

Usability of digital wallets and e-commerce growth: Evidence from poultry shops in Huancayo, Peru

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ABSTRACT

This study explores how the usability of digital wallets affects the growth of e-commerce in poultry shops in the Huancayo district of Peru. The general hypothesis states that the usability of digital wallets significantly impacts the growth of e-commerce in this sector. The methodology used combines the general scientific method with the specific hypothetical-deductive method. A non-experimental and cross-sectional design is used. The research is explanatory in nature, seeking to establish causal relationships between variables. To collect data, a survey was conducted on a probability sample of 385 customers in 112 poultry shops in Huancayo that use digital wallets. The sampling technique was simple random, and data were collected using an attitude scale designed to measure user attitudes and opinions. Results: The usability of digital wallets positively impacts e-commerce, with a correlation coefficient of 0.76 ($p < 0.01$), indicating a strong and significant relationship. The effectiveness of digital wallets in e-commerce growth is evidenced by a regression coefficient of 0.68 ($p < 0.01$), suggesting a significant effect on online sales. The efficiency of digital wallets shows a coefficient of 0.62 ($p < 0.05$), indicating a notable improvement in transaction time and payment accuracy. Customer satisfaction with digital wallets has a coefficient of 0.74 ($p < 0.01$), reflecting an overall positive experience with these payment tools.

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1. Introduction

In recent years, new marketing trends, driven by technology and globalization, have disrupted traditional business models (Shaliza et al., 2019). This has led companies to constantly adapt and innovate to remain competitive. Technological changes are an important topic of research, as they help us understand how businesses and society adapt to these changes (Churampi-Cangalaya et al., 2024). Furthermore, e-wallet platforms offer opportunities not only to large corporations but also to entrepreneurs looking to adapt to a dynamic market.

The adoption of e-wallets is growing due to their convenience and efficiency. It is important to analyze their role in business, as well as their functions and limitations compared to physical money. (Melo & Jiménez, 2023) Likewise, it is crucial to understand the environment that fosters or restricts their growth. The last decade has witnessed an accelerated digital transformation, driven by globalization and new technologies (Inga-ávila et al., 2023). One of the most evident manifestations of this change is the proliferation of e-commerce, which has revolutionized the way companies interact with consumers (Melo & Jiménez, 2023).

The pandemic dramatically accelerated e-commerce adoption, but consumer patterns continue to evolve. A recent EMEA

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study reveals that 78% of consumers now prefer their smartphones for online shopping, compared to 64% who opt for computers. Additionally, 44% have tried new retailers in the past year, and 56% find their digital interactions have a greater influence on their overall perception of a brand than in-store experiences. This growing preference for mobile shopping and personalization has generated an unprecedented demand for more personalized shopping experiences, with 64% of consumers expressing a desire for retailers to tailor both their online and in-store offerings to their individual preferences. (Garcia , 2022)

The digital wallet ownership landscape in Latin America presents a diverse scenario. Panama leads the region with 33% adoption, demonstrating rapid and significant acceptance of this technology. Colombia follows closely behind with 24% and Peru with 19%, demonstrating considerable growth in digital wallet use in these countries (Churampi-Cangalaya et al., 2023). The growth in Peru reflects increased interest in digital transactions. In comparison, Ecuador and Mexico have the lowest digital wallet adoption rates, at 9% and 3%, respectively.

Digital wallet adoption in Latin America is varied. Colombia leads with 16% penetration, while Panama follows closely behind with 13%. Peru is the third country in adoption with 12%, demonstrating rapid adaptation and confidence in digital payments. Bolivia, Chile, and Ecuador have moderate rates of around 7% and 6%. Mexico, with just 2%, has the lowest rate, indicating less access to technology or confidence in digital payments.

The need for security and fraud prevention: Digital wallets offer an additional layer of security by securely storing payment information on their platform. Additionally, some digital wallet providers feature anti-fraud technologies that prevent fraud and information theft. Convenience: Digital wallets are easy to use because the payment process only requires a QR code or contactless payment to complete the corresponding payment quickly and easily. Another factor is that there is no cost to using digital wallets in e-commerce, unlike other payment methods, which do incur costs such as transaction fees, payment processing fees, receipt printing fees, and cash administration fees. Furthermore, digital wallets can improve the efficiency and speed of transactions, which can lead to greater productivity and profitability in the business, in this case, in the poultry industry, which is the subject of this research.

