Digital and mobile payment methods: Influencing factors in the decision to use retail business customers according to the TAM model

Medios de pagos digitales y móviles: factores de influencia en la decisión de uso de clientes de negocios minoristas según el modelo TAM

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Abstract

The growing use of both digital and mobile technologies have given way to the emergence of new ways of carrying out daily activities and especially commercial activities, a group that has seen the need to apply new ways of doing business through the use of both digital and mobile technologies, however, previous research shows that there is no mass adoption in the use of digital and mobile technologies for making payments in commercial transactions. Therefore, the objective that this research aims to achieve focuses on: Analyzing the main factors that influence so that users of retail businesses in the city of Guayaquil do not massively adopt digital and mobile payment methods. For this, an empirical, descriptive, correlation and cross-sectional study was carried out, the Technology Acceptance Model-TAM was used, in addition, quantitative tools such as the survey and qualitative tools such as the bibliographic study were applied. It was possible to determine the existence of various models to explore the adoption of technology by TAM and UTAUT users. When using the TAM model to study the adoption of digital and mobile payment methods, a correlation was found (*rho* = 0.668) positive mean between the independent variable, the factors of the TAM technology acceptance model and the independent variable.
Keywords: Digital; mobile; correlation; model; commerce; e-commerce

Resumen

El uso en crecimiento de las tecnologías tanto digitales como móviles han dado paso al surgimiento de nuevas formas de realizar las actividades cotidianas y sobre todo las actividades comerciales, sector que se ha visto en la necesidad de aplicar nuevas formas de realizar negocios mediante el uso tanto de tecnologías digitales como móviles, sin embargo, investigaciones previas demuestran que no existe una adopción masiva en el uso de tecnologías digitales y móviles para la realización de pagos en las transacciones comerciales. Por lo tanto, el objetivo que pretende alcanzar esta investigación se enfoca en: Identificar los principales factores que influyen para que los usuarios de los negocios minoristas de la ciudad de Guayaquil adopten de forma masiva los medios de pagos digitales y móviles. Para esto se realizar un estudio empírico´, descriptivo, correlación y de corte trasversal, se empleó el Modelo de Aceptación de Tecnología-TAM, además se aplicaron herramientas cuantitativas como la encuesta y herramientas cualitativas como el estudio bibliográfico. Se pudo determinar la existencia de diversos modelos para explorar la adopción de tecnología por parte de los usuarios TAM y el UTAUT, Al emplear el modelo TAM para estudiar la adopción de los medios de pagos digitales y móviles se halló una correlación (*rho* = 0.668) positiva media entre la variable independiente, los factores del modelo de aceptación de tecnología TAM y la variable independiente.
Palabras clave: Digital; móvil; modelo; correlación; comercio; comercio electrónico

Introducción

The growing use in the application of digital and mobile media in the daily activities carried out by the different actors of societies at a global level has given way to the fact that commercial organizations are increasingly dependent on these for their success and sustainability in a highly competitive world (Galán and Venegas, 2016). Applications in marketing, today, have personalized content for each segment and these, in turn, provide in real time their tastes and preferences (Sumba, Cueva and López, 2018).

The above is even more determinant if we consider today's society as a knowledge society, where its actors must actively integrate Information and Communication Technologies-ICTs in their daily work (Pérez et al., 2018). This situation was enhanced by the presence of Covid-19 since companies had the need to adapt to the use of technologies to ensure the subsistence of the organization (García-Madurga, Grilló-Méndez and Morte-Nadal, 2021; Cueva-Estrada, López-Chila and Sumba-Nacipucha, 2021).

In this emerging digital ecosystem, electronic transactions between commercial organizations and their Consumers or Customers (C/C) are constantly growing, allowing commercial companies additionally to maintain a two-way type of communication with their C/C, as well as to extend their operation globally. Today more and more medium and small businesses are converging to the combined use of online and traditional stores (Cueva and Sumba, 2015; López and Andrade, 2018).

In this sense, Armstrong y Kotler (2012) arguethat companies that are now part of this new digitalecosystem must seek different ways to create value for people using all the benefits and advantages that ICTs can offer. Armstrong and Kotler (2017) further add that the digital environment allows to increase the productive link between digital and mobile technologies with business C/C, a link which must be used strategically by economic societies to ensure their sustainability. To conclude, it is worth reflecting on how this doesnot only imply the use of technology *per se* but involves the strategic use of these digital and mobile elements in order to add value truly appreciated by the business C/C (Guerra, Torres, Sumba and Cueva, 2021).

With the wide range of possibilities and interaction alternatives offered by ICT, the so-called digital C/C emerge, which are characterized by making daily use of digital and mobile technologies directly connected to the Internet, allowing them to communicate with other people and perform transactions with commercial organizations ubiquitously, bringing to e-commerce a wide range of transactional gateways and exposure of products and services (Peñafiel y López, 2012; Delgado, 2016; Guaña-Moya, Quinatoa-Arequipa and Pérez-Fabara, 2017; Alvear, 2017).

