E-banking in Colombia: factors favouring its acceptance, online trust and government support

Purpose - This study aims to examine the adoption of e-banking in Colombia, including a comprehensive analysis of consumer trust in this type of transaction and of the impact of the current government policy to promote e-commerce.

Design/ Methodology - An empirical investigation based on the UTAUT2 model collected data from throughout the country to develop 600 online questionnaires.

Findings - The proposed model was validated in that the factors hypothesized to build trust in the use of electronic banking were shown to be significant: trust, performance expectancy and effort expectancy had a positive impact on the use of financial websites in Colombia, while government support did not have a significant impact.

Implications and limitations of the study - The study explains the antecedents to trust, as well as the government support variable, and concludes by producing a model that is highly successful in predicting financial customers' online behaviour.

Practical implications - The results can help Colombia's government and private banks to further develop trust and other conditions necessary for e-banking.

Social implications - Government policies to support the development of e-banking are not viewed favourably by Colombians.

Originality/ Value - This study is one of the first to present empirical findings on the acceptance of e-banking in Latin America; it further presents a model that integrates the most important variables needed for an analysis of the acceptance of e-banking.

Introduction

The continuing development of the Internet offers countless innovations in consumer services. In recent decades, other technologies have become closely integrated with information and communication technologies (ICT) because these offer a cost efficient way for businesses to create a competitive advantage in the market and retain their customer base (Bhatt & Bhatt, 2016; Laukkanen, 2016). Banks have adopted the Internet as a new channel for improving offered services while simultaneously increasing process efficiency, for example, electronic payments, as it provides an online platform that supports many e-commerce transactions (Lee, 2009). E-banking platforms can offer bank customers services that are typically provided in physical branches, such as account status inquiries, transfers and payments to third parties, bank statements, the ability to consult savings and credit simulators, and 24-hour access, among others.

In light of this trend, several studies have found that customers cite a number of reasons for preferring e-banking (Al-sharafi, Arshah, Abu-shanab, Fakhreldin, & Elayah, 2016; Ayo, Oni, Adewoye, & Eweoya, 2016; Hui Ling, Islam, Abdul Manaf, & Wan Mustafa, 2015; Lee, 2009; Tan & Teo, 2000; Yousafzai, Pallister, & Foxall, 2003), including transaction speed, lower management costs, greater control over service delivery, shorter wait times, a perception of more customized service, and greater convenience given access to services that is not limited by time or space (Lee, 2009; Montazemi & Qahri-Saremi, 2015).

Despite its appeal, consumers have been slow to adopt e-banking in some emerging countries (Montazemi & Qahri-Saremi, 2015). In fact, acceptance of new technologies generally lags behind the pace at which they are introduced in all regions of the world (Katz, Agudelo, Bello, & & Rojas, 2015). In regions like Latin America, where there is a significant digital divide (Landau, 2012; Sánchez Torres & Arroyo-Cañada, 2016), consumers are refraining from using these types of technologically advanced services due in part to a lack of awareness but also due to concerns about security, usability and trustworthiness (Bhatt & Bhatt, 2016).

In Colombia, for example, data from the Superintendence of Finance (2016) shows that although both monetary and non-monetary online transactions increased from 951,616,157 in 2012 to 1,905,341,076 in 2015 (comprising 43.97% of total operations for that year), much scepticism is still apparent when only monetary transactions are considered; these accounted for 313,888,272 operations by 2015, representing only 13.10% of total monetary transactions. Other indicators such as the low rate of credit card use (just 10%) and the high cost of financial services reveal widespread scepticism of e-banking in this country (Rodríguez-Raga & Riaño Rodríguez, 2016). In addition, government policies and public programmes to develop the digital sector, including e-banking, are limited throughout Latin America (Katz et al., 2015) due to the sector's lack of importance, poor coordination between different sectors, a lack of transparency in the management of those resources devoted to the sector, a lack of trust between the private and public sectors, and the high cost for companies to implement technology services. Therefore, it is important to understand the factors that influence customers' decision to use banking services and how they may be encouraged to engage with them (Ayo et al., 2016).

