

# Use of e-Wallets and Their Impact on SME Business Transactions

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**Abstract:** Currently, worldwide there is an accelerated digital transformation, which will continue in time with the same trend, becoming an everyday part of human life. The appearance of covid-19 has had a strong impact on several aspects of life, especially in the way of acquiring products and/or services, which, due to the fear of receiving money from a person infected with the virus, led people to look for other options to carry out their economic transactions without physical contact, such as the use of electronic wallets. However, many entrepreneurs still do not use this type of technology in their businesses. The purpose of this research is to determine the impact of the use of electronic wallets in the commercial transactions of SMEs. To this end, we worked with entrepreneurs in the town of Otuzco in the La Libertad Region of Peru. It was observed that they only carried out transactions using the cash collection and payment method and did not use technological tools such as electronic wallets. This is applied research with a quasi-experimental design, cross-sectional and quantitative approach, with a sample of 88 SMEs divided into a control group (23 SMEs) and an experimental group (65 SMEs). The survey was used as a data collection technique, and a program was developed to promote the use of electronic wallets in the entrepreneurs of the city of Otuzco, obtaining as a result a positive impact on the commercial transactions of these SMEs. The results show that 96% of the merchants were reluctant to use electronic wallets for fear of being affected by computer crimes. After the training, 98% of the merchants monitored recognized the importance of their use in their regular commercial transactions. In conclusion, it was found that training on the use of electronic wallets and continuous monitoring have a positive impact on the level of commercial transactions, boosting the competitiveness of businesses by increasing sales, streamlining operations, and reducing financial costs. The research is of interest because it shows the importance of disseminating programs in the use of technological tools such as digital wallets in small businesses to achieve a positive impact on the improvement of their economic activities.

**Keywords:** Technology, SMEs, Commerce, Development, Digital applications

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## 1. Introduction

Currently, worldwide there is an accelerated digital transformation, which will continue in time with the same trend, becoming an everyday part of human life, in addition, the emergence of covid-19, strongly affected various aspects of life, especially in the way of acquiring products and / or services, The fear of receiving money from a person infected with the virus led people to look for other options to carry out their economic transactions without physical contact, such as the use of electronic wallets, which are the world's favorite because of their simplicity and minimal cost (Hoang and Nguyen, 2022).

According to McKinsey (2020), this global virus pushed people to learn to use the electronic means of payment that were already available, being adopted quickly in countries that had the necessary digital channels, but complicated for those where the equipment was insufficient, so that the migration to digital would take longer. That is why there are small groups that have not yet managed to adapt and are unaware of the use and benefits of digital tools for their businesses, meaning this is a barrier to globalized economic growth.

Worldpay (2020) points out that the way in which people carry out economic transactions daily has a lot to do with their culture, habits and the level of technology available to them; therefore, in places where people lack all of the above, there will continue to be a negative tendency to always use cash as a means of payment.

While it is true that there are internal factors such as the culture and habits of each individual that affect the way of making economic transactions, other highly external factors also have a significant impact, so Aparna et al. (2015) emphasize that merchants are somehow prevented from efficiently taking advantage of electronic payment tools, due to the lack of internet in some rural areas, in addition to the lack of technical knowledge of its correct use.

Muhtasim (2022) mentions that another factor that makes merchants distrustful of using digital wallets is the issue of privacy and cybercrime, which have a negative impact on the decision to adopt these electronic tools, since due to this fear they prefer to use cash for their transactions in their stores. This situation is detrimental to businesses because it does not allow them to increase sales and this affects profits (Ajimon and Prajod, 2021).

In Peru, due to state initiatives, there is a regulatory standard that encourages the growth of electronic payment methods, as Abad et al. (2016) report that Peru has a legal framework that encourages access to electronic payments, which is essential for the expansion and growth of mobile payments today. According to El Comercio (2022), in response to the pandemic, 61% of Peruvians abandoned the use of cash, and 79% of Peruvians are open to the possibility of trying new digital payment options.

