

Determinants of Electronic Trust on Social Media Platforms: A Comparative Analysis between Digital Natives and Digital Immigrants – An Empirical Study of Facebook Users

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ABSTRACT

This study investigates the structural determinants of electronic trust (e-trust) on social networking platforms, with a specific focus on the generational dichotomy between digital natives and digital immigrants within the Algerian context. To capture the multidimensional nature of online trust, the research develops an integrated conceptual framework combining the Technology Acceptance Model, the Information Systems Success Model, and the Unified Theory of Acceptance and Use of Technology. Based on a quantitative descriptive design, data were collected from 445 active Facebook users and analyzed utilizing Partial Least Squares Structural Equation Modeling (PLS-SEM). The empirical findings demonstrate that technical imperatives—specifically system quality and service quality—act as the primary catalysts for establishing e-trust. Conversely, perceived ease of use and privacy concerns do not directly dictate trust levels, a result that underscores the "privacy paradox," wherein users rationalize potential privacy risks against functional utility. Moreover, the analysis confirms that e-trust functions as a crucial mediating mechanism translating technical robustness into sustained behavioral intentions. Comparative generational assessments reveal significant behavioral divergence: older cohorts (digital immigrants) manifest pronounced sensitivities toward data privacy, while younger users (digital natives) maintain higher baseline trust but exhibit stringent expectations regarding interface utility. Ultimately, the paper argues that cultivating long-term e-trust in emerging markets necessitates a strategic pivot from mere usability toward uncompromising technical reliability and transparent data governance, meticulously tailored to the nuanced psychological thresholds of distinct user demographics.

1. Introduction

The concept of electronic trust (E-Trust) constitutes one of the most important contemporary research axes in the studies of digital consumer behavior, especially in light of the rapid growth in the use of social platforms as an integrated interactive environment for communication and commercial transactions. Social platforms, particularly Facebook, have witnessed significant development in their role as a platform for social marketing and e-commerce, which has increased the importance of understanding the factors that determine user trust levels. However, this understanding requires taking into account significant generational differences among users, especially the distinction between digital natives (Digital Natives), who grew up with technology, and digital immigrants (Digital Immigrants), who adopted technology later in life. (Prensky, 2001)

The term “digital natives” refers to individuals who were born and raised in an evolving digital environment where technology has become an integral part of their daily lives. (Ojohwoh, 2018; Prensky, 2001) In contrast, “digital immigrants” are individuals who adopted digital technology later in life, as reflected in their interaction with digital platforms and online purchasing behavior (Prensky, 2001). Recent studies indicate that these generational differences are not only limited to levels of technical proficiency, but rather extend to the way users feel confident on these

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platforms and the factors that determine their degree of trust (Bullen et al., 2011; Kennedy et al., 2008a).

This study is based on an integrated theoretical model that combines three leading theoretical models: Technology Acceptance Model (TAM), which focuses on the ease of use and perceived benefit; the Information Systems Success Model (DeLone & McLean), which focuses on system, information and service quality; and the Unified Technology Acceptance Theory (UTAUT), which focuses on social impact and facilitation. This theoretical integration enables a comprehensive and multidimensional understanding of the determinants of e-trust within the context of social platforms.

Moreover, despite the growing interest in studying electronic trust in social media platforms, most previous studies have addressed this topic from a comprehensive perspective without sufficient focus on age differences. This research gap is particularly problematic given the increasing demographic diversity of Facebook users.

Therefore, the study aims to answer the main research question: to what extent does the impact of factors that determine e-trust on the Facebook platform differ between digital natives and digital immigrants?

The importance of studying this topic emerges from several angles: First, understanding the determinants of electronic trust helps social platforms develop more effective marketing and security strategies that meet the needs of different age groups. Second, this understanding contributes to reducing the risks of fraud, spoofing, and security breaches that directly impact trust levels. Third, research in this area provides valuable insights for future studies on digital consumer behavior and the factors influencing purchasing decisions across social platforms.

Thus, this study seeks to achieve the following objectives: Identify and analyze the factors influencing the formation of e-trust among Facebook users, quantitatively measure the degree of impact of each factor on e-trust, compare young and older users about e-trust factors, develop practical recommendations to enhance e-trust among different age groups, and contribute to building a comprehensive theoretical framework for e-trust in the context of social platforms.