This study, therefore, intends to analyse the behaviour of e-banking users in Colombia in order to explore the adoption of financial services based on variables drawn from the literature, specifically as follows: first, following the Unified Theory of Acceptance and Use of Technology (UTAUT) model of technology acceptance (Venkatesh, 2003; 2012), test those variables that clients considered most important in their decision to use e-banking; second, examine whether government policies on Internet use are directly and positively related to the acceptance of e-banking; and third, analyse the trust factor in depth because it is a particularly relevant factor in financial transactions (Oliveira, Faria, Thomas, & Popovič, 2014) and therefore integral to an analysis of the acceptance of e-banking.

Review of the literature

Acceptance of e-banking

Research on the acceptance of online transactions has been guided by theoretical models that explain the acceptance of technologies based on the characteristics of virtual channels, which have been widespread in modern society for only 20 years. Several authors have used theories of technology acceptance to analyse e-banking as well as mobile banking (Afshan & Sharif, 2016; Oliveira et al., 2014); the main theories are the Theory of Diffusion of Innovations (Rogers, 1995), the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), the Social Cognitive Theory (SCT) (Bandura, 1997; Bonera, 2011)), and the Decomposed Theory of Planned Behaviour (DTPB) (Taylor & Todd, 1995). Research on the acceptance of e-banking (Fishbein & Ajzen, 1975) has applied two theoretical models that have contributed to analysing the variables most important to this acceptance. The first of these is the Technology Acceptance Model (TAM) (Davis, 1989b), which predicts that an individual's decision about whether to use e-banking is affected by his or her view of the "Perceived Usefulness" and the "Perceived Ease of Use" of electronic banking services (Bukhari et al., 2013). This model is complemented by Davis and Venkatesh and the UTAUT, which subsequently evolved into UTAUT2 (2012) (Venkatesh et al., 2003)). UTAUT2 combines five basic constructs of the eight previous theories*: performance expectancy, effort expectancy, social influence, facilitating conditions and trust.* The UTAUT and UTAUT2 models have been widely used to study acceptance of e-banking, indicating that performance expectancy, facilitating conditions and trust are important to the acceptance of e-banking (Afshan & Sharif, 2016; Kurila, Lazuras, & Ketikidis, 2016; Williams, Michael-D., Rana, Nripendra-P., and Dwivedi, 2015, Hui Ling, Islam, Abdul Manaf, & Wan Mustafa, 2015).

Variables that have been applied in previous studies of the acceptance of e-banking have been chosen for the first hypothesis of this model.

Effort expectancy for the use of e-banking, defined as the degree of ease with which e-banking can be used (Viswanath Venkatesh, Morris, Davis, & Davis, 2003), combines the concepts of ease of use of an innovation (Rogers, 1995) and the

perceived ease of use from the TAM (Davis, 1989a); these have been amply demonstrated to influence the use of e-commerce (Venkatesh, V., Thong, James. Y., Xu, 2012) and e-banking (Chong, Ooi, Lin, & Tan, 2010). Especially in regard to financial transactions, the user expects greater ease online than in branch offices, for example by saving time and minimizing travel. Therefore, the following hypothesis is proposed:

H1: Effort expectancy has a positive impact on the intention to use e-banking in Colombia.

Performance Expectancy refers to the user's beliefs about the benefits brought by using a technology (Viswanath Venkatesh et al., 2003). It combines perceived usefulness (Davis, 1989b), extrinsic motivations (Davis, Bagozzi, & Warshaw, 1992) and the expectation of results (Bandura, 1977). As one of the most studied and relevant concepts in the acceptance of technological innovation, it has been amply validated with regard to e-commerce and e-banking in that users perceive economic benefits, satisfaction and convenience from e-banking (Oliveira et al., 2014; Zhu, Lee, O'Neal, & Chen, 2011). Thus, the following hypothesis is proposed:

H2: Performance expectancy has a positive impact on the intention to use e-banking in Colombia.