However, there are many entrepreneurs who do not use or are unaware of the use of digital wallets, in the case of Peru more than 60% of the total population is unaware and does not take advantage of the benefits, nor trust in these electronic tools, so to promote their proper use, it is necessary to promote internet connection in remote areas and especially provide programs that educate on financial issues, giving them greater confidence for the implementation of electronic wallets in their businesses (Gubbins, 2023).

Such is the specific case of SMEs in the district of Otuzco, La Libertad. Most of these small entrepreneurs are unaware of the benefits they would get with the use of electronic wallets in their businesses, although it is true that they have a smartphone and internet connection, they are still wary of the security of using these digital tools for their daily transactions, affecting their level of sales to the general public, since millennials represent a large part of their clientele and they normally use and prefer to use digital payments to make their purchases. For this reason, it is of utmost importance to train them on the efficient use of digital wallets to efficiently take advantage of the benefits of technology. As explained, this article aims to determine the impact of the use of e-wallets in the commercial transactions of SMEs.

## **2. Literature Review**

According to Páez (2020) digital wallets also called digital purses are mobile or web applications that have the functionality to store and send money for transactions at any time of the day. They are used to perform online economic transactions using a cell phone, computer, tablet or any electronic device with internet connection (Le et al., 2019).

Through mobile payment, money is transferred to a person through a mobile device which enhances the functionality of smartphones because they become virtual debit cards. It is currently the most popular mobile banking service, especially in newly developing regions where the rate of transactions through these e-wallets has increased (Taufan and Yuwono, 2019).

Due to the simplicity of their use, e-wallets have managed to consolidate their position as the world's favorite for making payments and collections, since they only need to top up the balance through the delivery of cash at a recharge point or ATM, contributing to financial inclusion (Aunurrochim and Bin, 2021, Cotrina and Pumarrumi, 2020). Customers see this option as very versatile as they can use them through mobile applications downloaded on their cell phones (Wang et al. 2016).

For some time now, technological innovations on electronic wallets have been trying to improve the coexistence of businesses so that transactions flow with greater continuity and strengthen commercial operations (Bellido and Bartolo, 2023). An important aspect is the short transit time of money and low distribution charges provide a guarantee of a higher level of sales, boosting business growth (Wei et al., 2023).

Several researchers approach the topic of digital wallets from different contexts and realities. The use of these tools is becoming widespread and is spreading faster and faster because their use increases the level of transactions, as they become easier, faster and more efficient to conduct business on a daily basis (Putri and Sumitra 2020), however, a certain part of the population has problems adapting to these new technologies (Manrai et al., 2021).

In order to identify elements that influence their adoption, Ramos (2022) proposes several alternative solutions for the use of these tools, taking into account that security and risk mechanisms influence the decision to adopt or not digital wallets, and that the correct use of these tools in businesses could be promoted.

The use of these wallets promotes financial inclusion, and it can be determined that the new electronic platforms have had a positive impact on businesses (Llamocca and Huaylla, 2020; Cotrina and Pumarrumi, 2020), which is why it is important to promote their use and publicize the minimal costs and benefits they offer. Taking into account that it helps to reduce costs and implies greater speed in commercial exchanges (Márquez, 2016). In addition, it avoids carrying cash, thus reducing assaults, promotes competitiveness and becomes a differentiator from traditional businesses (Encalada et al., 2020).

On the customer side, factors such as ease of use, credibility and security are established, which make digital wallets a preferred option for consumers (Soervanto and Sumantri, 2020). The key factors driving the adoption of these wallets were also analyzed by Ilieva et al. (2023), identifying ease of use, social influence, compatibility with lifestyle and perceived trust. Sharma (2022) determines a positive relationship between customer intentions and the factors of ease of use, trust and experience through the use of e-wallets. Despite the ease of use and greater security compared to the use of credit and debit cards, as well as the absence of transaction costs, there are gaps that represent a challenge for their sustainability over time (Bagla and Sancheti, 2018; Kapoor, 2020, Chawla and Joshi, 2019).

Determining factors with respect to generating greater trust in the use of e-wallets were analyzed by Kinis and Tanova (2022) who determined that the behavioral intention to use e-wallets increases if a reimbursement condition is shown in case of fraud.