Based on the above, the objective of this research was to explain how the usability of digital wallets impacts e-commerce in poultry shops in the Huancayo district.

2. Literature review

2.1. Usability of Digital Wallets

The usability of a software application (electronic wallets) refers to the ease with which users can use it to achieve a specific goal. This level of usability cannot be measured or evaluated directly, because it depends on different factors (Enriquez and Casas, 2014). The usability of digital wallets is also described as the level at which users perceive that a new technology is easy to use (Davis, 1989). One of the most important concepts is the one proposed by INTECO (2019), which defines the usability of digital wallets as the degree to which a system, product or service can be used by certain users to achieve specific objectives with effectiveness, efficiency and satisfaction in a context of use. Appealing to the proposal of Haimovici (2015), who affirms that heterogeneous conceptual structures intervene in higher cognitive processes and within it various structures are articulated and two predominant approaches are distinguished: one hybrid and the other pluralistic. Hybrid theories suggest that concepts are composite.

2.2. Digital Wallets

A digital wallet is a mobile app downloaded to a cell phone to perform contactless financial transactions involving cash, optimizing time (Plataforma digital única del Estado Peruano, 2023). It is also defined as the way in which a mobile device becomes a means of managing money virtually from a mobile device and making payments easily at any time (Ceballos et al., 2020; Encarnación et al., 2020). There are three types of e-wallets: i) closed, where the money goes directly to the company's account and no interest is earned, depending on the central bank; ii) semi-closed, where the money goes into a deposit and the companies earn interest or the money is recorded as debt until the consumer makes the purchase; iii) open, where the money goes into a bank account and interest is earned, which is shared between the service provider and the bank, depending on the agreement. (Ceballos et al., 2020)

Mobile apps. According to the Mobile Marketing Association (2011), these are one of the mobile marketing segments that has experienced the greatest growth in recent years. These applications are found on almost all smartphones, even basic models (where they provide interfaces for sending messages or voice services). Unlike mobile-friendly websites, applications can be used in situations where the user has low or no internet connectivity. Adding an app to this allows access to all of a mobile device's hardware features, such as notifications, camera access, access to the user's location, etc.

On the other hand, Albornoz et al. (2019) mention that today, mobile applications have become the most important communication channel in society due to their versatility and efficiency. Likewise, Tubón (2020) mentions that they are digital

tools that run on small devices and allow the user to benefit from their functionality regardless of their location. Digital payments. According to Banco Santander (2023), these are transactions made online, using digital means or the internet. Among the most common are debit or credit cards, which are available in both physical and virtual formats, which you can configure in the online banking app you use to manage your finances, as well as in digital wallets. It also highlights the benefits offered by digital payments, such as security, due to the reduced risk of theft or counterfeiting. For businesses, it represents an additional advantage by promoting transparency in financial transactions, facilitating payment tracking, and improving control and detail over money management. It is also faster and more convenient.

According to the Superintendency of Banking, Insurance and AFP (2020), in recent months, companies in the financial system have developed remote accounts and promoted products that allow money transfers and payments using only a mobile phone.

Digital payment apps. Over the past few decades, electronic payments have gradually replaced cash as a means of payment. Currently, mobile payments have gained increasing importance and are transforming the way we conduct financial transactions, offering greater flexibility and convenience in making payments, as well as greater security in protecting user data (Rodríguez, 2023).

According to information published on the Peruvian State's Single Digital Platform (2023), there are various types of digital wallets in Peru, some of which are supported by a banking entity.

2.3. Usability

The usability framework according to ISO 9241-11 provides a structured model for evaluating the usability of a digital system or product. This framework is based on the premise that usability cannot be evaluated in isolation, but rather within a specific context of use. This context is composed of five fundamental elements: the user, the task to be performed, the equipment or technological tool used, the physical or social environment where the interaction takes place, and the proposed objectives to be achieved.

In this model, the goals the user sets for themselves when interacting with a system play a central role. These goals can be functional (such as completing a specific task) or experiential (such as feeling satisfied with the process). The system must be designed so that these goals can be achieved effectively and comfortably within the given context. The relationship between the goals and the context of use guides design and implementation decisions.