Government support

Empirical research about the relation of government support to e-banking acceptance is limited to a few studies of Asian countries (Chong et al., 2010; Tan & Teo, 2000). However, these studies indicate that it improves acceptance of e-banking, finding that all government policies designed to foster the use of this channel are meaningful; these policies may include less expensive Internet service, web security policies and consumer protection legislation. Efforts to reduce the digital divide and the consequent positive effect on Internet usage have also been extensively studied (Ghobadi & Ghobadi, 2013; Landau, 2012; White, Gunasekaran, Shea, & Ariguzo, 2011). A programme spearheaded by the Economic Commission

on Latin America and the Caribbean (CEPAL) calls for governments in the region to commit to reducing the digital divide in their respective countries (Katz et al., 2015; NU. CEPAL, 2015) and, consequently, to developing policies for online commerce and banking. It is believed that this programme may be contributing to the acceptance of e-banking in Colombia.

Therefore, the following hypothesis is proposed:

H3: Government support for e-banking has a positive impact on the intention to use e-banking in Colombia.

Web trust and its antecedents

Trust is one of the most important variables in a user's decision to online purchase; it is defined as the psychological state of a client's perception of the seller's integrity and benevolence (Zhu et al., 2011). In studies of e-commerce, analysis has concentrated on the characteristics of trust and risk involved in an online purchase (Á. Agudo Peregrina, 2014; Bonera, 2011; Chen & Dhillon, 2003; Chiu, Chang, Cheng, & Fang, 2009; Choon Ling, Bin Daud, Hoi Piew, Keoy, & Hassan, 2011; Escobar-Rodríguez & Carvajal-Trujillo, 2014; Flavián & Guinalíu, 2006; H. Kim, Kim, & Shin, 2009; Mohamed Fadel Bukhari, Ghoneim, Dennis, & Jamjoom, 2013; Palvia, 2009). This variable carries additional weight in online purchases due to the buyer's heightened sense of uncertainty (Zhu et al., 2011); with regard to e-banking, studies by Afshan & Sharif (2016) and Chong et al. (2010) show that clients value guarantees by financial institutions regarding online purchases and the handling of confidential information. Therefore, the following hypothesis is proposed:

H4: Perceived trustworthiness of e-banking has a positive impact on the intention to use e-banking in Colombia.

H5: Perceived trustworthiness of e-banking has a positive impact on the use of e-banking in Colombia.

To strengthen this analysis, the antecedents of trust will also be measured. Although there are several models that examine this process (Kaplan & Nieschwietz, 2003; Zhu et al., 2011), this study has chosen to use the model proposed by D. J. Kim, Ferrin, & Rao (2008) and subsequently validated in studies of online purchases by Escobar-Rodríguez & Carvajal-Trujillo (2014), as it offers the most frequently studied constructs: quality of information, protection of privacy and protection of security. The latter two are considered relevant to an examination of e-banking by Yousafzai, Pallister, & Foxall (2003).

The quality of information variable is very important to the study of the acceptance of web information as it relates to decision-making (Erkan & Evans, 2016). For the purposes of trust, it can be defined as a user's perception that a website contains complete and accurate information about the products or services of interest (D. J. Kim et al., 2008): the website's information is related to the degree of trust it inspires in the user (Escobar-Rodríguez & Carvajal-Trujillo, 2014). Therefore, the following hypothesis is proposed:

H6: The quality of information has a positive impact on the perceived trustworthiness of e-banking.

Protection of privacy is the next variable that directly affects web trust; this is defined as the website user's perception that the online transaction is controlled and protected against any unauthorized use. For the purpose of e-banking acceptance, it has been demonstrated that the clients' perception regarding the protection of privacy directly influences their level of confidence (D. J. Kim et al., 2008) in online transactions, since financial information requires high levels of security and control (Yousafzai et al., 2003). This variable has also been the focus of a study of online financial transaction security by Al-sharafi, Arshah, Abu-shanab, Fakhreldin, & Elayah (2016) Therefore, the following hypothesis is proposed:

H7: Protection of privacy has a positive impact on the perceived trustworthiness of e-banking.

