

The Impact of Privacy and Data Localization on the Digital Consumer Behavior of Generation Z across E-Commerce Platforms: A Study in the Arab Environment

Nassira Salmi¹Mohamed Boudiaf University of M'sila (Algeria)
nassirasalami80@gmail.com**Noudjoud Hamri²**² University of Bouira (Algeria)
hamri.noudjoudd@gmail.com

Abstract

Background and purpose: Arab countries, as a growing economic center, are among the environments witnessing increasing reliance on electronic shopping owing to the ease and diversity of products it offers; however, its spread faces obstacles to adoption because of these risks. This study examines the impact of Arab Generation Z consumers' perceptions of privacy risks and data localization, and seeks to understand how these perceptions affect consumer behavior on e-commerce platforms.

Materials and methods: A cross-sectional quantitative survey design was used, in which data were collected from 106 Generation Z e-shoppers from various Arab countries. The research instrument comprised a structured online questionnaire designed to assess perceived privacy and security risks as well as consumer behavior. The t-test and multiple regression analysis were used to test the hypotheses.

Results: The results indicate that privacy and data localization have a significant effect on the digital consumer behavior of Arab Generation Z on e-commerce platforms. The model explained 36.2% of the variance in the digital consumer behavior of Arab Generation Z across electronic platforms, resulting from privacy and data localization, which highlights the importance of their dimensions in shaping consumer behavior. Their influence varies and carries different weights compared with other factors, and these elements are understood not merely through the level of perception or expressed fears, but through their translation into actual behavior.

Conclusion: This research provides valuable insights for e-commerce companies and marketing strategy makers by prioritizing investment in measures that improve the transformation of consumers' perceptions of

¹ Received: June 06, 2025; Accepted: August 08, 2026; Published: September 05, 2026

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privacy, security, and data localization into actual behavior, enabling companies to enhance trust, encourage repeat purchases, and drive sustainable growth in e-commerce.

Keywords: Generation Z; privacy; data localization; e-commerce platforms; trust

Introduction

The emergence of digital technologies has brought about a radical transformation across various economic sectors, and the e-commerce sector has been among the sectors that benefited most from this transformation, given the spread of the Internet and smartphones, which have contributed to expanding the scope of electronic transactions. The International Telecommunication Union reported that global Internet penetration reached approximately 74% in 2025 (equivalent to about 6 billion people), an increase of 5.8 billion compared with 2024. The number of Internet users in the Arab world specifically reached about 348 million users, representing 70.2% of the total population, of whom 46% are social media users—approximately 228 million of the total population (Banks, 2025).

E-commerce platforms have become a primary environment for displaying products and services and completing purchases. In Saudi Arabia, for example, research has indicated a notable increase in e-commerce revenues, which are expected to reach SAR 204 billion by 2024, with the number of online stores increasing from 28,676 to 57,000 (Aljobasi et al., 2024). A Deloitte (2025) report clarified that 73% of consumers in Saudi Arabia and the UAE made a purchase through social media during 2025, and 58% use generative artificial intelligence applications. This has led to increased consumer reliance on these platforms owing to the ease of access, the wide range of products, competitive prices, and the speed of completing transactions they offer, making e-commerce one of the most important components of the digital economy. This development has brought about a change in consumer behavior, as it has become influenced by multiple digital factors, such as the information available on platforms, user experiences, the level of trust in the platform, and personal data protection mechanisms. Consequently, understanding digital consumer behavior has become one of the topics receiving increasing attention in the marketing literature, given its role in explaining consumer behavior and thus building effective marketing strategies.

Conversely, this rapid growth of e-commerce has been accompanied by concerns about privacy and data protection among digital consumers, as their perception of the level of privacy has become an influential factor in building trust and making purchasing decisions, especially with the increase in data breach and privacy violation incidents. This is in addition to the issue of data localization as one of the most important modern trends aimed at enhancing and protecting digital data in accordance with local legal frameworks. This trend has received increasing attention from governments and institutions, given the support it provides for digital sovereignty and the enhancement of consumer trust, which in turn is reflected in their dealings with e-commerce platforms.

Significance of the study. Privacy and data localization issues are of particular importance. Despite the growing global interest in this topic, most studies have focused on the Western environment, while studies addressing it in the Arab context remain limited, and even when they exist, they have often focused on explaining consumer behavior through traditional variables without providing an integrated conception that explains how privacy- and data-localization-related factors interact in shaping the digital consumer behavior of Generation Z in the Arab environment. This limits the understanding of the nature of this generation in an Arab context witnessing an accelerating expansion in the use of e-commerce platforms, which highlights the need to understand these variables in light of the local characteristics of the Arab consumer. The need to conduct more studies in the Arab environment increases, as the available evidence indicates the existence of real challenges in applying privacy and data

localization requirements. A study by Alashwali and Cranor (2024), for example, showed that 9.4% of e-commerce platforms targeting the Saudi consumer do not provide a privacy policy, and that a proportion of websites do not provide a privacy policy in Arabic, which may affect the transparency of data processing and consumer trust.