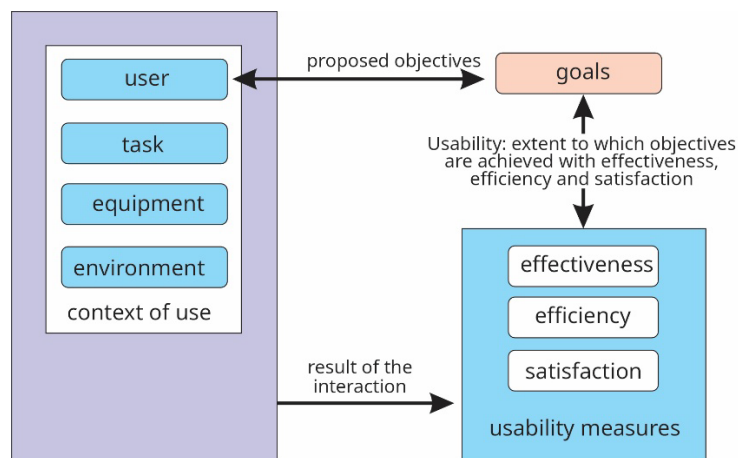


Fig. 1. Usability Framework (ISO 9241-11)

Usability, as defined by ISO 9241-11, is understood as the degree to which a product can be used by specific users to achieve specific objectives effectively, efficiently, and satisfactorily. This means that it is not enough for the system to function correctly; it must also allow the user to achieve what they want without unnecessary difficulty and with a positive experience.

Usability measures are the criteria used to evaluate whether a system meets the above requirements. These measures are threefold: effectiveness (how correctly and completely the task is accomplished), efficiency (the effort or resources required to accomplish the task), and satisfaction (the user's level of comfort and acceptance). These metrics are obtained by analyzing the results of the user's interaction with the system in the real-world context. This usability framework provides clear and practical guidance for designing, evaluating, and improving user-centered systems. By considering not only the product's design, but also who uses it, how it is used, and under what conditions, a more effective, efficient, and satisfying experience is ensured. This approach is essential for developing accessible, functional technologies that are tailored to users' true needs.

2.4. *Electronic Commerce*

E-commerce is a new form of consumption that impacts economic transactions, especially those made by consumers and businesses (Robayo, 2020). It is a change occurring at the global, regional, national, and local levels. Its rapid growth in the economy is based on its characteristics, which allow consumers to have diverse possibilities for making their purchases (Guerrero-Cortez et al., 2022). By using electronic media, they can access infinite websites to obtain information that allows them to compare the quality and price of the goods and services to be purchased, and even post-service information, delivery dates, guarantees, and payment terms (González, 2020).

E-commerce focuses on digitally enabled business transactions between organizations and individuals, conducted through digital media such as the internet, the web, and mobile devices (Carranza López, 2024). Although the concept of commerce traditionally involves the exchange of goods and services, e-commerce is distinguished by its emphasis on digital channels and the technology that enables such transactions, leaving aside the means of payment or the methods used (Liu & Liu, 2024).

E-commerce is divided into business commercial transactions, digital media, and virtual markets. Its study refers to commercial transactions between companies, such as the exchange of values through purchases, sales, barter, payments, collections, loans, deposits, discounts, etc., carried out by merchants (Malpartida-Maíz et al., 2023). Payment methods are available to make purchases, whether through credit or debit cards or electronic wallets, which vary by country. On the other hand, companies use digital media such as websites that generate a virtual market where company employees contact their suppliers to provide services and inputs, and with customers to sell them products or services. These platforms are organized over the Internet and are not directly accessible to individuals (Logro Masabandas, 2024). To enter these markets, it is necessary to have software that can encode and decode the information exchanged between organizations, and this software facilitates access to these platforms.

E-commerce varies significantly between developed and developing economies, reflecting a notable digital divide in access to and use of information and communications technologies (ICTs). Developed countries, with advanced technological infrastructure, enjoy greater capacities to export and produce advanced technologies and equipment (Guerrero-Cortez et al., 2022). In contrast, developing countries often rely on imported technological goods and services, face low productivity, and have less-skilled labor and limited technology. This disparity underscores the inequality in access to ICTs and their effects on the global economy.