In addition, the pandemic forced people reluctant to use technology to adapt to the new normality, which required the use of digital and mobile devices to carry out transactions through the Internet and thus avoid physical contact (Ortega-Vivanco,

2020; Central Bank of Ecuador-CBE, 2021a). All of the above shows that commercial organizations are obliged to attend to digital consumers, who use ICTs more actively and recurrently, a situation that was not so evident a few years ago.

In this sense, we can add what was published in a report about Electronic Means of Payment-MPE, elaborated by the CBE (2021b), which concludes that: MPE as well as Credit Cards-TC and Debit Cards-TD, since 2015, have experienced and shown a constant growth, both in the number of transactions made and in the amount of money used in these. But there is a slowdown in the year 2020, the time of the beginning of the pandemic, where the levels fell to values close to those of the year 2017 for the case of CTs.

However, the use of TDs as a means of payment increased compared to pre-pandemic levels. The Banking Association of Ecuador-ASOBANCA (2022) states that during 2021 the most used payment method by users to make their transactions was the teller window with the use of physical money, this use represented 39.8% compared to the rest of the enabled channels.

From the above, it is possible to indicate that the use of digital and mobile technology in Ecuador is growing, but nevertheless, there is a considerable percentage of people who still prefer to use physical means of payment rather than digital means. Therefore, the problem that the study aims to solve can be determined as follows: What are the factors that influence the users of retail businesses in the city of Guayaquil not to massively adopt digital and mobile means of payment?

The importance of the study is based on the fact that retail entrepreneurs have updated information to make better decisions regarding the implementation of digital payment methods in their respective organizations and, on the other hand, with the results obtained, the National Government of Ecuador will be able to motivate the use of these digital platforms in the population and thus eliminate the expenses that can be generated by the use of physical money.

Contextualization and State of The Art

Retail trade

Retail trade can be conceptualized as any process or set of retail trade activities, in which goods are purchased to be subsequently sold to final consumers. It should be noted that this additional process adds an additional cost to the final price (Eustat-Euskal Estatistika Erakundea-Basque Statistics Office, 2022; Bohórquez-Lopez, García, Méndez-Lazarte and Caycho, 2022). In addition, it can be added that retailers are how producers and final consumers are linked or related, thus benefiting on the one hand the producing company, since it can receive direct feedback from its consumers, and the latter by being able to satisfy their desires through the purchase of the products.

The National Institute of Statistics and Census of Ecuador-INEC (2012) states that this sector of the Ecuadorian economy represents 46.53%, distributed as follows: lighting, household appliances, and furniture, 3%; books, newspapers, and

stationery, 3.2%; toiletries and pharmacy, 4.7%; footwear, leather products and clothing, 10.9%; beverages and food, 50.5%; trade of other items, 23.3%. In real terms, 500 217 organizations show economic activity in Ecuador, of which 232 760 are retail businesses. Finally, it is worth mentioning that the three provinces where there is a greater presence of retail trade are Guayas at 25.2%, Pichincha at 20.3%, and Manabí at 6.7%.

With regard to their division or form of classification, we have the following: A) *Stores or popular businesses*, an organization that offers a wide assortment of products or merchandise, however, they possess a low level of depth or specialization in their marketing lines. B) *Supermarkets or large businesses*, organization that offers a high variety of products with a high level of depth or specialization in their marketing lines (García, Alcaraz and Fernández, 2014). At this point it can be added that supermarkets or large businesses have mostly implemented different forms of digital and mobile payment, however, their C/C have not adopted them massively, while in small businesses the preferred form of payment for transactions is physical money.

E-commerce

It is important to mention the factors that allowed E-Commerce-CE activities to emerge globally, in the first place are mobile and digital technologies which with their constant integration into the daily activities of society gave way to the evolution of traditional customers to digital C/C with new needs and desires that organizations had to meet, this is how digital marketing emerges which can be described as strategies used and applied in order to improve advertising and positioning of a service or product and especially to optimize the company-customer communication (Barzola, Jara and Aviles, 2019; Chavez, Miranda, Quispe and Robles, 2019). This is supported by the appropriate and strategic management of the content published by the organization, applying techniques provided by content marketing (Pachucho, Cueva, Sumba and Delgado, 2021; Cueva, Sumba and Duarte, 2021).

Considering the massive use of digital and mobile technologies, retailers found themselves in the obligation to evolve towards the development and applicationof CE activities, this inorder to serve the so-called digital C/C.

CE can be defined as a system or means of automation for traditional commerce, but it can also be described as the group of exchange activities of goods, information, or services using as means of communication: telematic networks and computer media connected to the Internet (Picazo-Vela, Ramírez-Goñi and Luna-Reyes, 2014; Jones, Motta and Alderete, 2016; Guzmán, 2018; Salas-Rubio, Ábrego-Almazán and Mendoza-Gómez, 2021). In short, CE is the evolution of traditional commerce, where now all the transactions involved in this process must be carried out digitally and wirelessly, taking advantage of the benefits of ubiquity, Figure 1 below shows a general overview of the basic actors involved in the VC process.