There is still a significant gap for e-wallets to be used to their full extent. Alam et al. (2021) conducted a SWOT analysis where they point out important strengths such as easy access, security, adequate management of products and services, as well as speed. However, they identify some weaknesses such as lack of infrastructure and exploitation by the mobile telephony market.

Studies reveal that users, regardless of age, prefer to use digital wallets for their simplicity. They use them for online shopping, transportation, restaurants, purchase of necessities, avoiding carrying money or going to ATMs to withdraw cash (Mavale et al., 2020). However, financial security, cybercrime and level of trust influence the use of digital wallets (Muhtasim et al., 2022).

No quasi-experimental studies on training programs on the use of e-wallets were found to be able to measure the effect they have on the economic transactions of merchants who increase the use of these technological tools.

### **3. Methodology**

The research has a quantitative approach because it focuses on the collection of numerical data. It is applied. The design is quasi-experimental because it reveals the impact of manipulating one or more independent variables on the dependent variable. The objective of the research is to determine the impact of the use of electronic wallets on SME business transactions.

The hypothesis of the research is that the implementation of an e-wallet training program does have a positive impact on SME business transactions.

The population of this research is represented by 88 SMEs in the province of Otuzco; this number was identified personally, observing and counting them at the time of applying the surveys. SMEs from all economic sectors in the city of Otuzco were included, without distinguishing any socio-demographic aspect. The sample is considered a census sample; this type of sampling is used when the sample represents 100% of the population and when the number of individuals is manageable.

A survey was applied to obtain information on various aspects related to the knowledge and use of the electronic purse for their businesses. To measure the reliability of the instrument (questionnaire) with dichotomous measures, the Kuder Richardson coefficient was used, yielding a result of 0.898, which means that the reliability is adequate.

$$kr20 = (k/(k - 1))(1 - (\sum pq) / \sigma^2) = (8/(8 - 1))(1 - (1.11) / [(5.16)^2]) = 0.898$$

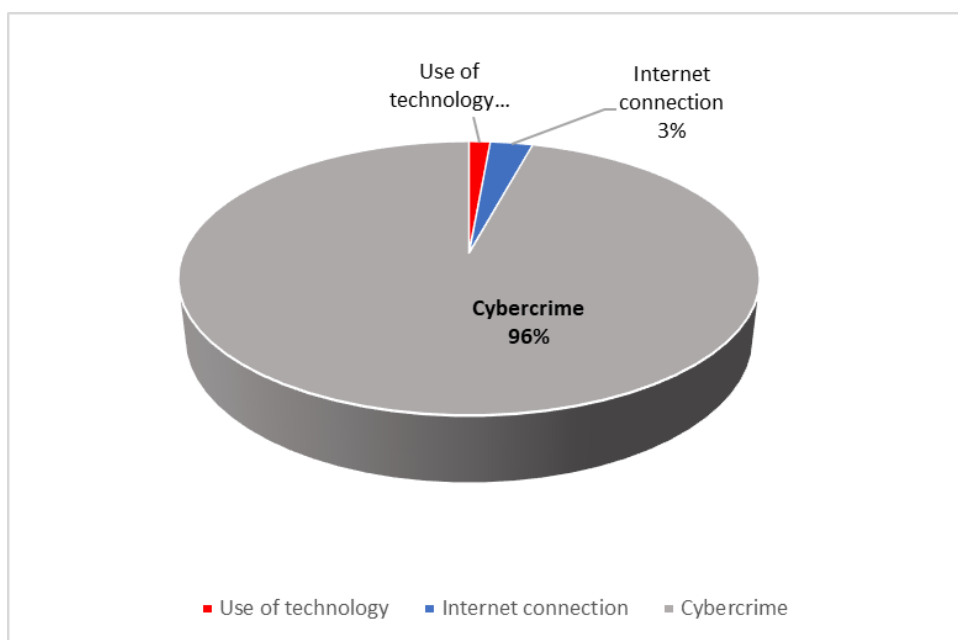
### **4. Results**

The characteristics of the 88 businesses that do not yet use electronic wallets during their economic transactions are disclosed.