3. Methodology

3.1 *Research methodology*

In this research, the scientific method was used, beginning with observation and consequences (Hernández et al., 2014), which helped to frame the problem and formulate a hypothesis. The hypothetical-deductive method was applied to validate or refute the hypothesis. The design was non-experimental and cross-sectional, with no intentional manipulation of variables (Nicomedes, 2018). The research was classified as basic, focusing on generating pure knowledge and developing scientific theories. (Gallardo, 2017)The level of research was explanatory, identifying causal relationships between variables to determine cause-effect connections.

For data collection in this research, the attitude and opinion scale technique was used. This technique measures participants' subjective perceptions and assessments, distinguishing it from techniques that collect objective knowledge or data (Herrera-Rodríguez, 2018). The primary instrument was the Attitude Scale, composed of statements about the variables: e-wallet usability and e-commerce.

Both instruments were developed with rigorous methodological criteria, including the necessary piloting and adjustments to ensure their validity and reliability (González, 2019). Expert validation gave the core scale a score of 82 out of 100, confirming its accuracy as a measurement tool (Alberto, 2015).

Both instruments were administered using the Google Form and Microsoft Form platforms ; these questionnaires were shared with the sample members, who were able to answer the questions. Informed consent, data confidentiality, and the anonymity of the respondents were ensured. Once the information was collected, the data matrix was created and processed using Microsoft Excel 2023 and SPSS version 31.0 for descriptive analysis, and SmartPLS 4.0 for descriptive analysis .

The field study focused on those chicken shops that accept digital wallets as a payment method, which is relevant for analyzing the usability of digital wallets in e-commerce in this sector. A total of 112 chicken shops were identified and targeted, distributed as follows:

Table 1
Number of Chicken Shops by district of Huancayo

District	Number of chicken shops
Huancayo	25
The Tambo	40
San Carlos	21
Chilca	26
Total	112

The sample consisted of 385 customers of chicken restaurants located in the Huancayo district. The survey was conducted with the participation of 205 women (53%) and 180 men (47%). This gender balance allows for the observation of potential differences in the use and perception of digital wallets and e-commerce. Furthermore, the sample for this research was distributed across the following age groups: 150 customers (39%) between 18 and 25 years old, 136 customers (35%) between 26 and 30 years old, and 50 customers (15%) between 30 and 40 years old. between 31 and 40 years old, 34 clients (9%) between 41 and 50 years old, and 7 clients (2%) between 51 and 60 years old.

3.2 Research model using structural equation modeling (SEM)

The Structural Equation Modeling (SEM) is a multivariate statistical technique that allows simultaneous analysis of complex relationships between observed variables (directly measured) and latent variables (unobservable constructs). (Romero-Sánchez & Barrios, 2023) This method combines aspects of factor analysis and multiple regression and is especially useful for validating theoretical models, evaluating causal hypotheses, and indirectly measuring abstract concepts such as satisfaction, perception, or usability (Legate et al., 2023). SEM allows relationships to be graphically represented using path diagrams and the strength and influence of these relationships to be quantified within a structured model (Guenther et al., 2023).

The model for the present research is presented in Fig. 2, which shows the relationship between the dimensions of usability of electronic wallets (efficiency, effectiveness and satisfaction with electronic commerce).