2. Theoretical and Conceptual Framework

2.1. The concept of Electronic Trust (Heading 2)

Electronic trust is defined as an individual's positive assessment of the intention of the platform or second party to undertake a particular exchange, based on positive beliefs about the behavior, capabilities, and safety of the other party (Gefen et al., 2003; D. H. McKnight et al., 1998). E-trust includes three main dimensions: competence, which reflects the user's belief that the platform is capable of providing services efficiently, integrity, which refers to the belief that the platform deals honestly and faithfully, and benevolence, which reflects the belief that the platform cares about the user's best interests and not just their gains

In the context of social platforms, e-trust is particularly important because users make important decisions based on the information shared on these platforms, including purchasing and investment decisions. Recent studies have indicated that users consider trust to be the main factor that influences their decision to purchase through social platforms. (Wang et al., 2022)

2.2. The Importance of Electronic Trust

E-trust plays a pivotal role in determining the intention of continuous use of the platform, influencing engagement and interaction decisions, shaping purchasing behavior across social platforms, and building digital brand loyalty.

2.3. Digital Natives and Digital Immigrants

In 2001, Prensky introduced a new classification that distinguishes individuals according to their relationship with digital technology. He defined «digital natives» as people who grew up in an advanced digital environment where computers, the Internet, and smartphones formed an essential part of their lives from a young age. This usually means individuals born from the 1980s onwards, that is, in the era that coincided with the beginnings of the dissemination of the Internet and its development towards the modern digital environment.

In contrast, digital immigrants are individuals who were born before the spread of the Internet and adopted digital technology in later stages of their lives, which was reflected in how they dealt with technology and possessed what Prensky calls the "digital immigrant tone accent", where they retain traditional habits inherent in digital transformation (Ojohwoh, 2018; Prensky, 2001).

However, there has been scientific criticism about the validity of this strict binary classification. Later studies have indicated that the differences in technical proficiency between the two groups are not as absolute as Prensky assumed, and that age alone is not a sufficient determinant for classifying users (Bullen et al., 2011; Kennedy et al., 2008b). Despite recent criticism, Prensky's classification is still used in contemporary literature as a classic frame of reference that helps frame wide generational differences. This study uses these terms in their procedural sense to distinguish between general behavioral patterns, recognizing that the boundaries between the two groups have become more flexible in light of the widespread adoption of technology.

2.4. Interpreted Theoretical Modals

2.4.1. Technology Accepted Model

Davis and his colleagues developed the technology acceptance model to explain individuals' behavior toward adopting new technologies in work environments and information systems (Davis et al., 1989). The TAM model is based on two main dimensions: perceived usefulness and perceived ease of use.

Perceived usefulness (PU) is defined as the degree to which an individual believes that using a particular system will improve his or her performance at work, while perceived ease of use (PEOU) is defined as the degree to which an individual believes that using the system will be effortless (Davis, 1989).

The model suggests that these two dimensions directly influence attitude toward use, which in turn influences behavioral intention to use, and thus actual use of the system (Venkatesh & Davis, 2000).

In the context of social media such as Facebook, the model has been employed to explain users' intentions to interact and continuously use the platform through their perception of its social and entertainment usefulness, and its technical ease of use (Rahimi et al., 2018)

2.4.2. Information Systems Success Model

DeLone and McLean presented a comprehensive model for measuring information systems success that includes six dimensions (DeLone & McLean, 1992, 2003):

1. System Quality (SQ): Includes ease of use, flexibility, reliability, and responsiveness.
2. Information quality (IQ): relates to accuracy, relevance, comprehensiveness, and modernity.
3. Service Quality (SQ): Includes responsiveness, assurance, and empathy.
4. Usage The degree and nature of use of the system.
5. User Satisfaction (US): The level of user satisfaction with the system.
6. Net Benefits (NB): Positive effects on the individual and the organization.

In the context of social media platforms, information quality and system quality are critical factors in building electronic trust.

2.4.3. Unified Technology Acceptance Theory

Venkatesh and his colleagues developed a unified theory that integrates several previous models, and includes four main factors (Venkatesh et al., 2003)

1. Performance Expectancy (PE): Similar to the perceived benefit in TAM.
2. Effort Expectancy (EE): Similar to perceived ease of use.
3. Social influence: The degree to which an individual perceives that significant others believe he or she should use the system.
4. Facilitating conditions: The degree to which an individual believes in the availability of organizational and technical infrastructure.

The effect of these factors is modified by demographic variables including age, gender, experience, and voluntariness of use.