**Table 1: Socioeconomic characteristics of SMEs**

|               |                    |     |
|---------------|--------------------|-----|
| <b>Age</b>    | 18 to 35 years old | 10% |
|               | 36 to 53 years old | 57% |
|               | Over 53 years old  | 33% |
| <b>Gender</b> | Male               | 88% |
|               | Female             | 13% |

|                       |                   |     |
|-----------------------|-------------------|-----|
| <b>Academic level</b> | primary           | 8%  |
|                       | secondary         | 74% |
|                       | technical studies | 18% |
| <b>Item</b>           | Commerce          | 97% |
|                       | Services          | 3%  |
| <b>Monthly sales</b>  | 0 - <1000         | 8%  |
|                       | >1000 - <5000     | 76% |
|                       | >5000 - <10000    | 13% |
|                       | >10000            | 3%  |



**Figure 1: Factors impeding the use of digital wallets**

The factor that predominates widely in comparison with the others is the fear of cybercrime, since traders believe that if they ever lose their cell phone, they run the risk of unscrupulous people using their money and emptying their accounts leaving them bankrupt; secondly, internet connection represents a minimum percentage, some businesses do not have a stable internet connection, and finally, the technological issue is a factor that affects to a lesser extent since the vast majority of businesses have a cell phone.

**Table 2: Development of the Training Program on the use of Digital Wallets**

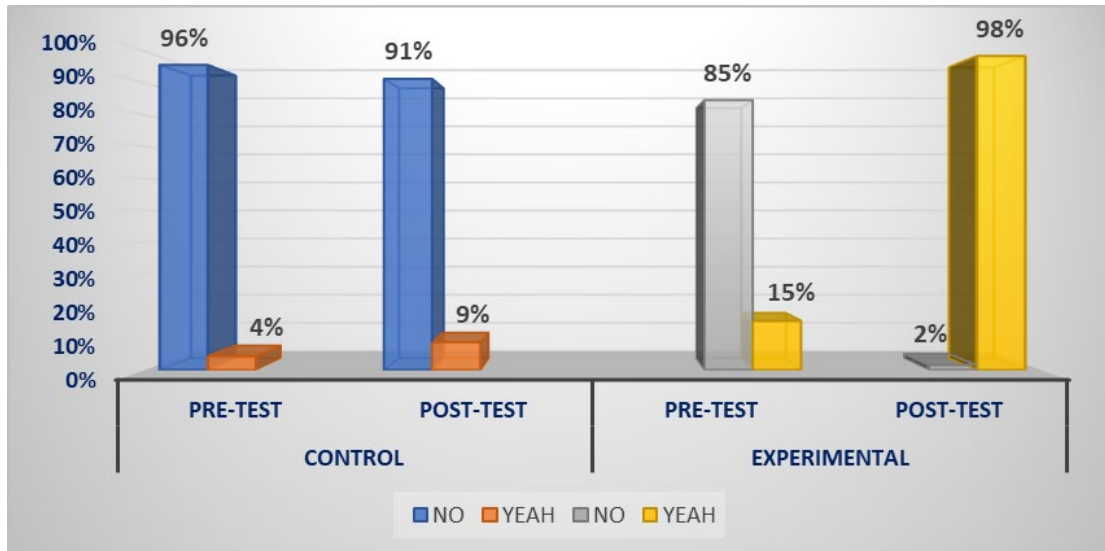
|           |   |  |  |  |  |
|-----------|---|--|--|--|--|
| Objective | To encourage merchants to use and take advantage of the benefits offered by electronic wallets. |  |  |  |  |
| Place     | Auditorium of the Provincial Municipality of Otuzco, in front of the main square.               |  |  |  |  |
| Date      | July 21, 2023   |  |  |  |  |

Agenda:

|  |            |
|--|------------|
| Introduction and Welcome                         | 5 minutes  |
| Definition and Importance of Electronic Wallets  | 20 minutes |
| Advantages, benefits, and precautionary measures | 25 minutes |
| Examples, practical demonstration                | 40 minutes |
| Questions from the audience                      | 30 minutes |