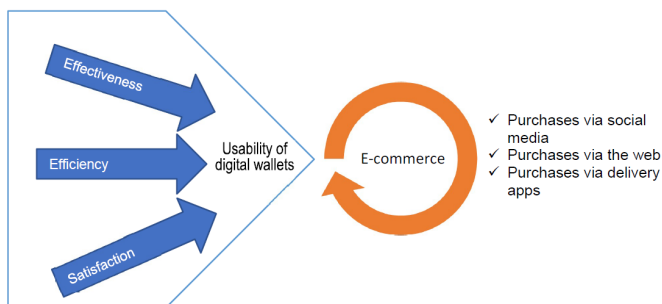


Fig. 2. Proposed research model

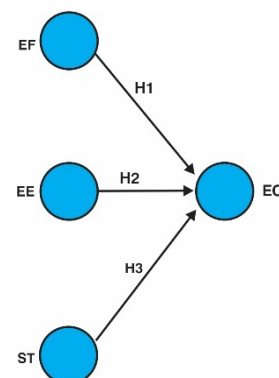


Fig. 3. Proposal for a research model using structural equations

Usability is broken down into three key factors: effectiveness, efficiency, and satisfaction. These elements act as drivers that improve the user experience when interacting with digital wallets, facilitating processes such as registration, payment, and transaction verification. The more effective, efficient, and satisfying a digital wallet is, the more likely the user is to use it repeatedly. As a result, this improvement in usability promotes the growth of e-commerce. The figure illustrates that e-commerce usage is manifested through three main channels: purchases via social media, purchases through websites, and purchases through delivery apps. In this sense, digital wallets become a fundamental bridge that connects consumers with various digital platforms, facilitating transactions and boosting the adoption of e-commerce in different purchasing contexts.

Based on the described model, the following specific hypotheses were raised:

Specific hypothesis 1: *The effectiveness in the use of digital wallets has a significant and direct impact on electronic commerce in poultry shops in the Huancayo district.*

Specific hypothesis 2: *The efficiency in the use of digital wallets has a significant and direct impact on electronic commerce in poultry shops in the Huancayo district.*

Specific hypothesis 3: *The efficiency in the use of digital wallets has a significant and direct impact on electronic commerce in poultry shops in the Huancayo district.*

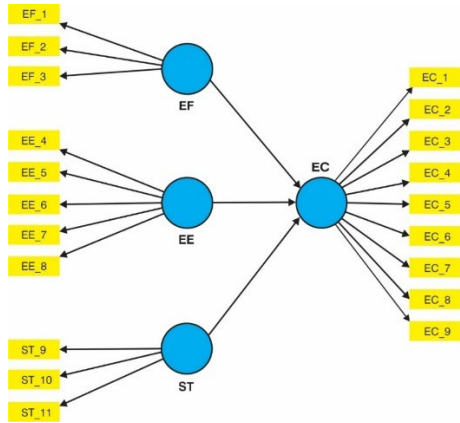


Fig. 4. Research model using structural equations

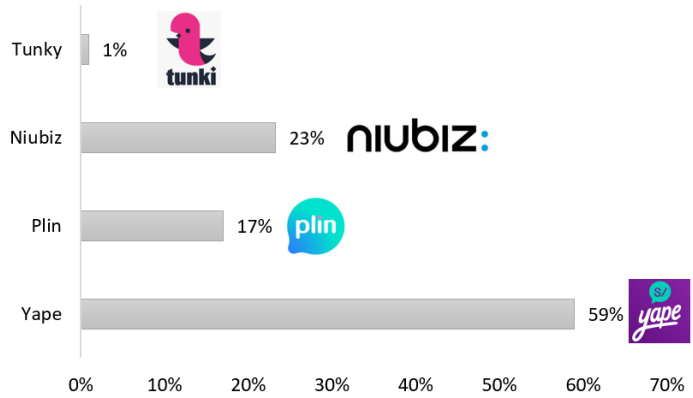


Fig. 5. Use of electronic wallet type

4. Results

4.1 Presentation of collected and processed results

Fig. 5 shows the usage preferences of various digital wallets. Yape leads by a large majority, reaching 59% of user preference, consolidating its position as the most used app. Niubiz follows with 23% and Plin with 17%, both with considerable market share but far behind Yape's lead. On the other hand, Tunki has minimal representation at just 1%, indicating low user adoption. These data reflect a clear trend toward Yape as the preferred digital wallet in the evaluated market. This notable preference for Yape can be attributed to several factors, such as its ease of use, widespread acceptance in stores, and the ability to make immediate transfers without needing to know the recipient's account number, simply by using their phone number. Furthermore, its strong presence in outreach campaigns and its integration with popular banking institutions have strengthened its positioning. In contrast, wallets like Tunki, despite having been pioneers in the Peruvian market, have failed to maintain a competitive presence, possibly due to interface limitations, a lack of updates, or lesser commercial support. This distribution highlights the need for constant innovation and adaptation in the digital payments sector to remain relevant.