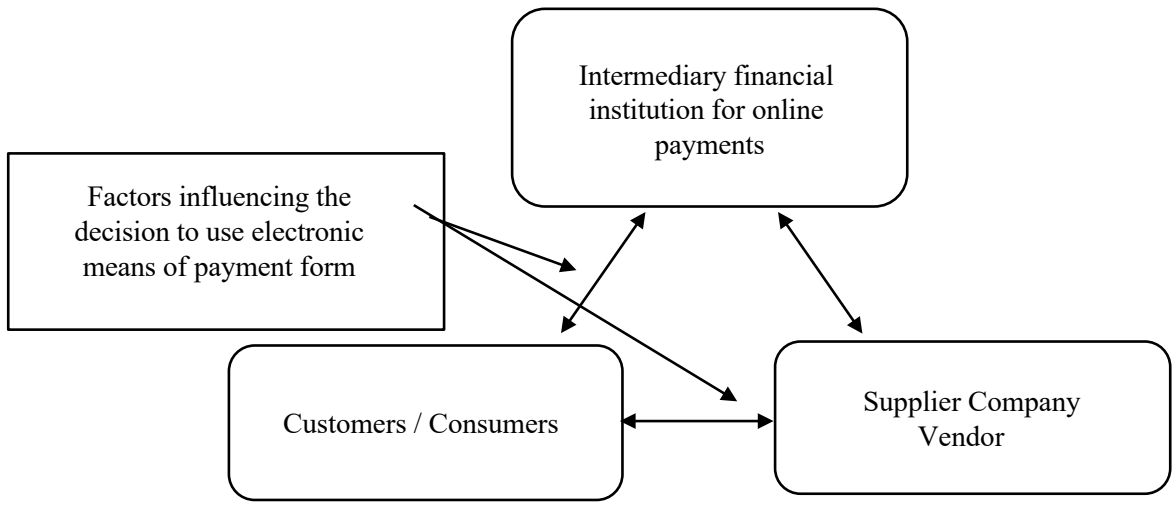

Figure 1. Actors in e-commerce.
Source: Elaborated from Durić, Marić & Gaśević (2007).

Payment Methods in the E-Commerce Environment

An electronic payment platform is in charge of transferring money or economic values between the person, client, or consumer and the seller or company in an electronic transaction. Therefore, this process becomes a fundamental piece within the whole EC system. The security during the payment system and the way to develop it through the Internet is the most important concern to be addressed by the company, besides trying to minimize the thoughts of insecurity that people have when they enter their data to digital payment platforms, a factor which could be negative in the decision to use this form of payment.

In this regard, the Asociación Española de Comercio Electrónico y Marketing Relacional-AECEM (2011) argues that the time of payment is crucial in the buying process, because at the last moment, the customer can change his decision, so organizations must provide a range of possibilities both online and offline so that the user can perform the process, providing all the security that the case deserves.

Online payment methods can be described as those in which the payment is made at the same time and place where the interested

person wishes to acquire the product or service, through the use of the Internet; it can be added that there is no face-to-face conversation or contact between the parties involved in this process. CT or TD is the most common way in which this transaction is carried out.

On the other hand, mobile payment methods are described as any payment transaction made through the use of mobile electronic equipment at the point of sale and does not necessarily involve interaction between people which suggests the use of an application or mobile program that allows avoiding the use of cards or cash (Maldonado, 2015). These payment methods are presented given the need of consumers to have different payment formats available that streamline their daily

activities but also provide security and trust (Pisani & Moormann, 2018). These two payment methods converge in communication with some banking institution which administers or manages the money online (Figure 2).