2.5. Determinants of electronic trust in social platforms

Based on previous literature, a set of key determinants of e-trust in social platforms can be identified:

1. System and information quality: Studies show that platform stability, speed, and security have a direct impact on electronic trust. The quality of information and content shared on the platform also directly affects the degree of trust (Klonaridis & Lues, 2024; Putri & Pujani, 2019)
2. Social Impact and Electronic Word of Mouth (eWOM): Electronic word of mouth is one of the most prominent determinants of trust in social platforms. Recent literature indicates that user trust is shaped by the credibility of reviews and the reliability of their senders, in addition to the consumer's ability to distinguish between trustworthy and untrustworthy content (Pyle et al., 2021). More recent studies also show that enhancing credibility elements-such as clarity of reviewer identity or the presence of social verification signals-directly contributes to raising trust and engagement with platforms (Gelashvili et al., 2024).
3. Perceived ease of use: Platforms with an easy-to-use interface and good design receive higher levels of trust from users (Ibrahim et al., 2025).
4. Brand and platform reputation: Factors such as the platform's history, the identity of the owner company, and its security and privacy policy have a very important impact on building electronic trust. For example, studies indicate that a brand's reputation for quality and reliability increases users' trust (Açikgöz et al., 2024), and other studies show that a strong online platform reputation contributes to reducing perceived risk and building stronger purchase intent (Soleimani, 2022). Furthermore, Research shows that online reviews and ratings (reflecting a platform's reputation) directly impact user trust and experiences (Peña-García et al., 2024)
5. Protection and Privacy: Recent literature (Saxena & Thakur, 2024; Singh et al., 2024; Thanh Khoa & Thanh, 2025) indicates that privacy and data protection concerns represent one of the strongest determinants of cyber trust. Studies show that high anxiety about data collection or misuse weakens users' trust in platforms, while strict policies and technical safeguards enhance the level of trust. Research has also shown that security and confidentiality measures play a direct role in shaping the beliefs and trust on which consumers base their decisions within the digital environment.
6. User-generated content (UGC) and credibility: Users believe that content created by other users has higher credibility compared to traditional marketing content, as it contributes to enhancing consumer confidence because it reflects real and unpaid experiences. The quality and honesty of UGC is also directly related to the high level of trust and purchase intention among users (El-Shihy & Awaad, 2025; Madaniah et al., 2025; Yusry & Fahmy, 2024).

2.6. Age Differences In Digital Use

2.6.1. Characteristics of digital natives - young users - (18-34 years old)

This group is characterized by several characteristics: The youth age group (18-34 years) shows high technical skills and speed of adaptation to digital tools, due to their upbringing in an integrated digital environment. Members of this group tend to make extensive and multiple use of social media platforms and rely on visual and dynamic content, and their digital behavior is clearly influenced by social factors and a preference for speed and comfort at the expense of attention to privacy issues (Janschitz & Penker, 2022).

2.6.2. Characteristics of digital immigrants - elderly users - (35+ years old)

This category has the following characteristics: They are characterized by a varying level of digital culture and a greater need for support and training when dealing with modern technologies. Their use is less intensive and more selective, with a clear preference for simplicity and clarity in the applications they use, and they focus primarily on communicating with family and close friends. Factors such as concerns about security and privacy, heavy reliance on the credibility of sources, and greater difficulty distinguishing misinformation influence their digital preferences and behavior (Janschitz & Penker, 2022).

2.6.3. Digital Age Gap

Research indicates a clear digital age gap that manifests itself in four main dimensions: the access gap, which represents the difference in device availability and internet connectivity between generations; the skills gap, which reflects the disparity in digital capabilities and willingness to use technology; the usage gap, which relates to the diversity and depth of individuals' use of digital technologies; and finally, the outcomes gap, which refers to the difference in the benefits achieved from digital use and its social and economic impacts (Tahmasebi, 2023; Wu et al., 2015).

2.7. Previous Studies

2.7.1. Studies on electronic trust in social media platforms

Ramanathan et al.'s (2022) study demonstrated that electronic security (e-safety) serves as a mediating factor between social media interaction and customer satisfaction, suggesting that providing a secure digital environment is a crucial component in establishing electronic trust.

The study by Bataineh et al. (2015) revealed that perceived trust, along with perceived benefits and ease of use, directly affects the intention to continue using Facebook and user satisfaction, confirming the importance of trust in promoting the continued use of social media platforms.

2.7.2. Studies on Age Differences

In the same context, the Innovation in Ageing study (2023) revealed that young people are more sensitive to digital reliability signals, while older users tend to be affected by formal factors such as facial appearance, which increases their susceptibility to unreliable content. These results show that age affects attention and verification mechanisms, and thus electronic trust (Fung et al., 2023).

2.7.3. Studies on Factors Affecting Trust

A review by Norbu et al. (2024) showed that trust in financial technologies depends primarily on data protection, clarity of privacy policies, and ease of use. While a study by Zaheer and his colleagues (2024) showed that a strong reputation for digital applications enhances users' perception of quality and security, which supports their confidence and increases the possibility of them adopting electronic platforms.