The third factor that fosters trust in the web is perceived protection of security, which consists of several features: authentication, protection, verification and encryption (D. J. Kim et al., 2008). When users of a financial website are aware of these factors, they tend to believe that the site will guarantee their security during the online transaction, which serves as an antecedent to trusting the site (Escobar-Rodríguez & Carvajal-Trujillo, 2014). In accordance with this and several previous studies that have validated web site trust (Al-sharafi, Arshah, et al., 2016; Escobar-Rodríguez & Carvajal-Trujillo, 2014; Flavián & Guinalíu, 2006; D. J. Kim et al., 2008) the following hypothesis is presented:

H8: Perceived protection of security has a positive impact on the perceived trustworthiness of e-banking.

Intention and use of e-banking
Finally, the UTAUT and UTAUT2 models examine the impact of variables on the intention to use e-banking and, subsequently, on the relation between intention and actual use (Venkatesh et al., 2003; 2012). Therefore, our model concludes by proposing that a user's intention to use e-banking has a direct effect on his or her actual use of e-banking, which may be tested in the following hypothesis:

H9: Intention to use e-banking has a positive impact on the use of e-banking in Colombia.

(Insert figure 1)

Methodology

Sample and data collection

This study focused on collecting the perceptions of e-banking users throughout Colombia by means of an electronic questionnaire, an approach that has been validated in similar studies of e-banking (Á. F. Agudo Peregrina, 2014; Escobar-Rodríguez & Carvajal-Trujillo, 2014) including studies set in Portugal (Oliveira et al., 2014), Pakistan (Al-sharafi, Arsha, et al., 2016) and Singapore (Tan & Teo, 2000). The questionnaire was built and pre-tested with a group of 30 teachers to rule out language and comprehension problems, as recommended by previous studies (Oliveira et al., 2014)). The final questionnaire contained at least three indicators per variable (Annex 1). To facilitate responses, the use of multiple items per construct was followed, and Likert-type scales were used for the questionnaire responses ranging from 1 ("Strongly disagree") to 7 ("Strongly agree") to effectively measure any variables that are not directly observable (Churchill & Iacobucci, 2004).

The sample was determined using the methodology of stratified sampling with geographic quotas, as this is deemed the most appropriate for studies of large populations that require a representative sample of all members (Hoe, 2008). Thus, the country of Colombia was divided into five geographic zones considering the five most important cities, such that zones 1, 2 and 3 would account for 80% of the sample, with zones 4 and 5 comprising the other 20%. Data collection occurred between November 2015 and May 2016. To achieve the sampling goals, a national team was established with coordinators in each of the main cities to manage the dissemination of the questionnaire through an e-mail from universities to ensure greater acceptance. A total of 734 questionnaires were returned, of which 134 were excluded due to inconsistent responses, leaving a final sample of 600 valid questionnaires. The most important characteristic of the sample is that it did not achieve the sampling objectives for areas 4 and 5, as more than 90% of the sample was concentrated in areas 1, 2 and 3, which include the cities where most of the country's inhabitants (Córdoba-pachón & Orr, 2009) are located. Although randomly selected, the sample was distributed equally between men and women,

70% of whom were between 18 and 34 years of age, 88% of whom were university educated, and 79% of whom earned more than the national average (Table 1); these figures are consistent with the profile of e-banking and financial service users in Colombia (Rodríguez-Raga & Riaño Rodríguez, 2016).