Generation Z is considered one of the most knowledgeable and frequent users of digital technologies and e-commerce platforms because it grew up in a digital environment (Prasanna & A Lakshmi Priyanka, 2024), and it relies heavily on technology and smart applications in carrying out its daily activities, including online shopping. A Tabby (2026) report showed that 51.8% of young people aged 18 to 29 use artificial intelligence to help make purchasing decisions, which may make their perception of privacy and data localization issues an important factor in explaining their consumer behavior.

In the context of this accelerating digital transformation, and the accompanying growing interest in data protection and enhancing trust in the e-commerce environment, the need emerges to study how these factors affect the digital consumer behavior of Generation Z, especially in the Arab environment, thereby contributing to filling part of this research gap and providing results that can benefit researchers, decision-makers, and institutions operating in the field of e-commerce by supporting the development of data protection policies, enhancing digital security measures, and adapting marketing strategies to respond to consumer concerns and the expectations of Generation Z.

Research Problem

Based on the foregoing and in light of the research gap, the need emerges to study the relationship between privacy, data localization, and the purchasing behavior of the digital consumer, particularly among Generation Z in the Arab environment, from a perspective that combines the technical characteristics of platforms with the specificity of the Arab context, allowing for the explanation of the factors most influential in their behavior and purchasing decisions. Accordingly, the problem of this study revolves around the following main question:

How do the characteristics of e-commerce platforms—represented in privacy and data localization—affect the formation of the digital consumer behavior of Generation Z consumers in the Arab environment?

Study Hypotheses

The hypotheses were formulated based on the research problem as follows:

Hypothesis 1: There is a moderate perception of privacy and data localization among digital consumers of Generation Z in the Arab environment across e-commerce platforms.

Hypothesis 2: There is a statistically significant effect of privacy and data localization on the consumer behavior of Generation Z in the Arab environment across e-commerce platforms.

Previous Studies

Study by Jack Tr^ong (2024): “Relationship between Data Privacy Regulations and Consumer Trust in E-Commerce Platforms in Vietnam”

This study aimed to assess the relationship between privacy regulations and consumer trust in e-commerce platforms. It adopted the desk-based method to analyze studies and reports, and concluded that there is an effect of the strictness of data protection regulations on consumer trust, and confirmed that compliance with data protection constitutes a competitive advantage for platforms. It recommended enhancing transparency and accountability in data processing and coordinating privacy protection standards internationally.

This study is useful in supporting the importance of data protection and its role in consumer trust in commerce, while it differs from the current study in terms of the location of application as well as the topic, as the current study focuses on privacy and data localization and their impact on the behavior of Arab Generation Z on e-commerce platforms.

Study by Farooq et al. (2024): “Exploring Social Media Privacy Concerns: A Comprehensive Survey Study Across 16 Middle Eastern and North African Countries”

The study aimed to analyze privacy attitudes and concerns on social media among users in 16 countries in the Middle East and North Africa region. The results showed that the concept of privacy is influenced by the cultural and social context, and that Western models cannot be generalized to Arab societies. It also showed differences in privacy concerns between countries and demographic groups. This study highlights the importance of privacy in the Arab environment, supporting the study of its impact on the online purchasing behavior of Generation Z.

Study by AlOshan et al. (2026): “Data Protection Practices in E-commerce Websites Privacy Policies: Multidimensional Study in Saudi Arabian Context”

The study aimed to evaluate data protection practices in the privacy policies of 17 Saudi e-commerce websites before the implementation of the Personal Data Protection Law (PDPL). It relied on qualitative analysis of privacy policy content, focusing on prohibitions, consent mechanisms, data disposal, and notifications, in addition to comparing the Arabic and English versions of the privacy policies. It found that 70% of the websites did not provide specific options for data-sharing usage, 65% had vague wording regarding the sequence of collected data, and 40% of the websites showed differences between the Arabic and English versions, in addition to the lack of notification, consent, and data disposal mechanisms. This study is useful in that it focuses on privacy and on Arab websites, but it was not applied to the consumer behavior of Generation Z individuals across online platforms.

Study by Marusic et al. (2024): “Understanding Generation Z as a New Generation of Consumers”

The study aimed to identify the purchasing behavior of Generation Z and understand the factors affecting it. It adopted the descriptive method using an electronic questionnaire, and concluded that Generation Z individuals rely on the Internet to search for information before purchasing, prefer online shopping, attach greater importance to product quality and value compared with brand name, and make their purchasing decisions independently, with weak influence of influencer advertisements on them.