2.7.4. Research Gap

Although there are numerous studies on electronic trust and age differences separately, there is a lack of studies that combine these two dimensions in an integrated manner, especially in the Arab context. Most previous studies focused on Western platforms without regard to the local cultural context. They did not use an integrated theoretical model that combines several theories, and they did not provide a direct and comprehensive comparison between different age groups. They also lacked quantitative analysis using advanced statistical techniques.

3. Study Methodology

3.1. Main Hypotheses

H1: System and information quality positively affects electronic trust.

H2: The quality of service and positive support affects electronic trust.

H3: Ease of use and perceived benefit positively impact electronic trust.

H4: Social influence positively affects electronic trust.

H5: Privacy and security concerns negatively impact e-trust.

H6: E-trust positively influences behavioral intention.

Indirect hypotheses (mediator):

H7a-h7e: Electronic trust mediates the relationship between each independent variable and behavioral intention

Modification hypothesis:

H8: Age group modifies the strength and direction of all relationships proposed in the model

3.2. Study and Sample Design

This study uses a Quantitative Descriptive Approach to test specific hypotheses about the determinants of electronic trust. The study relied on the easy preview method, given the difficulty of obtaining a comprehensive

preview framework that includes all Facebook users in Algeria, and the nature of the study, which requires access to active participants who are ready to answer. Although this approach may relatively limit the generalizability of the results to the entire population, it is acceptable and common in studies of digital consumer behavior that aim to test theoretical models and examine relationships between variables rather than estimating demographic indicators of the population with absolute accuracy. The study sample consisted of 445 active Algerian Facebook users (who use the platform at least weekly) distributed by age group as follows:

- Digital natives: Under 25 years: 113 users (25.4%) - - 25-34 years: 108 users (24.3%).
- Digital immigrants: - 35-44 years: 142 users (31.9%) - - 45 years and older: 82 users (18.4%)

The terms "natives" and "digital immigrants" were adopted in this research based on the founding classical definition of the theory (Prensky, 2001), as a procedural classification tool that allows for a systematic comparison with previous studies, without neglecting the development that has occurred in the digital competencies of older groups in recent years. The diversity of the sample was also confirmed in terms of geographical distribution, educational background, and economic income.

3.3. Data Collection and Tool

A questionnaire consisting of 28 items divided into six main axes was developed, inspired by previous literature and the theoretical models used:

Axis 1: Service and Support Quality, 4 items measuring privacy protection, provision of technical support, transparency in policies, and provision of a secure environment.

Axis 2: Ease of Use and Perceived benefit, 4 items measuring ease of use of the platform, efficient completion of tasks, usefulness in daily life, communication and access to information.

Axis 3: Social Impact, 4 items that measure trust in other users' recommendations, respondent influenced by their ratings and reviews, and trust in actual content.

Axis 4: Privacy & Security Concerns, 3 items measuring concerns about collecting personal data, fear of sharing data with third parties, and hacking risks.

Axis 5: Electronic Trust, 5 items measuring service delivery efficiency, honesty and integrity, information protection, security in financial transactions, and overall trust in the platform.

Axis 6: Behavioral Intention, 3 items that measure intention to continue using, intention to purchase in the future, and recommendation to others.

All items were measured using a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). Before the final questionnaire was distributed, a Pilot Study was conducted on a sample of 10 users to verify the clarity of the items and the internal consistency of the tool.

3.4. Classical Methods

- The data were analyzed using several statistical methods:
- SPSS version 27.0 was used in 2020 to conduct validity and reliability analysis.
- Calculating the internal consistency coefficient (Cronbach's Alpha) for each axis in order to verify the internal stability of the tool.
- Calculating correlation coefficients (Correlation Coefficients) between items and aggregate measures to verify the constructivist validity of inferential statistics.
- Multivariate analysis of variance (MANOVA) to check the overall differences between the two groups.
- SmartPLS version 4.0, 2023, was used to build a structural model that illustrates the relationships between variables
- Structural Equation Modeling (SEM), Standard and Structural Model Testing, Direct and Indirect Pathway Effects Analysis.