(Insert Table 1)

Data analysis and findings

This study employed a regression analysis of the latent variables with the aid of the SmartPLS 3.0 program; this was based on the optimization of partial least squares (PLS), a multivariate technique for testing structural models that is recommended for exploratory models. This program was chosen, first, because it has been used in previous studies to test the UTAUT and UTAUT2 models for the acceptance of e-banking and e-commerce; second, due to the large number of latent variables that it contains; and finally, because the tested model is an exploratory effort, and it has shown that PLS is the most appropriate for this type of analysis (Escobar-Rodríguez & Carvajal-Trujillo, 2014; J. F. Hair, Ringle, & Sarstedt, 2013; Kiwanuka, 2015; Matute Vallejo, Polo Redondo, & Utrillas Acerete, 2015).

The data analysis was performed in two stages: first, the measurement model was estimated and, second, the validity of the structural model was examined.

(Insert Table 2)

4.1 Validation of the model measure

The measurement instrument was validated through a test analysis to determine first the convergent and discriminant validity of the constructs and, second, the reliability of each item. The convergent validity of each construct was acceptable, as all had loadings higher than 0.505 (J. F. J. Hair, Hult, Ringle, & Sarstedt, 2014). Each item's individual reliability was measured by the correlations of its loadings with every variable; table * shows that the loadings for each indicator were significant, and all are validated. The internal consistency for all indicators in

relation to their corresponding variables was measured using Dillon-Goldstein's test; this is known as the composite reliability coefficient, and all values were greater than the minimum acceptable level of 0.70 (Gefen, Straub, & Boudreau, 2000). Cronbach's alpha test was also applied, and it also obtained values higher than the 0.7 minimum needed for confirmation (Churchill & Iacobucci, 2004). Finally, convergent validity was again analysed taking variance into account, i.e., that indicators and their construct have similar variance, which should be greater than 0.50 of the variability explained by the indicators (Fornell & Larcker, 1981)(Table 2). Discriminant validity was tested by comparing each variable's AVE with the correlation of each construct of each variable squared; the values obtained from the square root of the AVE were greater than the constructs, showing that each variable was more closely associated with its own items than with those of other variables (Fornell & Larcker, 1981) (Table 3).

The discriminant validity was verified by comparing the value of the average variance extracted (AVE) of each variable with the correlation of each construct of every variable squared. The values obtained from the square root of the AVE were higher than those of the constructs, thus indicating that each variable was related more strongly with its own items than with those of other variables (Fornell & Larcker, 1981) (Table 4).

(Insert Table 3)

(Insert Table 4)

4.2. Validation of the structural model

Turning to the structural model, a re-sampling was conducted using the bootstrapping technique. A test of the significance of the model's parameters was performed using 1,000 sub-samples from the study data; this confirmed that the model had fulfilled its predictive capacity by obtaining R squared values greater than 0.10 for the three variables explained (J. F. J. Hair et al., 2014). The hypotheses were tested as follows. Hypothesis 1 (H1: B=-0.182) was not significant, as users do not perceive effort expectancy with regard to the use of e-banking. Hypothesis 2

(H2: B=0.679) was significant, showing that performance expectancy is highly influential in users' intention to use e-banking. Hypothesis 3 (H3: B=0.019) was not significant, indicating that government support does affect the intention to use e-banking. Hypothesis 4 (H4: B=0.301) was significant, showing that perceived trustworthiness positively affects the intention to use e-banking. Hypothesis 5 (H5: B=0.181) was significant, showing that perceived trustworthiness positively affects the actual use of e-banking. Hypothesis 6 (H6: B=0.506) was significant, finding that the perceived quality of information positively affects the perception of trust. Hypothesis 7 (H7 7: B=0.054) was significant, showing that perceived privacy in banking websites positively affects the perception of their trustworthiness. Hypothesis 8 (H8: B=0.408) was significant, indicating that the perceived security of financial websites positively affects perceptions of the bank's trustworthiness. Hypothesis 9 (H9: B=0.326) was significant, confirming that intention to use directly and positively affects the actual use of e-banking in Colombia (Table 5).