The importance of this study lies in explaining the online purchasing behavior of Generation Z and linking its consumer characteristics to the features of online platforms and the factors affecting its consumer behavior.

Study by Alsaadi et al. (2024): “A Dataset Analysis of Digital Marketing’s Influence on Purchase Intentions of Millennials and Generation Z in Saudi Arabia”

The study aimed to create a database to study the impact of digital marketing on the purchase intentions of millennials and Generation Z in Saudi Arabia, adopting the quantitative method. Data were collected through an electronic questionnaire distributed to 520 participants, and it concluded with the creation of a database that can be used to support more effective marketing strategies.

The study supports the framework related to the purchasing behavior of Generation Z in the digital environment, while the current study focuses on the impact of privacy and data localization on the digital consumer behavior of Generation Z in the Arab environment.

Study by Pilakaew et al. (2024): “The Impact of Consumer Perceptions of Privacy and Security Risks on Re-purchasing Intention for Online Shopping in Chiang Mai Province, Thailand”

The study aimed to analyze the impact of consumer perception of privacy and security risks on the intention to repurchase online in Chiang Mai Province, Thailand. The results showed that consumer perception of the level of privacy and security has a positive and significant effect on repurchase intention, and the likelihood of repeat purchase increases as the perception of privacy and security rises.

This study supports the hypothesis of the current study, which assumes a positive effect of privacy and security on online purchasing behavior, but it differs in that it does not focus on Arab Generation Z.

Study by Alfaleh (2026): “Patterns of Arab Gen Z in Consuming AI-Assisted Media Content: A Mixed-Methods Investigation Integrating Uses and Gratifications and Interactive Theory”

The study aimed to analyze Arab Generation Z’s awareness of artificial intelligence-supported content and their patterns of interaction with digital platforms. The results showed that they do interact intensively with AI-supported digital platforms, and that algorithmic recommendations and personalization contribute to enhancing engagement and satisfaction with content, while trust and credibility remain among the factors affecting the acceptance of these technologies.

The current study benefits from these results in confirming the importance of digital platform characteristics in shaping the behavior of Arab Generation Z, while directing attention toward studying their impact on purchasing behavior across e-commerce platforms in the Arab environment.

Literature Review

Privacy

Digital privacy represents one of the most important issues that have attracted the attention of researchers and decision-makers over the past decade, as a result of the expansion in the collection of personal data and the reliance of e-commerce platforms on analyzing them to improve and personalize services.

The word privacy itself is a relatively recent innovation, appearing at the beginning of the twentieth century—in English, privacy—and it is the right of the individual to maintain their personal information and private life in a voluntary and free manner (Bent et al., 2021). It is the person’s desire to control, or greatly influence, how their personal data are handled (Mahany, 2022). Digital privacy, in turn, is defined as a description of the protection of an individual’s personal data that have been published and circulated through digital media (Bent et al., 2021). Thus, privacy is the digital consumer’s perception of the extent to which e-commerce platforms are able to protect their personal data and control its collection, use, and sharing in accordance with their expectations and rights, which is reflected in their purchasing behavior. Accordingly, the most important aspects of digital privacy are:

- Transparency: respecting consumer privacy by refraining from collecting and using data without permission. Consumers tend to interact with brands that are perceived as transparent and respectful of privacy, which reduces the sense of risk and enhances engagement and purchase, supporting the relationship between privacy and consumer behavior in e-commerce (S. B. M. A. et al., 2025), while a lack of trust may lead to the opposite.
- Consent: not sharing data with external parties without explicit permission (Salmi, 2025).
- Security: securing personal information from breach or theft.

These dimensions together play a key role in the consumer's perception of the level of protection of their data, which is reflected in their trust in digital platforms. A study by Jack Trøng (2024) found that data protection and enhancing consumer privacy contribute to increasing trust in e-commerce platforms, which enhances the desire to purchase online, and confirmed the importance of transparency and compliance with data protection regulations in building sustainable relationships with consumers. To this end, legal frameworks known as data privacy regulations have been established to protect individuals' personal information from unauthorized access, use, and disclosure, such as the General Data Protection Regulation (GDPR) in the European Union and the California Consumer Privacy Act (CCPA) in the United States, to impose strict measures on how companies collect, store, and process personal data, thereby enhancing transparency and increasing consumer trust in digital platforms (Jack Trøng, 2024).

Breach of privacy represents the most important concern of the digital consumer, represented in the unlawful disclosure of personal data, surveillance, hacking, and electronic espionage (Bent et al., 2021). To address these concerns, consumers often conduct "privacy calculations," weighing the benefits of personalization against privacy risks. However, the literature shows a contradiction between individuals' attitudes and their actual behavior, known as the "privacy paradox," where their attitudes toward privacy diverge from their actual behaviors. For example, 87% of Internet users in Germany use online services that collect their personal data despite not fully trusting the protection of their data (Engels, 2019).