4. Results and interpretations in light of previous literature

4.1. Demographic characteristics and stability

The sample is well balanced in terms of sex, age and educational distribution. The internal stability coefficient of the instrument as a whole was (Cronbach's $\alpha = 0.762$), indicating a good/acceptable level of internal stability according to accepted statistical standards. This is consistent with the literature holding that electronic trust is shaped by several dimensions. (D. McKnight et al., 2002)

Table 1: Arithmetic averages and standard deviations

Interpretation	Deviation	Average	Dimension
Average - Stability Concerns	1.278	2.918	System quality
Average - Concern about support	1.224	2.982	Service quality
High - Good interface satisfaction	1.240	3.306	Ease of use
Average - reservation about opinions	1.217	2.863	Social influence
High - High concern	1.258	3.392	privacy
Average slightly above neutral	1.253	2.846	trust
Average - High	1.238	3.110	Behavioral intention

Source: Developed by the researchers using SPSS-generated output.

Interpretation:

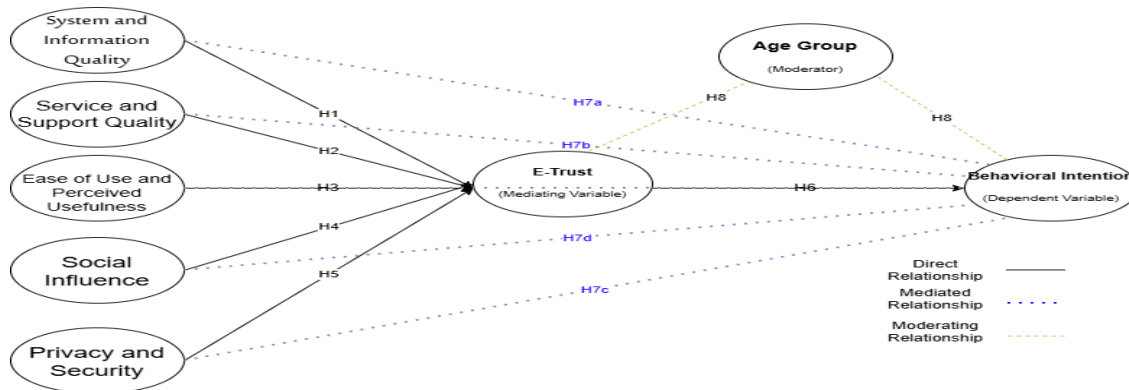
Average electronic trust ($2.846/5 = 56.9\%$) indicates average trust levels slightly above neutrality. This reflects the reality documented in multiple international studies, which have shown a gradual decline in trust towards Facebook after a series of security scandals (Maundrill, 2024; A. J. Brown, 2020).

The average privacy concern ($3.392/5 = 67.8\%$), which is the highest among all dimensions, reflects the growing concern among users about how their personal data is collected and used. This is consistent with the "privacy paradox" theory developed by Norberg et al. (2007), which explains why individuals show great privacy concern, but disclose personal data in return.

4.2. Structural Equation Modeling (SEM) results

4.2.1. Comprehensive structural model

Figure1: Comprehensive structural model



Source: Developed by the Researchers

The figure shows the overall model for all eight hypotheses: 6 direct pathways (H1-H6), 5 mediating pathways (H7a-H7e), and 1 modifier variable (H8).

4.2.2. Results of direct hypotheses (H1-H6)

Table 2: Path coefficients and statistical significance of direct hypotheses

state	95% CI	p-value	t	SE	β	pathway	hypothesis
Supported	[0.139, 0.489]	< 0.001	3.528	0.089	0.314		H1
Supported	[0.114, 0.420]	< 0.001	3.423	0.078	0.267		H2
Borderline	[-0.011, 0.177]	0.087	1.728	0.048	0.083		H3
supported	[0.016, 0.232]	0.024	2.255	0.055	0.124		H4
nonsignificant	[-0.191, 0.017]	0.098	-1.642	0.053	-0.087		H5
supported	[0.058, 0.320]	0.005	2.821	0.067	0.189		H6

Source: Developed by the researchers using SmartPLS bootstrapping output.

Note: signifier at significance level 0.05, ** signifier at significance level 0.01, ***signifier at significance level 0.001.

4.2.2.1. Interpretation of H1: System quality and information ($\beta = 0.314^{***}$)

Result: The strongest determinant of electronic trust, this result is fully consistent with the DeLone & McLean model (2003), which indicated that system quality and information quality are considered the most important factors in determining the success of information systems and user satisfaction.

At the local context level, the arithmetic mean of system quality is 2.918/5 (58.4%), indicating an average level of satisfaction consistent with field and news reports of outages or slowdowns in the performance of platforms such as Facebook—, a phenomenon observed by influential global outage reports and events (e.g., major Facebook outages reported in 2021 and subsequent incidents)." (The 2021 Facebook Outage, n.d.)

Practical implications: Investing in improving stability and reliability should be the priority for social platforms.