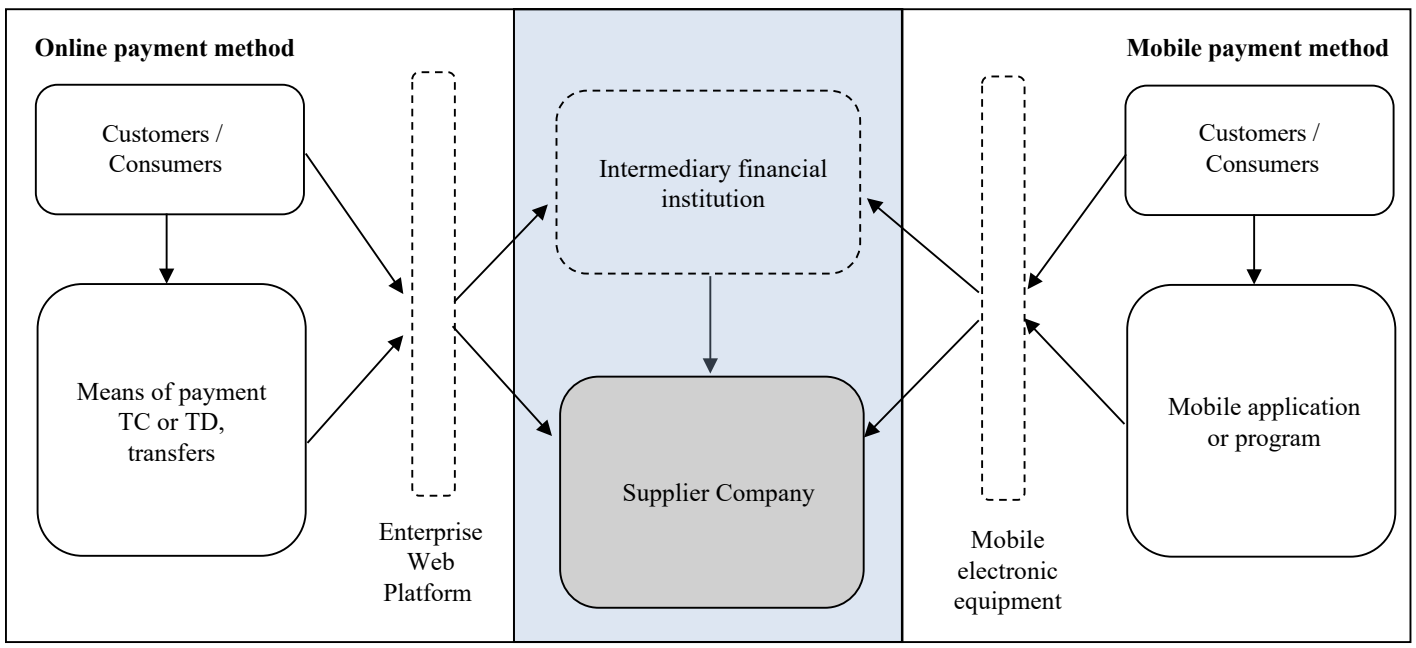

Figure 2. Scheme of payment methods.
Source: Own elaboration.

Davis, Bagozzi y Warshaw (1989) developed the Technology Acceptance Model-TAM based on the theory of action of reason (Ajzen & Fishbein, 1980). In this model five factors determine the usability of technology by users:

1. *External factors*, these are related to the analysis of the different external variables that could influence the use and adoption of technologies, such as security, connectivity, people's comments, costs, etc.
2. *Perception of usefulness*, is the user's perception of the improvements that the use of technology will bring in the performance and efficiency of the actions.
3. *Ease of use*, is related to the level of comfort perceived by the user when using technological applications.
4. *Attitude towards use*, refers to the person's willingness or unwillingness or predisposition to use the technological application.
5. *Intention to use*, this factor is linked to the degree of conscious and planned willingness to use a technological application.

The relationship between these factors can predict user acceptance of technologies (Figure 3).

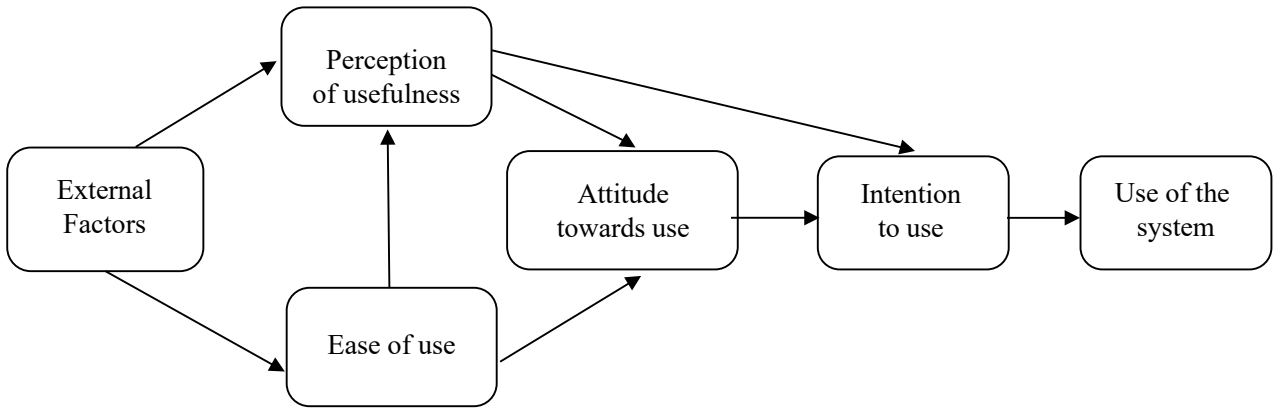

Figure 3. TAM Technology Acceptance Model.
Source: Based on Davis et al. (1989) and Yong, Rivas and Chaparro (2010).

Years later, Venkatesh, Morris, Davis y Davis (2003) proposed theUnifiedTheoryof AcceptanceandUseofTechnology(UTAUT). This theory is made up of a total of eight factors: four factors denominated as determinants and four denominator factors as moderators.

The determinants refer to: 1) *performance expectations*: which indicate the level at which the user perceives that the system will be beneficial to him/her; 2) *effort expectations*: which point to the level of ease that the person associates with the use of the technology; 3) *social influences*: associated as the level at which the user believes that members of his/her environment —family, peers, friends— considerthat he/she should usethetechnology; and 4) *ease conditions*: which point to the level at which a user considers having the technical resources and infrastructure to adopt the new technology.

