybersecurity Infrastructure: Develop and implement high national standards for electronic security to protect payment transactions, and publish periodic reports to reassure the public.
2. Platform Integration (Interoperability): Work toward full Interoperability between various payment platforms (postal and banking) to streamline the user experience and foster a healthy competitive environment.
3. Digital Financial Literacy: Incorporate e-payment and digital security awareness into educational curricula and community programs to build a solid digital financial culture.

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