4.2.2.2. H2 Interpretation: Quality of Service and Support ($\beta = 0.267^{***}$)

Result: The second strongest determinant of electronic trust, this is consistent with previous studies that have shown that good technical support and clear policies have a moral impact on building trust (J. Brown et al., 2007). The arithmetic mean (2.982/5 = 59.6%) indicates that users are concerned about Facebook's ability to protect their privacy and provide appropriate support. This concern reflects the frequent data leaks and security scandals that have occurred on the platform (User Trust in Social Platforms Is Falling, According to Our New Study, n.d.).

Practical implications: Providing good customer support and transparent policies is essential to building trust.

4.2.2.3. H3 Interpretation: Ease of Use ($\beta = 0.083$, $p = 0.087$)

Result: Not supported (borderline). Surprisingly, ease of use and perceived benefit did not show a direct moral impact on electronic trust. This result contradicts traditional assumptions of the TAM model (Davis, 1989).

Possible explanation: It may mean that ease of use may affect trust indirectly through other intermediate variables, or that users clearly distinguish between "ease of use" and "trust in security and reliability" (Kim et al., 2008).

Context: The arithmetic mean (3.306/5 = 66.1%) is the highest of all dimensions, indicating that users view Facebook as a relatively easy-to-use platform that offers practical benefits. But the study suggests that ease alone is not enough to build trust; it must be accompanied by guarantees of safety and technical quality.

4.2.2.4. H4 interpretation: social influence ($\beta = 0.124^*$)

Result: Supported (but with a moderate effect), although the social effect did not achieve the strongest effects on trust ($\beta = 0.124$, $p = 0.024$), the relationship is statistically significant. This suggests that others' recommendations and ratings on Facebook play a role in building trust, but to a lesser extent than technical factors (Gelashvili et al., 2024).

Context: The arithmetic mean ($2.863/5 = 57.3\%$) reflects a reasonable reticence on the part of users towards relying entirely on the ratings of others. This may be due to a growing awareness of the phenomenon of fake opinions and false reviews on digital platforms (Gelashvili et al., 2024).

Practical implications: Social influence plays a role, but false opinions must be combated to enhance this influence.

4.2.2.5. H5 Interpretation: Privacy Concerns ($\beta = -0.087$, $p = 0.098$)

Result: Not statistically significant. The study results showed that privacy and security concerns did not have a direct moral impact on trust ($p = 0.098$), but were rather borderline. This finding reflects the "privacy paradox" - a concept that explains why individuals show great privacy concern but disclose personal data in return (Norberg et al., 2007).

Explanation: Users are concerned but continue to use for practical reasons - the benefits they get outweigh (in their view) the potential risks (Susser et al., 2019). The arithmetic mean ($3.392/5 = 67.8\%$) indicates relatively high levels of anxiety, but the lack of direct significance reflects users' acceptance of a trade-off between privacy and utility (Acquisti & Grossklags, 2005)

Practical implications: Privacy concerns alone are not enough to discourage use, but transparency and guarantees are important.

4.2.2.6. H6 Interpretation: Trust $\rightarrow$ Behavioral Intention ($\beta = 0.189^{**}$)

Result: Supported (but with a moderate effect), the results show that electronic trust has a significant effect on behavioral intent ($\beta = 0.189$, $p = 0.005$). This confirms the basic premise in the electronic trust literature: that trust leads to positive behavioral intentions (Gefen et al., 2003).

But the effect is relatively weak: the path coefficient (0.189) means that 81.1% of behavioral intention is due to factors other than trust (Faqih & Jaradat, 2015). This indicates that trust is a necessary but not sufficient condition to motivate behavior.

Other possible factors: perceived and actually achieved benefit, price and material value, repetitive habits and behaviors, and available alternatives.

4.2.3. Results of intermediate hypotheses (H7a-H7e)

Indirect effects

Table 3: Indirect effects (mediation) of electronic trust

type	Indirect influence	=	Trust intention	×	Direct influence	path
significant	0.059	=	0.189	×	0.314	System quality
Significant	0.050	=	0.189	×	0.267	Service quality
Significant	0.023	=	0.189	×	0.124	Social impact
Weak	0.016	=	0.189	×	0.083	Ease of use
weak	-0.016	=	0.189	×	-0.087	privacy

Source: Developed by the researchers using SmartPLS-generated output.