On the other hand, moderating factors refer to 1) the *gender*, of the person who will use the new technology; 2) the *age*, of the person-user; 3) the *experience*, of the person in previous interactions with technologies; and 4) *willingness to use*: which refersto whether the use of the new technology is imposed or voluntary. Although the UTAUT model has been widely used in a variety of studies, Williams, Rana, Dwivedi and Lal (2011) point out that few studies use all the variables and that moderating variables are not considered.

In the context of electronic commerce, there is the exchange of goods and services for a monetary value, and since this process is ubiquitous, there is a need for payments to be made from anywhere and globally through the internet, however, this process which suggests saving time given all the facilities it presents, is also minimized and excluded by the lack of confidence of the C/C when entering their data in an open digital platform connected to the Internet, a situation which has caused users to dismiss the use of these digital payment platforms and continue to use traditional means, as well as the use of physical money (Martínez, 2018).

Therefore, the purpose of this study will be to identify the main factors that influence the massive adoption of digital and mobile payment methods by users of retail businesses in the city of Guayaquil, using the TAM model proposed by Ajzen and Fishbein (1980).

Methodology

Considering the main objective of there search proposed above,the study proposes the first Specific Objective-OE: To identify models capable of analyzing the intention to use technologies —digital and mobile means of payment— in retail business customers. For this, a bibliographic study was conducted, consulting books and scientific articles that allow the identification of models for the adoption of new technologies.

To continue and in the case of the next SO: To know the behavior of the Guayaquil user regarding digital and mobile means of payment, a surveywas used as a research instrument. And finally, and to finish and achieve the last SO, determine the level of relationship of the factors: external factors, perceived usefulness, ease of use, attitude towards the use, and intention to use, on the decision to use new technologies of mobile digital payment methods, the data obtained in the survey was used to carry out a descriptive and correlational statistical study.

For all of the above, the research is considered non-experimental and empirical since data will be collected from the perception of the people and as evidence to reach the conclusions of the study. Additionally, the cut of the research is identified as transversal sincetherespondents will only be questioned at the aspecific moment.

Table 1.
Systematization of variables.

Variable	Dimensions	Indicators
VI TAM	External Factors	P1 Cost. P2 Safety. P3 Stability. P4 Availability of technology.
	Perception of usefulness	P5 Benefits. P6 Agility.
	Ease of use	P7 Make simple payments. P8 Intuitive.
	Attitude towards use	P9 Predisposition to use. P10 Openness to new technologies.
	Intention to use	P11 Purpose of use. P12 Recommendation for use.
VD DUT	Decision of use by External Factors	P13 Decision by cost . P14 Decision for safety . P15 Stability decision. P16 Technology availability decision.
	Decision to use by Perception of usefulness	P17 Decision for benefits. P18 Agility decision.
	Ease of use decision	P19 Decision to make single payments. P20 Intuitive Usage Decision.
	Decision by Attitude towards use	P21 Decision by predisposition to use. P22 Decision for openness to new technologies.
	Decision by Intention to use	P23 Decision by purpose of use. P24 Decision by recommendation of use.

Source: Elaborated from Davis et al. (1989) and Yong et al. (2010).

The research will also be descriptive and correlational in order to obtain statistical evidence that demonstrates the existence of a relationship between the factors for technology adoption (independent variable VI) and the decision to use technology (DUT) (dependentvariable VD). Table 1 below showsthe variables analyzed in the study with their respective dimensions and indicators.

Considering the indicators and dimensions proposed in Table 1 a questionnaire was constructed consisting of 24 questions, 12 of them corresponding to the VI TAM and the others aligned to the VD DUT, at this point it is necessary to indicate that each of the questions were valued by using the Likert scale in the degree of agreement, and itshould benotedthattheuseof thequestionnaire of questions was approved by an expert in research (Hernández, Fernández and Baptista, 2014). While to develop the conclusive study, a statistical analysis of correlational type between the proposed variables was performed. The hypotheses that were tested during the research are shown below.

Hypothesis System

H_1. Existence of correlation between TAM and DUT.

H_2. Existence of correlation between *External factors* and *Use decision by External Factors.*

H_3. Existence of correlation between *Perceived usefulness* and *Decision to use by perceived usefulness.*

H_4. Existence of correlation between *Ease of use* and *Ease of use decision.*

H_5. Existence of correlation between *Attitude toward use* and *Decision by attitude toward use.*

H_6. Existence of correlation between *Intention to use* and *Decision by intention to use.*

To check there liability of the questionnaire, a statistical testwas performed through Cronbach's Alpha coefficient, obtaining as coefficient value 0.85, a record that shows and sustains the high internal consistency of the research tool (Hernández et al., 2014).

Economically active people in Ecuador will be considered as the population of this study. INEC (2022) states that this part of Ecuadorians is made up of 8.5 million people, and according to Triola (2009), this number of members in a population will be considered infinite, to calculate the sample a confidence of 95% and a maximum error of 5% will be taken into account. Based on the above, the sample will consist of 385 people.