In the Arab environment, digital privacy acquires particular importance. A study by Farooq et al. (2024), conducted on social media users in 16 countries in the Middle East and North Africa region, showed variation in the level of privacy concerns between countries and different demographic groups, confirming that the perception of privacy is influenced by the social and cultural context, and highlighting the necessity of taking this specificity into account when studying the behavior of Generation Z on digital platforms, including e-commerce platforms.

A study by Francisco (2015) revealed that weak trust and fear of disclosing personal information are among the most prominent barriers limiting the spread of e-commerce in the Gulf. Therefore, governments seek to provide a safer environment for online shopping and to enhance trust in e-commerce (Francisco, 2015). Meanwhile, a study by AlOshan et al. (2026) reported that 70% of Saudi e-commerce websites do not give users clear options regarding sharing their data, while 65% of them used unclear wording when explaining how data are collected, and the study also found that 40% of the websites showed differences between the Arabic and English privacy policies.

A study by Alashwali and Cranor (2024) added that Saudi consumers are more accepting of the use of their data to improve services compared with its use in targeted advertising, and it revealed their limited use of privacy control tools, which confirms the importance of transparency and user empowerment in enhancing trust and protecting privacy.

Accordingly, privacy transcends the boundaries of data protection to become a key determinant of digital consumer behavior.

Data Localization

With the increasing reliance of e-commerce platforms on personal data to personalize services, improve the shopping experience, and enhance their competitive advantage, challenges have emerged relating to where these data are stored, processed, and transferred across borders, along with the accompanying security, legal, and sovereignty considerations. In this context, data localization has emerged as one of the modern trends aimed at regulating data management within national borders,

thereby enhancing cybersecurity, supporting digital sovereignty, and raising the level of consumer trust in digital services.

Data localization is defined as the principle requiring the storage of user data within the jurisdiction where the user resides, and it aims to limit the transfer of data to countries that provide an insufficient level of privacy protection, thereby enhancing the protection of personal data and reducing the risks of surveillance or misuse (Gamero-Garrido et al., 2025).

Elsewhere, data localization has been referred to as the practice of minimally storing data and information within the borders of the state, or even resorting to transferring data within geographic regions (D. F. J. A. A. et al., 2023).

Data localization can enhance consumer protection by ensuring that data are stored and processed locally, which may lead to improved security and privacy in some contexts, provided it is supported by legal safeguards and effective accountability mechanisms, and by compliance with data protection principles. The most prominent consumer concerns regarding data localization relate to the misuse of their personal data or its processing for purposes to which they did not consent, weak transparency regarding where data are stored and the mechanisms of processing them, the entities that can access them, and the retention period. Their concern increases when data are transferred across borders due to differences in legal protection levels between countries, and the resulting difficulty in exercising the rights of data subjects or holding the processing entities accountable.

In another direction, the literature indicates that data localization may increase operating costs and lead to greater risks such as fraud and cybersecurity threats, which may negatively affect consumer behavior in the digital age. In Saudi Arabia, a study by Alashwali and Cranor (2024) showed that only 31% of Saudi e-commerce websites declared all the basic elements related to personal data rights, indicating the persistence of compliance and data governance challenges. A study by Omar et al. (2022), conducted on the Arabic-language Amazon.sa platform, showed that weak translation and linguistic and cultural adaptation reduce the platform's reliability and affect the user experience.

Generation Z

Generation Z is one of the generations most connected to digital technologies and platforms because it grew up in a digital environment, which has made it more affected by data collection and processing practices. Generation Z refers to individuals born approximately between 1993 and 2005 (Marusic et al., 2024). The Pew Research Center, however, stated that they are people born in 1997 onward. This period is characterized by different formative experiences of new technological developments and modern social and economic trends. They are the “native speakers” of the digital language of the Internet, computers, video games, and multimedia platforms, representing more than 25% of the world's population; they represent and shape the future (Marusic et al., 2024). In 2024, they ranked first demographically with approximately 25–30% of consumers (Shahid & Ikram, 2024), and they are expected to become the dominant group in terms of purchasing power by 2030 (Harari et al., 2023).

This generation tends to spend more time on the Internet and conduct intensive searches on it, and considers shopping through it safe and time-, money-, and information-saving (Marusic et al., 2024). Social media plays a crucial role in shaping their perceptions, as they are a generation that relies on technology in its consumer behavior. These technologies accelerate the ease of access to electronic markets and delivery services, which accelerates their purchasing decisions, increasing the frequency and diversity of consumption, especially as they are influenced by promotional offers. Digital payment systems have also improved transaction efficiency and reinforced their tendency toward impulsive

spending, which has fostered a seamless consumer environment consistent with their values based on speed, ease, and convenience. As a result, Generation Z is the fastest among generations in adopting digital technologies and responding to marketing influences, which may also accelerate their purchasing decisions across digital platforms.