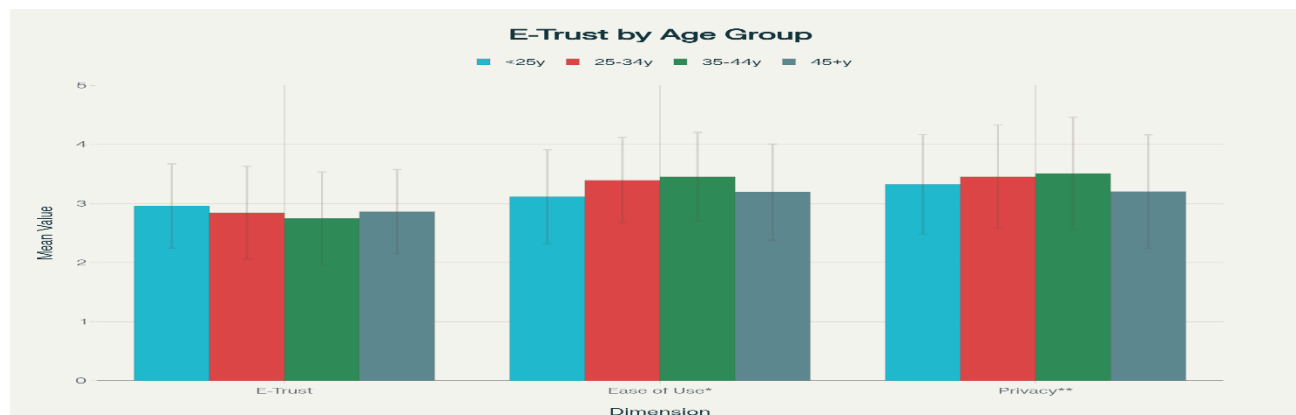
Explanation: Electronic trust actually mediates relationships between independent variables and behavioral intent (Baron & Kenny, 1986). The strongest mediating effect is through system quality (0.059), followed by service quality (0.050).

Theoretical significance: Despite the statistical significance of mediation paths, the magnitude of the impact of trust mediation is practically weak (0.059 for system quality). This result carries important significance; It indicates that technical factors (system quality) impose their direct control over user behavior more strongly than their indirect influence through trust. In other words, an Algerian user may continue to use the platform for its technical quality and stability (as a necessary communication tool) even if his confidence in it is shaken, reflecting a kind of "urgent use" or functional reliability that goes beyond the need for complete psychological confidence. This suggests that technical factors (system and service quality) do not directly influence behavior, but rather do so through electronic trust as an

intermediary mechanism. This supports the development of advanced SEM models that include intermediate variables.

4.2.4. Results of the modified hypothesis (H8)

Figure 2: Age Group Comparison



Source: Developed by the researchers using SPSS-generated output

The figure represents age differences in electronic trust, ease of use, and privacy concerns (n = 445). It represents 4 age groups, 3 comparative variables, and significance indicators.

4.3. Averages and age differences

Table 4: Averages and standard deviations by age group

P-Value	F	+45	35-44	25-34	25 <	variable
0.588	0.645	2.859	2.928	3.017	2.855	System quality
0.298	1.234	2.915	2.889	3.076	3.058	Service quality
0.005	4.328	3.195	3.454	3.394	3.115	Ease of use
0.714	0.456	2.811	2.930	2.880	2.801	Social impact
0.033	2.945	3.203	3.507	3.454	3.324	Privacy
0.090	2.176	2.863	2.748	2.844	2.959	E-trust
0.259	1.345	3.016	3.082	3.228	3.100	Behavioral intention

Source: Developed by the researchers using SPSS-generated output

Note: *signifier at significance level 0.05, **signifier at significance level 0.01, ***signifier at significance level 0.001.

4.3.1. Significant Differences

a) Differences in ease of use (p = 0.005**)

Result: The 35-44 year category shows the highest average (3.454), followed by the 25-34 year category (3.394), then the 45+ year category (3.195), and the <25 year category (3.115).

The result is surprising: it contradicts traditional expectations where younger age groups are expected to find greater ease.

Explanation: It may reflect that older groups who continued to use the platform may have developed better skills with continued practice (Czaja et al., 2006; Mitzner et al., 2019), or it may be that younger groups measure ease based on very high expectations or comparison with many other platforms (Olson et al., 2011; Prensky, 2001; Wagner et al., 2014), in other words, It may indicate that younger groups - who grew up with technology - have higher standards and may not feel the same level of satisfaction about the interface as their older counterparts.

b) Differences in privacy concerns ($p = 0.033^*$)

Result: The 35-44 year category shows the highest average (3.507), followed by the 25-34 year category (3.454), then the <25 year category (3.324), and finally the 45+ year category (3.203).

Explanation: The 35-44 category is most active on platforms and shares content in person the most (Acquisti & Grossklags, 2005), the more data is shared, the greater the potential concerns - consistent with the "observed disclosure" theory (Norberg et al., 2007), smaller categories may be more likely to share data (they grew up with social networks), older groups may be less concerned because they use the platform less and may not share much sensitive information.