Results

Figure 4 shows the technologies that were most recognized by the respondent swhichin this case show that bank transfers, debit and credit cards are the most recognized technological means of payment, while DeUna is the most recognized mobile application for payments.

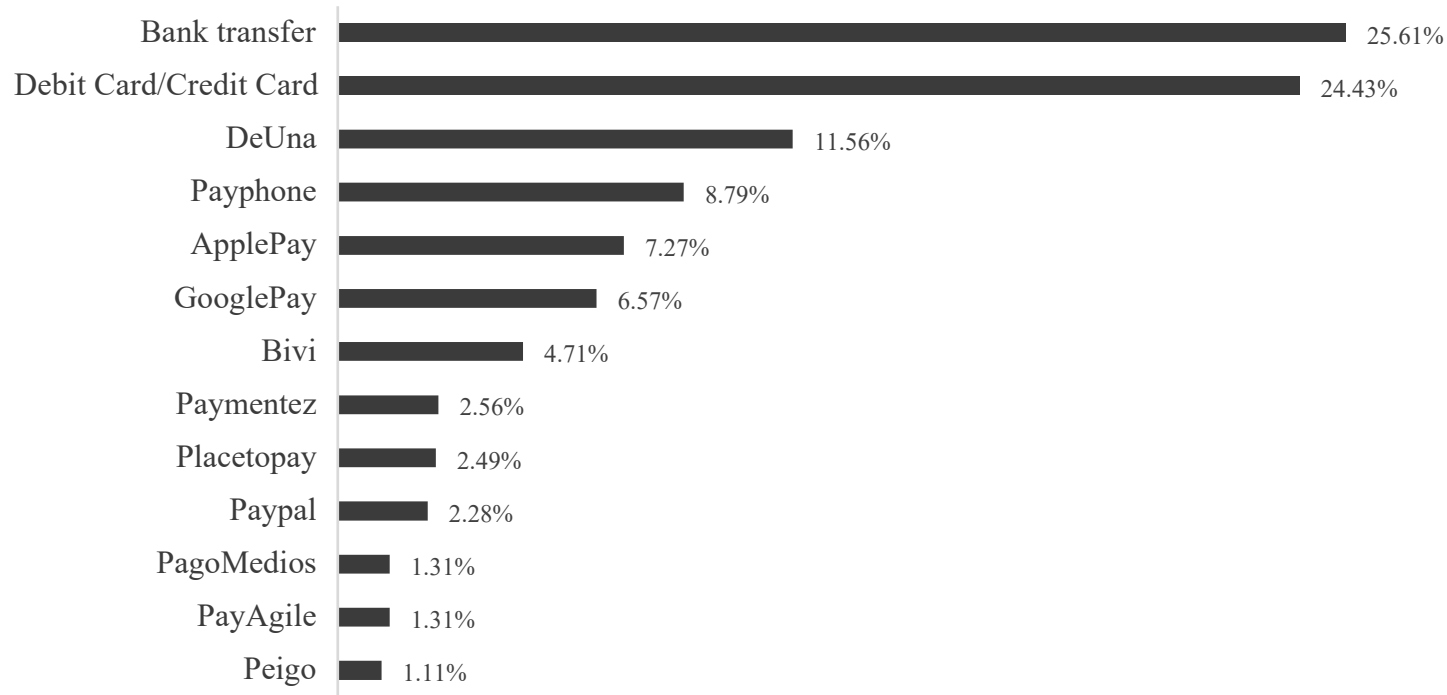

Figure 4. Recognition of payment technologies.
Source: Prepared from data obtained from the survey.

Figure 5 shows that credit and debit cards are the most used means of making transactions and payments, followed by bank transfers, and, contrary to the previous result, the PayPhone application is the most used means of mobile payment.