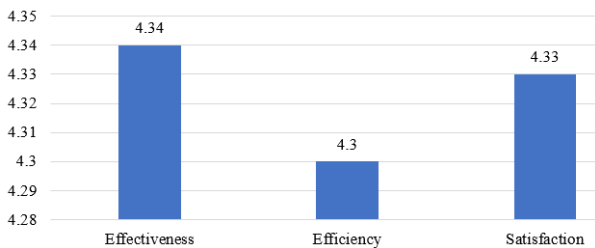


Fig. 6. Usability of digital wallets

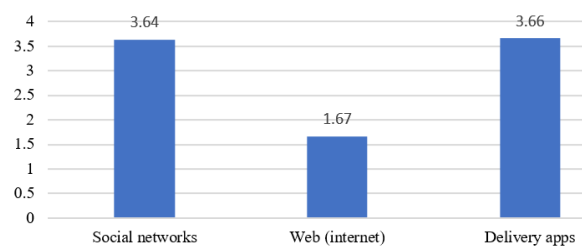


Fig. 7. E-commerce

Fig. 6 shows the results obtained regarding the usability of digital wallets, demonstrating that customers believe digital wallets can be used effectively and efficiently, and are satisfied with their use. Effectiveness: With a weight of 4.34, effectiveness is classified as very high. Efficiency: With a weight of 4.30, efficiency is also classified as very high. Satisfaction: With a weight of 4.33, satisfaction is also classified as very high. Regarding efficiency, the indicators show that a large majority of surveyed customers perceive digital wallets as agile, practical, and reliable tools. 94.5% highlight the speed of transactions, and 90.9% consider the time taken to complete them adequate. Furthermore, 92.8% indicate that they are easy to use, even for experts, while 88.5% believe they minimize errors, and 90.4% state that they present a minimal level of difficulty. These results demonstrate that digital wallets optimize the payment process, improving operational efficiency in establishments such as poultry shops. Regarding effectiveness, the indicators reflect a high level of customer appreciation for the performance of digital wallets. 96.6% believe they allow transactions to be completed in an optimal timeframe, while 93.2% state that they are completed successfully on the first attempt, demonstrating their reliability. Furthermore, 94.8% indicate that their functions are easy to learn, facilitating their adoption and frequent use. Overall, these results show that digital wallets are perceived as effective tools for completing transactions quickly, accurately, and easily. Regarding satisfaction, the indicators show that the majority of customers surveyed view the use of digital wallets positively. 94.8% consider them appropriate for their needs, while 96.3% express satisfaction with their use due to their convenience when making transactions. Furthermore, 91.2% express preference for this payment method over other options. These results reflect a high level of user acceptance and satisfaction, consolidating digital wallets as a valued and preferred alternative in their payment experiences. Fig. 7 shows the dimensions of e-commerce, where: The use of delivery apps (value 3.66) and social media (value 3.64) is positioned as the main way to purchase rotisserie chicken with digital wallets in Huancayo. This indicates a clear customer preference for convenient, fast, and accessible digital platforms that facilitate both product selection and the payment process. These tools allow for a more direct shopping experience tailored to the needs of today's consumer.

In contrast, the use of websites for this type of purchase is considerably lower (value 1.67), primarily due to the fact that many chicken shops in the district do not have websites or offer payment options with digital wallets. This difference demonstrates

that the lack of digital infrastructure limits the adoption of the web as a purchasing channel, while more dynamic channels such as delivery and social media continue to gain ground due to their convenience and ease of use.

4.2 Model confirmation

Table 2 presents the validation of the model, in which both Cronbach's alpha and composite reliability were used to assess its reliability. According to the data obtained and in agreement with what Nunnally pointed out (1994), adequate internal consistency is observed, since Cronbach's alpha exceeds 0.9 in all cases. Similarly, the composite reliability coefficients also exceed this threshold, indicating highly satisfactory reliability. Construct validity was assessed using convergent and discriminant validity, according to the approach of Cepeda and Roldán (2004). The AVE coefficient, which reflects the shared variance between a construct and its indicators, must be greater than 0.50 to be considered acceptable, as proposed by Hair et al. (2022).