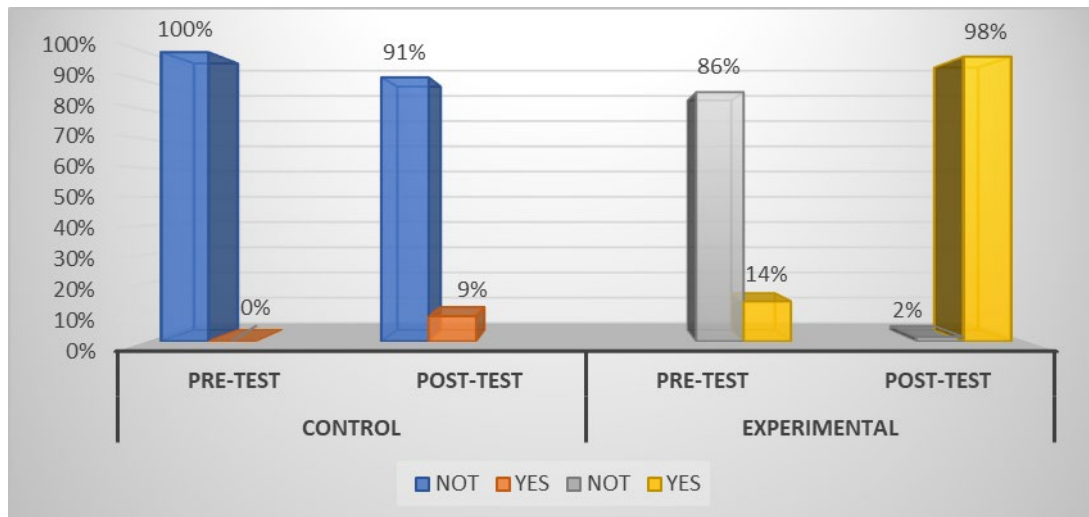
After the training on the use of electronic wallets and the accompaniment for a period of approximately 2 weeks, the survey was applied to measure the impact on commercial transactions in SME merchants.

The following shows the evolution of the responses of the questionnaire applied to the 88 merchants, comparing the impact on the responses of the 65 people who attended the training and allowed continuous follow-up, with the 23 people who did not attend, therefore, this research divides the sample into two groups, the control group, made up of those SMEs that were surveyed pre and post training, but without having participated in the training; and the experimental group, made up of the SMEs surveyed pre and post the scheduled training.



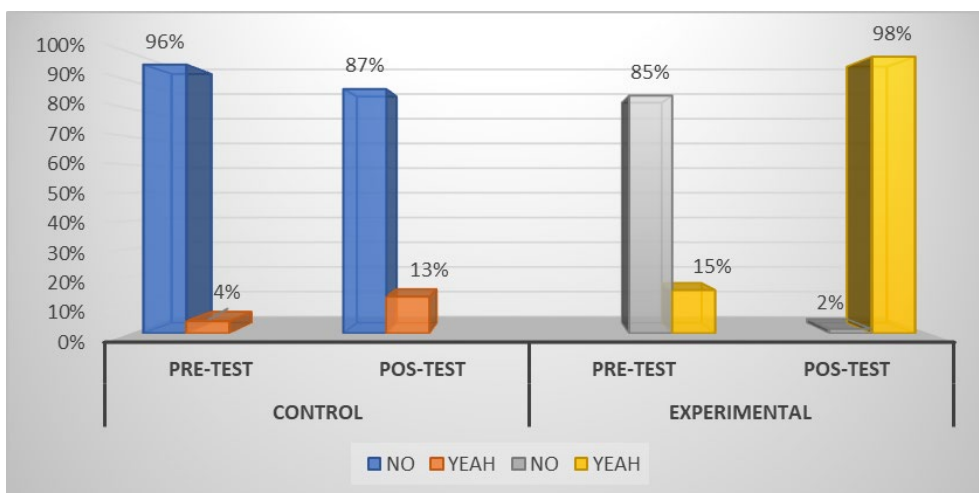
**Figure 2: Importance of the use of electronic wallets for business operations**

The control group shows little acceptance of the importance of the use of electronic wallets in their businesses. The results in the experimental group show a significant impact, because after the training 98% of the respondents value the importance of the use of these wallets as an important impulse in their business operations.