In this context, Generation Z trusts peer reviews and user-generated content more than traditional advertisements and reviewer ratings, which makes transparency and value for money crucial. They have a great interest in social justice, environmental issues, and ethical practices, and are attracted to unique and specialized products and services (Prasanna & A Lakshmi Priyanka, 2024). They rely on interactive marketing campaigns and prior research when making purchasing decisions, and show globally similar behavioral patterns (Marusic et al., 2024), which helps marketers adopt this homogeneity as a way to segment the consumer audience.

Despite Generation Z's reliance on artificial intelligence systems and deep understanding of technical media, their skepticism about the role of AI in shaping the concepts of authenticity and privacy in the digital environment is increasing (Alfaleh, 2026). A Tabby (2026) report showed that 51% of young people use AI to make purchasing decisions, and 43% of shoppers in Saudi Arabia and the UAE use it while shopping, while only 30% of them trust it completely, reflecting the growing influence of the digital environment in shaping their consumer behavior.

Consumer Behavior of Generation Z

E-commerce platforms represent the digital environment in which data are collected, processed, and utilized, relying on algorithms and artificial intelligence to personalize offers and recommendations. Among the leading e-commerce platforms are Amazon, Taobao, Douyin, and Pinduoduo. Among the most famous platforms in the Gulf countries are Noon, Jumia, and others.

The growing role of platforms raises issues regarding privacy protection and the limits of using user data, especially in light of the collection of sensitive data. Their success today has become contingent on consumer trust in the protection of their data and compliance with privacy and data localization laws, as they are the meeting point between these practices and digital consumer behavior, particularly Generation Z, as the group that uses these platforms most, which makes analyzing their behavior an essential step toward understanding their response to digital practices related to privacy and data localization.

Consumer behavior is the study of consumers and the processes they use to select, use, and dispose of products and services, including their emotional, mental, and behavioral reactions (Marusic et al., 2024).

Digital consumer behavior focuses on the behavior of consumers in searching for, purchasing, and using products and services in digital environments. Generation Z consumers, thanks to their extensive familiarity with technology, conduct prior research before purchasing online. They are smart shoppers who compare prices and look for discounts (Prasanna & A Lakshmi Priyanka, 2024). They possess a consumer culture close to that of their peers while at the same time making informed decisions that are more practical and analytical than previous generations (Al-Sati & Abu Al-Khair, 2024). A study by Popa et al. (2023) showed that 49% of Generation Z prefer purchasing through e-commerce platforms, 30% from the company's official website, 17% from phone applications, and only 4% through social media platforms. A study by Alsaadi et al. (2024) showed that the average daily hours of phone use among Generation Z in Saudi Arabia ranges between four and eight hours, and that the majority of them tend to shop online up to three times a month.

Because Generation Z cares about sustainability and environmentally friendly products, 73% of them express willingness to pay a larger amount for sustainable products, and they prefer using electronic wallets and smartphone applications in purchases, as applications achieve higher purchase rates than websites on phones (Popa et al., 2023). A study by Alfaleh (2026) showed that Generation Z's engagement and satisfaction increase with content that is more personalized, more suited to their interests, and AI-supported on digital platforms, but trust and credibility remained influential factors in accepting this personalization. They appreciate personalized products and are attracted to brands that share their values (Marusic et al., 2024); their behavior and decisions are influenced by algorithmic recommendations (Alfaleh, 2026). Generation Z is aware of the importance of their digital footprint and values privacy. Transparency practices and respect for their personal information are of paramount importance to them.

Methodological Procedures and Methods of the Field Study

The quantitative phase aimed to study the measurable aspects of the impact of privacy and data localization on the digital consumer behavior of Arab Generation Z on e-commerce platforms.

Study Method

A mixed research methodology was followed to achieve statistical reliability and analytical depth, and the quantitative phase formed the basis for further qualitative research.

Study Population and Sample

The study population consisted of users of e-commerce platforms from Generation Z individuals in the Arab world. The sample was selected according to a purposive design to target respondents who met specific criteria: being of Arab nationality, aged between 18 and 29 years, and using e-commerce platforms. Given the large size of the studied population, an electronic questionnaire was distributed to 106 individuals during the period from March 15 to April 15, 2026.