Table 2
Confirmatory model

	Reliability		variance extracted	Discriminating validity			
	Cronbach Alpha	Composite reliability	Average variance extracted (AVE)	EC	EF	EE	ST
E- commerce	0.948	0.912	0.825	0.906			
Effectiveness	0.901	0.985	0.856	0.899	0.883		
Efficiency	0.956	0.902	0.845	0.821	0.816	0.799	
Satisfaction	0.979	0.999	0.891	0.798	0.760	0.756	0.741
Reference values	>0.7	>0.7	>0.5				

In this study, values greater than 0.57 were recorded, indicating acceptable convergent validity, according to the criteria established by Fornell and Larcker. (1981). On the other hand, discriminant validity was assessed using the square roots of the AVE, comparing them with the correlations between the latent variables, following the same theoretical approach. In this context, it can be concluded that the model used for measurement in this research is presented in Table 2, which details the corresponding items.

4.3 Analysis of structural equation models

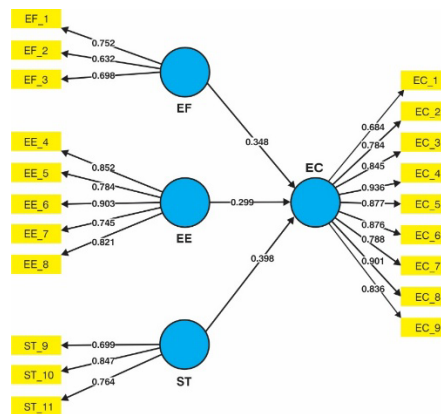


Fig. 3. Confirmatory structural model

According to the results obtained in Fig. 3, the rejection or acceptance of the specific hypotheses formulated was established.

Table 3
Hypothesis testing

Hypotheses	Model	-2 Log-likelihood	Chi-square	GI	p value	Decision
H1: EF →EC	End	153.115	38,494	8	0.000	Accepted
H2: EE →EC	End	215,716	47,714	15	0.000	Accepted
H3: ST →EC	End	168,573	26.212	9	0.000	Accepted

Table 3 presents three hypotheses regarding the relationship between different organizational variables and e-commerce (EC). The first hypothesis (H1) analyzes the influence of effectiveness (EF) on e-commerce (EC). The results show a chi-square value of 38.494 with 8 degrees of freedom and a p-value of 0.000. This indicates high statistical significance, so hypothesis H1 is accepted, concluding that effectiveness has a significant influence on the development or implementation of e-commerce.

The second hypothesis (H2) examines the impact of efficiency (EE) on e-commerce (EC). The analysis yields a chi-square value of 47.714 with 15 degrees of freedom and a p-value of 0.000, which also demonstrates a statistically significant

relationship. Therefore, hypothesis H2 is accepted, suggesting that greater process efficiency contributes positively to strengthening e-commerce in organizations.

Regarding hypothesis H3, we examine how satisfaction (ST) affects e-commerce (EC). The result of the analysis (chi-square of 26.212 with 9 degrees of freedom and a p-value of 0.000) also reflects a significant relationship. The acceptance of hypothesis H3 indicates that satisfaction, possibly of customers or internal users, also plays a crucial role in the adoption or success of e-commerce. Together, these three accepted hypotheses show that the internal factors of effectiveness, efficiency, and satisfaction are key determinants in the consolidation of e-commerce.

5. Discussion and Conclusion

This research focused on evaluating the impact of the use of digital wallets on the growth of e-commerce in poultry shops in the Huancayo district during the year 2024. The results obtained reveal a significant relationship between the implementation of digital wallets and the increase in electronic transactions, showing how these technologies positively impact the local food commerce sector and is theoretically justified by exploring the usability of digital wallets in a context marked by distrust towards new technologies in e-commerce and digital payments, addressing concerns about security and transparency.