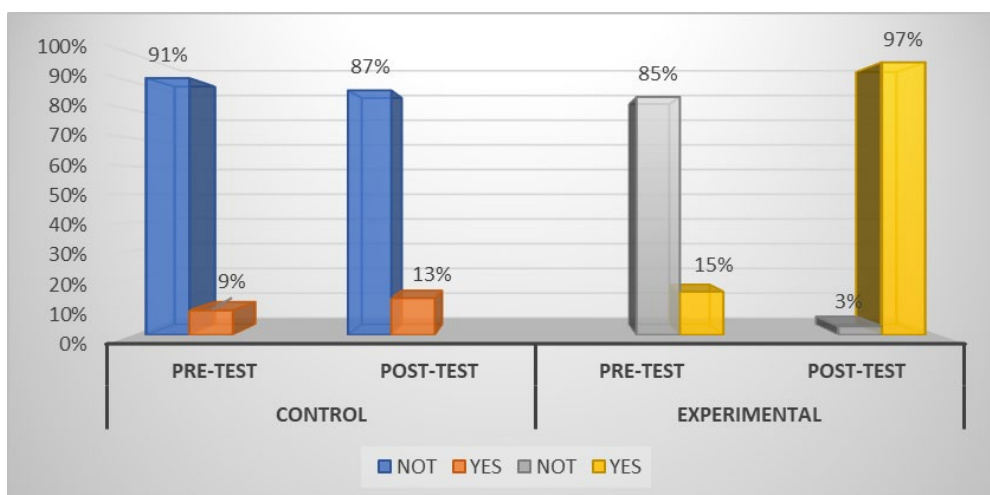
**Figure 3: Electronic wallets facilitate cash change management**

The control group is still reluctant to use electronic wallets, some respondents changed their minds in the post-test, due to comments from friends or relatives. The results in the experimental group show a significant impact, since after the training 98% of the respondents testified that they found it much easier to make change when making sales, improving the flow of customer service.



**Figure 4: Use of electronic wallets facilitates payment to suppliers**

The same trend in the consultation regarding payments to suppliers, which is often presented as a difficulty since they come from different remote areas of the city and with this mechanism it is much more feasible to comply with payments on time and thus make purchases more easily.



**Figure 5: Use of electronic wallets facilitates service payments**

The control group, made up of those merchants who did not attend the training, did not present relevant changes in the pre- and post-test, while in the experimental group, approximately all the merchants have changed their way of thinking, this being the result of the dissemination of the benefits that electronic wallets bring to businesses, such as, Improving sales by capturing the largest number of customers, since the use of these electronic tools avoids several day-to-day sales problems, such as not having a single payment for the returns, traveling to another location to pay suppliers, or making deposits to pay for various services necessary for the operation of the business where commissions are charged, etc.

**Table 3: Normality test**

|                       | Group        | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|-----------------------|--------------|---------------------------------|----|------|--------------|----|------|
|                       |              | Statistical                     | gl | Sig. | Statistical  | gl | Sig. |
| Measurement Pre-Test  | Control      | .402                            | 23 | .000 | .562         | 23 | .000 |
|                       | Experimental | .350                            | 65 | .000 | .712         | 65 | .000 |
| Measurement Post-Test | Control      | .422                            | 23 | .000 | .641         | 23 | .000 |
|                       | Experimental | .527                            | 65 | .000 | .134         | 65 | .000 |

It is identified that the significant probability of the pre-test and post-test measurement is less than 0.05, therefore, it is concluded that the data do not tend to a normal distribution.

Based on this, non-parametric tests were performed for related samples, so the Wilcoxon test was applied in two parts, the first for the control group:

**Table 4: Incidence between the pre-test and post-test of the Control group**

| Test Statistic <sup>s</sup> |                       |
|-----------------------------|-----------------------|
|                             | Post-Test Measurement |
|                             | Pre-Test Measurement  |
| Z                           | -1.342 <sup>b</sup>   |
| Asymptotic sig. (bilateral) | .180                  |

It is observed that the asymptotic significance is greater than 0.05; therefore, it is concluded that the results of the questionnaire applied to the control group in the pre-test and post-test moments did not produce relevant changes; in summary, the merchants in this group continue with the fear and uncertainty that prevents them from using electronic wallets.