Study Instrument and Methods

The questionnaire was distributed using Google Drive. The questionnaire was divided into a first section that included the personal variables of the study sample—gender, age, educational level, and country of residence—while the second section included two axes: the first related to the dimensions of privacy and data localization, and the second to the dimensions of the dependent variable, the digital consumer behavior of Generation Z. The questionnaire also included open-ended questions aimed at exploring the most prominent concerns and motivators among the sample members, whose results were used complementarily to interpret the quantitative results. The five-point Likert scale was adopted as a quantitative rating scale. For data analysis, SPSS v26 (Statistical Package for the Social Sciences V26) was used to analyze the study variables and test the hypotheses, which required the use of some descriptive and inferential statistical methods, such as the reliability coefficient Cronbach's alpha to indicate the reliability and stability of the study instrument, the t-test, multiple regression, descriptive statistics measures for presenting the data and discussing the study results, and inferential statistics measures for testing the study hypotheses.

Reliability Test of the Study Instrument

To statistically test the reliability of the scale, Cronbach's alpha method was used, and the following table shows the test results.

Table 1

Results of Cronbach's Alpha Coefficient Analysis for the Questionnaire Dimensions

First axis	Cronbach's alpha	Second axis	Cronbach's alpha
Privacy and data localization	0.683	Digital consumer behavior of Arab Gen Z	0.757
Questionnaire as a whole	0.817		

Source: Prepared by the two researchers based on SPSS v26 results.

We note that the value of the Cronbach's alpha reliability coefficient reached 0.683 for privacy and data localization, 0.757 for the digital consumer behavior of Generation Z, and 0.817 for the questionnaire as a whole, which is acceptable because it is greater than 0.6; that is, the study instrument can be relied upon because it has a high degree of reliability above the acceptance limit (60%).

Descriptive Analysis of the Study Data

Analysis of the Demographic Characteristics of the Study Sample

Table 2

Analysis of Demographic Variables

Demographic variable	Category	Frequency	Percentage
Gender	Male	38	35.8%
Gender	Female	68	64.2%
Age	18–21 years	14	13.2%
Age	22–25 years	53	50.0%
Age	26–29 years	39	36.8%
Educational level	Middle school	8	7.5%
Educational level	Secondary	23	21.7%
Educational level	University	75	70.8%
Country of residence	Algeria	32	30.2%
Country of residence	Saudi Arabia	28	26.4%
Country of residence	Egypt	27	25.5%
Country of residence	United Arab Emirates	19	17.9%

Source: Prepared by the two researchers based on SPSS v26 results.

The demographic variables table of the sample showed relative variation in the representation of categories according to gender, age, and educational level. In terms of gender, females predominated at 64.2% over males at 35.8%. Most respondents were aged 22 to 25 at 50% compared with the other age groups. Those with a university-level education constituted the largest proportion of the sample at

70.8%. In contrast, there is relative convergence in the proportions of participants by country of residence, reflecting a relatively balanced representation of the countries under study.

Analysis of the Study Axes

Analysis of the Dimensions of Privacy and Data Localization

Table 3

Analysis of Privacy and Data Localization Variables

No.	Dimension	Mean	Std. dev.	Relative importance	Rank	Direction
01	Privacy perception	4.0920	0.6513	81.84%	01	High
02	Security perception	3.8805	0.5749	77.60%	04	High
03	Data localization	4.0314	0.7397	80.62%	03	High
04	Consumer trust in the platform	4.0440	0.5784	80.88%	02	High
	Total of privacy and data localization dimensions	4.0120	0.4069	80.24%	/	High

Source: Prepared by the two researchers based on SPSS v26 results.

The above table shows that the arithmetic means of the privacy and data localization dimensions ranged between 3.880 and 4.092, and the total mean of the dimensions reached 4.012, indicating that the level of responses of the study sample members was high, with relative variation in the degree of dispersion of their answers, which reflects relative convergence in their opinions about the dimensions of the studied variable.

Analysis of the Dimensions of Digital Consumer Behavior of Generation Z

Table 4

Analysis of the Dimensions of Digital Consumer Behavior of Generation Z

No.	Dimension	Mean	Std. dev.	Relative importance	Rank	Direction
01	Cognitive dimension	4.245	0.6143	84.30%	02	High
02	Affective dimension	3.830	0.5984	76.60%	03	High
03	Behavioral dimension	3.518	0.7643	70.36%	05	High
04	Technological dimension	3.512	0.6459	70.42%	04	High
05	Social dimension	3.509	0.7420	70.18%	06	High
06	Attachment and loyalty dimension	4.316	0.6980	86.32%	01	High
	Total of digital consumer behavior dimensions	3.822	0.4343	76.44%	/	High

Source: Prepared by the two researchers based on SPSS v26 results.

The above table shows that the arithmetic means of the dimensions of the digital consumer behavior of Generation Z were all high, with the attachment and loyalty dimension ranking first with a mean of 4.316, and the social dimension ranking last with a mean of 3.509. The total level of responses of the study sample members was high at 3.822, with relative variation in the degree of dispersion of their responses, which reflects relative convergence in their opinions.