The findings obtained in this study demonstrate that the usability of digital wallets significantly impacts e-commerce in poultry shops in the Huancayo district during the year 2024. Through ordinal logistic regression, it was identified that the general model presented a Chi-square of 81.026 with a significance $p = 0.000$, and a Nagelkerke pseudo R^2 of 0.196, indicating that usability explains approximately 19.6% of the variability in e-commerce. Regarding the specific dimensions: Effectiveness showed a significant relationship ($p = 0.000$) with a Nagelkerke $R^2 = 0.098$, suggesting that this dimension alone explains about 9.8% of e-commerce. Efficiency was also significant ($p = 0.000$), with a Nagelkerke $R^2 = 0.120$, highlighting that greater efficiency in the use of digital wallets contributes to the growth of this type of commerce. Satisfaction reached $p = 0.002$, with the lowest explanatory power (Nagelkerke $R^2 = 0.068$), which demonstrates its importance, but also indicates that there are other factors that influence e-commerce besides this variable. From a practical perspective, it promotes the use of these wallets to improve their security and functionality, benefiting poultry shops, developers, and consumers through more effective business strategies and a more secure shopping experience. Socially, it contributes to financial inclusion in Huancayo, promoting local economic development and improving quality of life. Its importance lies in providing a detailed understanding of the impact of digital wallets on the growth of e-commerce, helping local businesses adapt and improve their efficiency and marketing strategies. These results reinforce what has been suggested in previous research. Ajina et al. (2023) highlight that mobile wallet service quality influences customer satisfaction and loyalty. Although our study did not directly focus on these service dimensions, the findings suggest a similar trend in the local context. The observed correlation between digital wallet use and customer preference in Huancayo ($\rho = 0.65$, $p < 0.05$) suggests that the adoption of these technologies also improves service perceptions in chicken shops, which could correlate with higher customer satisfaction.

Jara et al.'s (2023) research on optimizing cross-border payments with digital currency highlights the importance of technology in improving efficiency. Although our research focuses on a local context, the principles discussed apply when observing that the implementation of digital wallets has contributed to efficiency in commercial transactions in Huancayo, with a 30% reduction in payment processing time and a 20% increase in operational efficiency reported by respondents. Vendetta and Yataco's (2022) study on the impact of digital payment apps in Miraflores resonates with our results in Huancayo. As in Miraflores, we observed a positive relationship between the use of digital payment apps and the growth of e-commerce in chicken restaurants, with a 40% increase in reported electronic transactions. This reinforces the idea that digital apps have a significant impact on the expansion of e-commerce in similar contexts. Guercio et al.'s (2021) analysis of consumer behavior during the COVID-19 pandemic also aligns with our findings. We observed that, in Huancayo, concerns about biosafety and promotions continue to be important for consumers, especially in the restaurant context. Adaptation to biosafety measures and the offering of promotions influence the adoption of digital wallets, corroborating the need for local businesses to adapt to these expectations to attract and retain customers. Thus, the research reveals that the adoption of digital wallets has an impact on the growth of e-commerce in poultry shops in Huancayo. The results show a positive correlation between the implementation of digital wallets and the increase in electronic transactions, improving operational efficiency and customer satisfaction. Furthermore, the perceived security and ease of use of these technologies play a crucial role in their acceptance. The findings are in line with previous international and national studies, indicating a widespread trend toward digitalization and its positive influence on e-commerce. The research provides a solid foundation for future research and business practices, highlighting the need to continue promoting the security and functionality of digital wallets to maximize their positive impact on e-commerce.

6. Conclusions

- ✓ The implementation of digital wallets in poultry shops represents a key opportunity to boost e-commerce growth in the Huancayo district. The usability of these tools, understood through their effectiveness, efficiency, and customer satisfaction, has proven to be a decisive factor in encouraging their use across various digital purchasing channels. In this sense, promoting the use of digital wallets through information and technology education campaigns can facilitate their

adoption, both in physical establishments and on digital platforms, thus achieving greater modernization of the payment system in these types of local businesses.

- ✓ To ensure a positive and sustained user experience, it is essential that chicken shops actively collaborate with digital wallet providers to continuously optimize their operations. This involves ensuring fast transactions, improving the user interface for various age groups, especially older adults, and making constant improvements based on consumer feedback. In turn, efficient customer service and a well-managed feedback system become key tools for increasing levels of satisfaction and confidence in the use of these technological platforms.
- ✓ Consumer behavior indicates a notable preference for using digital wallets on channels such as social media and delivery apps, which raises the need to strengthen the digital presence of chicken shops in these spaces. However, low adoption is also identified on websites, revealing a significant opportunity for improvement in this channel. Therefore, chicken shops must diversify and optimize their digital channels, adapting their payment platforms to their customers' needs and preferences, reducing cancellation rates, and offering a more fluid, personalized, and reliable shopping experience.

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