On the other hand, different results were obtained in the experimental group, as shown in the following table:

**Table 5: Incidence between the pre-test and post-test of the Control group**

| Test Statistics             |                       |
|-----------------------------|-----------------------|
|                             | Post-Test Measurement |
|                             | Pre-Test Measurement  |
| Z                           | -6.771 <sup>b</sup>   |
| Asymptotic sig. (bilateral) | .000                  |

In this case the asymptotic significance is much lower than 0.05, that is to say that in this group there is a very noticeable incidence between before and after the programmed training, in other words, the merchants who attended and accepted the continuous follow-up, already use at least one electronic wallet for their respective businesses, thus achieving greater efficiency in their commercial transactions, allowing them to increase their sales gradually, since generally, tourists use electronic tools for their purchases.

## 5. Discussion

According to the results obtained, the hypothesis is validated, since the implementation of a training program on the use of electronic wallets does have a positive impact on the commercial transactions of SMEs. After the training and continuous follow-up, it was noted that the level of commercial transactions gradually increased, since more clients are being attracted every day.

The results show that the sales income regularly received by the businesses is relatively low, and that women represent most of the salespeople who do not know how to use an electronic wallet according to the survey, due to their low level of education. Likewise, the age of the merchants is not a differentiating criterion in the level of knowledge of electronic wallets, since according to results the ages of the respondents vary between 18 and 53 years old. This is in line with the research of Manrai et al. (2021), which found that semi-rural women present problems in adopting new technologies related to finance, since if they do not have facilities and training available, they will not be able to learn to use digital payments. It is also aligned with Mavale et al. (2020), who mention that regardless of the age of the users, their behavior and preferences are the same due to their simplicity of use.

It is observed that, after some time of their use, the level of commercial transactions gradually improved according to the result obtained by applying the Wilcoxon test, since thanks to the various benefits such as their simplicity of use, the zero commissions charged by these electronic tools for their use, the speed of the transactions as they are immediate, avoiding loss of time, they allow merchants to adapt quickly. It is identified with the study by Wie et al. (2023), where they mention that thanks to the short transit time of money and the minimum distribution costs, it helps to ensure that a higher percentage of customers are captured. In the same

line, Márquez (2016) says that, as there is greater confidence in the use of digital payments, being faster and safer, it allows to reach a greater number of customers, achieving customer loyalty. It is also supported by the research of Putri and Sumitra (2020), where they found that the use of electronic wallets has a positive impact on sales, because of which sales become easier, faster and more efficient.

This allows them to grow economically and develop in line with the emergence of new technologies in the world.

## **6. Conclusions and Recommendations**

It was determined that the use of electronic wallets has a positive impact on the commercial transactions of SMEs, considering that sales revenues gradually increased as it allowed merchants to capture a greater number of customers for all the benefits that their use brings, therefore, it is absolutely necessary that all large and small businesses learn to use at least one electronic wallet with the help of training and monitoring, so that in this way they continue to capture more local and international clientele.

It was found that the level of knowledge about the use of electronic wallets by SMEs in the city of Otuzco is almost nil, since, although it is true that more than half of those surveyed have heard of these tools at some point, almost all of them are unaware of their use and benefits. Therefore, it is concluded that there are businesses that do not use electronic wallets in their operations due to lack of knowledge.

It was identified that there are several factors that affect the adoption of electronic wallets, but the main one is the fear of cybercrime and distrust in the use of these tools; therefore, it is concluded that as long as they are not made aware of their correct use, they will continue with this fear, being unable to use them.

The impact of the training on the use of electronic wallets for SMEs in Otuzco is positive, since after the merchants who attended the training (experimental group) put into practice what they learned in their businesses, they noticed that the use of these tools helps to increase their sales, to make it easier to manage money for collections and payments, which allows them to enhance their economic activities, so it is considered essential to train entrepreneurs on these technological issues that help the sustainable development of their businesses.

## **Acknowledgements**

Special thanks to Universidad Privada del Norte for funding this research.

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