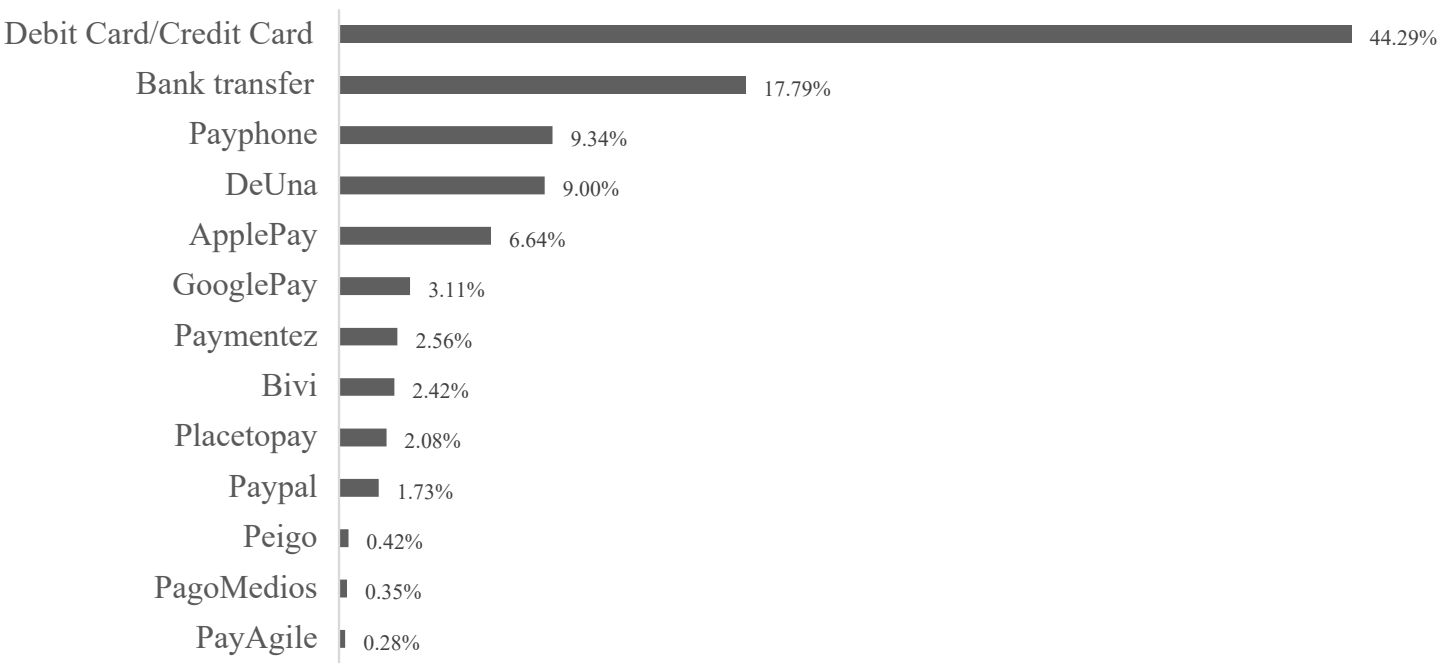

Figure 5. Use of Payment Technologies.
Source: Prepared from data obtained from the survey.

To begin with the statistical analysis of correlation, we will proceedto relate the total sums of the indicatorsofeachdimension of the VI TAM and the dimensions of the VD DUT. Table 2 shows the relationship between the External Factors-SFE and the Use Decision by External Factors-DUFE. Perceived Usefulness-SPU with the Use Decision by Perceived Usefulness-DUPU. Ease of Use-SFU with the Decision for Ease of Use-DFU. Attitude Towards Use-SAHU with the Decision for Attitude Towards Use-DAHU and finally, the Intention to Use-SIU is related to the Decision for Intention to Use-DIU.

Taking into account that an ordinal rating scale was used for the research work and also that the Kolmogorov-Smirnov normality test applied by means of the Software Statistics Standard Edition-SPSS (v. 29), resulted in the existence of non-normality in the variables, therefore, the Rho Spearman correlation coefficient will be applied for the variables with their respective dimensions (Hernández et al., 2014). Table 2 shows the Rho obtained when performing the relationships.

TABLE 2.
Correlación dimensiones VI TAM y de la VD DUT.

			SFE	DUFE	Intensity
Rho de Spearman	SFE	Correlation coefficient (CC).	1.000	.610**	Average positive correlation.
		Sig. (bilateral) (SB).		0.000	
			SPU	DUPU	
	SPU	CC	1.000	.366**	Weak positive correlation.
		SB		0.000	
			SFU	DFU	
	SFU	CC	1.000	.602**	Average positive correlation.
		SB		0.000	
			SAHU	DAHU	
	SAHU	CC	1.000	.291**	Weak positive correlation.
		SB		0.000	
			SIU	DIU	
	SIU	CC	1.000	.631**	Average positive correlation.
		SB		0.000	
		N	385	385	

** The correlation is significant at the 0.01 level (bilateral).
Source: Own elaboration.

With all the above and according to the results obtained and shown in Table 2, the statements of hypothesis systems 2, 3, 4, 5, and 6 should be accepted. Table 3 shows the value of Spearman's Rho coefficient obtained in the statistical study using SPSS software (v. 9) for the variables TAM (VI) and the variable DUT (VD).

TABLE 3.
Spearman's Rho between VI TAM and VD DUT.

			VI. TAM	VD DUT
Spearman's Rho	VI. TAM	CC	1.000	.668**
		SB		0.000
		N	385	385
	VD DUT	CC	.668**	1.000
		SB	0.000	
		N	385	385

** La correlación es significativa en el nivel 0.01 (bilateral).
Source: Own elaboration.

Considering that the *p* value (0.000) is below the significance level $\alpha = 0.01$, H0 must be rejected and H1 must be accepted, this means thatthere is a positive correlation between VI TAM and VD DUT with a Spearman's Rho of 0.668 (Hernández et al., 2014). The coefficient of determination was *rho*2 = 0.4462, with which it can be argued that VI TAM, explains 44.81% of VD DUT, however, Creswell (2005) argues that this value evidences a relevant prediction of the variable.