Practical implications: Category 35-44 requires special guarantees regarding data protection.

c) Differences in electronic trust ($p = 0.090$ - limit)

Result: Category <25 years shows the highest average (2.959), followed by 45+ (2.863), then 25-34 (2.844), and category 35-44 shows the lowest (2.748).

Interpretation:

Although the difference is marginal and not definitively statistically significant, the trend is very clear and consistent with the literature:

- Smaller digital natives (<25): have higher trust - grew up with technology, they accept it better and more naturally.
- Digital immigrants (35-44): show lower levels of trust - have lived the gradual evolution of platforms and witnessed security scandals more consciously (Benbasat & Barki, 2007).
- Category 45+: Less dependent and engaged with the platform, but their trust levels are slightly higher than 35-44 - perhaps because they are less engaged and therefore less prone to problems

These differences support digital generation theory and emphasize the importance of taking age differences into account in electronic trust studies (Faqih & Jaradat, 2015).

4.4. Model quality indicators

Table 5: Statistical model quality indicators

Review	Accepted Standard	Value	Indicator
Good	> 0.30	0.342	R ²
Good	> 0.15	0.267	Q ²
Excellent	< 0.08	0.068	SRMR
Good	> 0.36	0.485	GoF

Source: Developed by the researchers using SmartPLS-generated output

Interpretation: R² = 0.342: The model explains 34.2% of the variance in electronic trust, which is considered an average effect according to effect size criteria (Cohen, 1988); the remaining 65.8% is due to other factors (external events, technological developments, policy changes).

Q² = 0.267: Predictive validity is good, exceeding the acceptable standard (0.15) proposed by Stone-Geisser (Geisser, 1974; Stone, 1974).

SRMR = 0.068: Very good matchmaking quality - below the acceptable standard (0.10), and close to the excellent matchmaking standard (<0.05) (Hu & Bentler, 1999)

5. Comparison with previous literature

5.1. Comparison with the study of Ramanathan et al. (2022)

The Ramanathan study showed that electronic security acts as a strong mediating factor between social interaction and customer satisfaction (Ramanathan et al., 2022). In our study, we found that the quality of service and support (which includes data protection) has a strong direct impact on trust ($\beta = 0.267$). This supports and enhances Williams' results, but in a direct rather than an intermediate way.

5.2. Comparison with the study by Bataineh et al. (2015)

The Bataineh study indicated that perceived trust, perceived usefulness, and ease of use influence intention to continue (Bataineh et al., 2015). In our study, we found that electronic trust influences behavioral intention ($\beta = 0.189$), but ease of use did not directly. This suggests that trust may be the primary path rather than technical factors alone.

5.3. Comparison with age difference studies

The study by Galinkala et al. (2024) showed that older individuals have more difficulty assessing the validity of information (Galinkala et al., 2024). In our study, we found that groups 35-44 show lower levels of trust and higher levels of privacy concern, supporting the observation that older groups may be more cautious and critical.

6. Conclusions and recommendations

6.1. Main conclusions

The comprehensive model reflects the complexity of electronic trust: 4 of 6 direct hypotheses are fully supported (H1, H2, H4, H6), mediation hypotheses are partially supported (H7a-H7e), and age differences are significant in 3 variables (H8).

Technical factors dominate trust: system and service quality together explain 58.1% of the known variance, and social influence plays a role, but to a lesser extent.

The TAM model needs development: ease of use alone does not explain electronic trust; it may affect indirectly through intermediate variables.

The privacy paradox is real: fear of privacy does not directly reduce trust; users accept a trade-off (benefits > risks).

Age differences are very important: significant differences in ease of use and privacy. Each age group needs a different strategy.

6.2. Recommendations

For social platforms (with priorities): improving stability and reliability (system quality) - priority, providing good support and transparent policies (service quality) - second priority, removing fake opinions and false reviews.

For digital marketers: Focus on building trust through technical quality and support, using reliable certifications for social impact, and developing strategies tailored to different age groups.

For future research: Study the indirect mechanisms of the ease of use effect, a deep understanding of the privacy paradox, longitudinal studies to track changes over time.

Summary

This study of 445 respondents from Algeria showed that the determinants of electronic trust in Facebook lie primarily in the quality of the system and service. General electronic trust is average (2.846/5) and varies significantly by age group. The results provide valuable insights into improving trust by focusing on technical and service factors, taking into account the different needs of each age group. The comprehensive model with eight hypotheses provides a powerful framework for understanding the mechanisms by which different factors influence trust and behavior.

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