Testing the Study Hypotheses

Hypothesis 1

There is a moderate perception of privacy and data localization among digital consumers of Generation Z in the Arab environment across e-commerce platforms.

To verify the validity of the hypothesis or otherwise, the t-test was used, in addition to the arithmetic mean, standard deviation, and direction:

Table 5

T-Test of Generation Z's Perception of Privacy and Data Localization

No.	Dimension	Mean	Std. dev.	Direction	Calculated t	Sig.
01	Privacy and data localization	4.0120	0.4069	High	25.604	0.000

Source: Prepared by the two researchers based on SPSS v26 results.

From the one-sample t value, it appears that the arithmetic mean of the privacy and data localization axis reached 4.0120 with a standard deviation of 0.4069, and a significance level of Sig = 0.000, which is less than the adopted significance level (0.05). Accordingly, we reject the null hypothesis and accept the alternative hypothesis, which confirms that there is a perception of privacy and data localization among digital consumers of Generation Z in the Arab environment across e-commerce platforms, and to a high degree at a significant level, indicating awareness of privacy and data localization risks and the increased exposure of Generation Z to digital practices, which may enhance their interest in protecting their privacy. This result is consistent with the study of Jack Trøng (2024) and the study of Alfaleh (2026), which concluded that there is a high level of privacy awareness among consumers.

Hypothesis 2

There is a statistically significant effect of privacy and data localization on the consumer behavior of Generation Z in the Arab environment across e-commerce platforms.

To test the hypothesis, multiple linear regression analysis was used to measure the combined effect of the dimensions of privacy and data localization on the digital consumer behavior of Generation Z, and to determine the model's ability to explain the variance in the digital consumer behavior of Generation Z, as well as to identify the most influential dimensions. The results are presented as follows:

Table 6

Results of Multiple Linear Regression Analysis for Testing the Effect

Dimension	B	Beta	t	Sig.	Tolerance	VIF	Decision
Constant	1.260	/	3.571	0.001			

Privacy perception	0.120	0.180	2.074	0.041	0.835	1.198	Significant
Security perception	0.131	0.174	1.834	0.070	0.704	1.420	Significant
Data localization	0.072	0.122	1.477	0.143	0.926	1.080	Not significant
Consumer trust in the platform	0.314	0.419	4.786	0.000	0.825	1.212	Significant

Note. $F = 14.340$; $\text{Sig } F = 0.000$; $R = 0.602$; $R^2 = 0.362$; adjusted $R^2 = 0.337$. Source: Prepared by the two researchers based on SPSS v26 results.

The table shows that the multiple linear regression model is statistically significant, as the value of $\text{Sig } F = 0.000$, which is less than 0.05, confirming the statistical significance of the model. The correlation coefficient $R^2 = 0.362$ indicates that the dimensions of privacy and data localization together explain 36.2% of the variance in the digital consumer behavior of Generation Z under study, while the remaining percentage is attributed to other factors not included in the model.

The results showed that the tolerance coefficient values for all dimensions of the independent variable exceeded 0.1, and the variance inflation factor (VIF) values were less than 5, indicating the absence of multicollinearity among the independent variables and thus the validity of the model for conducting multiple linear regression analysis.

The results of the standardized regression coefficients (Beta) also show that the effect of the dimensions of privacy and data localization differs from one dimension to another. The results showed that the privacy perception dimension, the security perception dimension, and the dimension of digital consumer trust in online platforms each have a positive effect, as the Sig value was less than the significance level of 0.05, while no statistically significant effect of the data localization dimension was proven, as its Sig value was greater than 0.05. The non-significance of the effect of data localization in the multiple regression model may be attributed to the limited perception of the concept of data localization among the study sample members compared with factors that are more visible to them, such as trust, privacy, and security.

The Beta values shown in the above table indicate that the dimension of consumer trust in online platforms represents the most influential dimension in the digital consumer behavior of Generation Z in the Arab environment across e-commerce platforms, with a value of $\beta = 0.419$, followed by the privacy perception dimension ($\beta = 0.180$), then the security perception dimension ($\beta = 0.174$).

The multiple linear regression equation can be formulated as follows:

$$Y = 1.260 + 0.314X_1 + 0.120X_2 + 0.131X_3 + 0.072X_4$$

Where: X_1 = consumer trust in the platform; X_2 = privacy perception; X_3 = security perception; X_4 = data localization.

Based on the foregoing, the second hypothesis is partially accepted.