DISCUSSION OF RESULTS

The greatest relationship obtained through the statistical analysis of the dimensions was that the intention to use technology, a dimension that included the study of two indicators: the purpose of use and the recommendation of use, implies that the dimension is related to the experience of use that the person has had and then transmit this experience to his or her close environment, both family and friends, in other words, users seek good experiences of use and based on this they can make the final decision.

The above is in line with ease of use, which was another factor with a higher degree of correlation on the decision to use. In this sense, we can add what was exposed by Jaradat and Faqih (2014) and Bermeo-Giraldo, Valencia-Arias, Duque García, Garcés-Giraldo and Luna-Ramírez (2019), who conclude in their research that potential users of mobile means of payment are those who observe ease, usefulness and quality in this type of payment system, finding a positive correlation between experience and intention to use.

Regarding the SAHU dimension has a low correlation on the decision to use (0.291), this result can be described as the adoption for the use of new technologies depends on the observations of stronger factors such as the stability of the computer network, the security that the system can offer and as already commented in the previous point due to the comments of good experiences exposed by other users. This result is not in line with that exposed by Van Deventer, De Klerk and Bevan-Dye (2018), who conclude that the SAHU significantly influences the decision to use technological means.

About the external factors, the relationship with the decision to use was 0.610 which implies a medium relationship between the variables, since the dimension includes very strong factors such as cost, security, stability, and availability of technology, the above is in agreement withwhat waspublished by Fonchamnyo (2013) who points out the existence of relationship between these variables.

Conclusions

With the research conducted, it can be noted that there are several models that can be used to explore the adoption of technology by users, among them the TAM model and the UTAUT, which through a series of factors allow understanding the state or level of acceptance of a technology by users/customers.

When using the TAM model to study the adoption of digital and mobile payment methods, a positive correlation (*rho* = 0.668) was found between the independent variable, the factors of the TAM technology acceptance model, and the independent variable, decisionto use DUT technology, which indicates that factors of this model such as external factors, perceived usefulness, ease of use, attitude towards use and intention to use have an impact on the decision to use digital and mobile payment methods by the CCs of the city of Guayaquil.

Of these factors, the ones that have the greatest impact on the decision to use digital and mobile means of payment are: Intention to Use (SIU) *rho* = 0.631 and External Factors (SFE) *rho* = 0.610, and among the latter are cost, security, stability and availability of technology for the use of these new means of payment. Of these, it is important to highlight security as one of the relevant points for the acceptance and use of new technologies by consumers, and even more so considering that the transaction to be carried out through these technologies involves the exchange of monetary resources, only now in digital form.

In this sense, these new forms of digital payment could be affected by the notable growth of cyber crime incidents in different technological platforms that have even reached the financial sphere. In this same line, the stability factor is perceived as important in the intention of use, since when this factor is present, the technology would allow a constant flow of transactions, which in turn would provide the necessary confidence for consumers to start making purchases and other commercial transactions using mobile payment methods.

Likewise, the availability of technology is present as an external factor that influences the intention of use, at this point it is necessary to point out that the means of mobile payments analyzed are available in all mobile devices (cell phones and tablets) sold in the country, the only exception would be ApplePay, which can only be used in Apple devices with IOS operating system. The minimum cost or the fact that most of the mobile payment methods are free of charge is also a relevant issue for people to decide to carry out their commercial transactions using these applications.

The context in which society is currently developing, where screens, mobile devices, and internet connectivity are increasingly abundant, together with these external factors, pave the way for mobile payment methods to become one of the preferred payment options for consumers.

Another of the factors of the model with the highest incidence was the Intention to Use (SIU) *rho* = 0.631, in this section were the purpose of use and recommendation of use, and it is at this point where developers and managers of mobile payment methods should design and aim to generate positive experiences in consumers during the use of these payment technologies, so that they can subsequently motivate and recommend to other users —such as friends and family—- the use of these payment methods, i.e. become standard bearers of the use of these new payment methods. For this, external factors come into play once again,since stability, availability, and, in addition, the agility in the processes for making payments through these new technologies, will provide positive perceptions among users.

One aspect to highlight is the low recognition that consumers in the city of Guayaquil have of the technological platforms that allow digital and mobile means of payment. Of these platforms, those with the highest recognition are DeUna (11.56%), PayPhone (8.79%), ApplePay (7.27%), and GooglePay (6.57%), the rest of the platforms have less than 5% recognition by consumers. These results point to the low penetration of these platforms in the Ecuadorian market, which in turn should give way to new advertising and marketing strategies by the companies that manage these new digital and mobile payment methods, given that to date —at least in Guayaquil— credit/debit cards and bank transfers continue to be the most widely used.

Statement of Authorship

Lara Marmolejo: Visualization, research, conceptualization, methodology, software.
Sumba Nacipucha: Curation of data, Writing-Preparation of original draft.
Cueva Estrada: Supervision. Software, Validation.
Zea Villacis: Writing-Revision and editing.

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Conflict of Interest Statement

This research does not represent any conflict of interest with the authors, the journal, the publisher, and the funding entities.

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