The results of the multiple linear regression showed a statistically significant effect of the dimensions of privacy and data localization on the digital consumer behavior of Generation Z in the Arab environment across e-commerce platforms, which confirms the importance of privacy and data localization in shaping the behavior of this consumer group. The variation in the strength of the effect

of the privacy and data localization dimensions can be explained by the fact that Generation Z consumers in the Arab environment rely to a notable degree on trust, which ranked first, because it plays a role in reducing uncertainty and perceived risks and transforming electronically circulated information into an actual readiness to purchase. This result is consistent with previous studies such as Francisco (2015) and Alfaleh (2026), which confirmed the significant effect of digital consumer trust in the platform on purchasing behavior.

In contrast, the privacy dimension ranked second in the degree of influence on digital consumer behavior, which may be attributed to the fact that Generation Z consumers in the Arab context consider trust to encompass privacy, and that they recognize the importance of protecting their data without privacy concerns necessarily turning into behavior of refraining from purchase—the so-called privacy paradox—where the consumer accepts sharing their data in exchange for obtaining digital benefits and facilities. This is consistent with the result of Engels (2019), which stated that consumers have a contradiction between protecting their personal data and their actual behavior of continuing to disclose them, as well as with Farooq et al. (2024), which showed that the concept of privacy is influenced by the cultural and social context and that Western models cannot be generalized to Arab societies, and with Pilakaew et al. (2024).

The effect of the security perception dimension ranked third, which can be explained by the fact that the digital consumer of Generation Z may consider protection measures and the availability of secure payment methods a basic and expected condition in e-commerce platforms, and that Arab Generation Z has become more accustomed to dealing with digital environments. This result differs relatively from the study of Rahayu et al. (2025), which showed a strong effect of security on the use of electronic wallets among Generation Z.

The lack of effect of the data localization dimension may be attributed to the limited awareness of the digital consumer of Generation Z in the Arab environment of the concept of data localization, which is reflected in their behavior across online platforms, and this dimension may not represent a direct criterion in their behavior compared with more visible factors such as trust, security, and ease of transaction; that is, they do not care about the location of data storage. This result differed from the OECD (2023) report, which indicated that data localization measures impose additional costs and increase the risks of fraud and cybersecurity, which is reflected in the consumer experience and trust in the digital environment. The reason for the difference may be attributed to the difference in the unit of analysis, as the OECD study focused on the impact on business activities rather than on consumer behavior.

Analysis of Open-Ended Responses and Interpretation of Quantitative Results

To explore the most prominent concerns and motivators expressed by Generation Z in the Arab environment toward online platforms, the open-ended responses in the questionnaire were analyzed. The results of the analysis showed great consistency with the results of the effect test, as the most prominent concerns were product quality and non-conformity with the description at 48.3%, privacy and security at 42.5%, and payment concerns at 29.9%. The most prominent motivators were trust and reliability at 47%, ease of use (browsing, app speed, user experience, and customer reviews) at 45%, then service quality (delivery, customer service, ease of return) at 42%. These results provide additional indicators that help interpret the quantitative results through their consistency with the factors that showed an effect on their digital behavior toward online platforms.

Study Results

- The privacy dimension is an influential and statistically significant factor in the digital consumer behavior of Generation Z in the Arab environment across e-commerce platforms,

but it does not operate in isolation from the other factors; rather, it overlaps with trust and security perception.

- The security perception dimension is an important condition, but it is not the decisive and sole factor in the digital consumer behavior of Generation Z in the Arab environment.
- Despite the high level of perception among Generation Z consumers in the Arab environment of the importance of data localization, no statistically significant effect on digital consumer behavior across e-commerce platforms was proven, which shows a gap between perception and behavioral effect.
- The open-ended responses showed that trust, privacy, and security are among the most prominent concerns expressed by the sample members, which is consistent with the quantitative results reached, supporting the consistency of the results and strengthening their interpretation.

Study Recommendations

- Privacy policies must be simplified, and long legal texts replaced with short, clear, and simple notices, taking into account the specificity of the Arab context and enhancing trust in e-commerce platforms.
- It is not enough to provide technical protection of data; transparency in data processing practices must be ensured and made clear and visible to the Arab Generation Z consumer.
- It should not be assumed that data localization alone is sufficient to enhance Generation Z's behavior; rather, it must be integrated with concrete measures to build trust and protect data.
- Arab Generation Z should be granted actual control, making it easy for them to understand the risks and opportunities of data collection and use, and providing simple ways for people to unsubscribe or withdraw consent easily and conveniently.
- Generation Z consumers' awareness of their digital rights should be raised, clarifying where the consumer should go to obtain help or file a complaint if needed, and encouraging them toward a culture of demanding privacy as a fundamental right in the digital age.
- The scope of personal data collection should be regularly reviewed and reassessed, along with whether it is necessary for the service provided.
- Future researchers are also recommended to study the gap between perception and behavior directly, particularly among Arab Generation Z.

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