(Insert figure 2)

(Insert Table 5)

Discussion

This study aimed to describe the variables that influence the acceptance of e-banking in Colombia. More specifically, the study sought to test the relationships between the main variables that influence the acceptance of e-banking (Afshan & Sharif, 2016; Kurila, Lazuras, & Ketikidis, 2016; Williams, Michael-D., Rana, Nripendra-P., and Dwivedi, 2015, Hui Ling, Islam, Abdul Manaf, & Wan Mustafa, 2015). First, the effort expectancy variable was found to have no significant impact on the intention to use e-banking in Colombia. This result contradicts the findings of other studies on the acceptance of e-banking (Afshan & Sharif, 2016; Oliveira et al., 2014). This unexpected finding may indicate that users have already developed expertise in managing e-banking operations, rendering this variable insignificant; however, the negative result could also indicate precisely the opposite, denoting a

lack of user experience and the novelty of Internet access in this country that leads to doubts and negative expectations about the use of e-banking. The results of the performance expectancy variable are consistent with the theory (Oliveira et al., 2014; Yousafzai et al., 2003) and indicate that users in Colombia have high expectations regarding the benefits that e-banking use will bring; this finding supports claims that this construct is essential to the acceptance of e-banking.

Users of e-banking in Colombia did not feel that government support of Internet use had any effect on their intention to use online banking; these results differ from other studies that found this variable to be highly significant, especially in Asian countries (Chong et al., 2010; Tan & Teo, 2000). This finding merits detailed analysis, as the government has implemented a series of policies over the past decade focusing on developing the digital sector. These policies may have been ineffective with regard to e-banking, or users may consider them irrelevant to their decision to use these services, perhaps because banking is a private sector activity that has distanced itself from these policies in users' eyes.

With regard to perceived trustworthiness, the study validates the strong influence of this factor on both the intention to use and the actual use of e-banking, demonstrating that users place high importance on a number of security features and that these bolster users' confidence in banking websites (Chong et al., 2010; Yousafzai et al., 2003).

More detailed analysis reveals that clients consider certain features of a website to be essential. The first is the quality of information: it is important that a client is able to find a webpage containing all information needed for banking, including processes, transactions, policies, customer service and resolution of problems. Since this is highly valued in the Colombian case, it may be deduced that users perceive the country's e-banking sites to offer high quality information.

Perceived privacy is the next important aspect for developing a perception of e-banking as trustworthy. This factor was shown to be significant, but given the context of distrust in online transactions in Colombia (Tavera-Mesías, Sánchez-Giraldo, & Ballesteros-Díaz, 2011), especially when personal information or large financial sums are involved, Colombians may fear that their financial information, bank accounts and balances could be vulnerable to hacking or theft. It is believed the approval of e-banking in Colombia is tied to improvements in website security,

as well as to the fact that banks have taken steps to raise clients' awareness about the proper use of their confidential information

Finally, in connection with the previous two factors, perceived security is also highly valued by Colombian users as contributing significantly to their perception of websites' trustworthiness. This result stems from the development and adoption of electronic encryption, and the adaptation of high-level global security for online transactions and highly secure personal access by all financial institutions.

As a final contribution to this line of research, this study is one of the first to analyse the factors that affect the acceptance of e-banking in Latin America, focusing on the Colombian case because of the country's current leading role in the development of online services and commerce (Katz et al., 2015; NU. CEPAL, 2015). These results reinforce the importance of key variables in the use of e-banking. Further, they support the critical role played by the antecedents of trust, which is of great importance to users of virtual services. Finally, the government support variable is found to be not significant, so it is not possible to determine its direct impact on the acceptance of e-banking.

Implications, limitations and future research directions

This study is one of the first to present empirical findings on the acceptance of e-banking in Latin America. It presents a model that integrates the most important variables for an analysis of the acceptance of e-banking, especially in countries or regions where development is recent, making an original contribution by explaining the antecedents of trust as well as the government support variable. Further, this model can be used to predict the online behaviour of financial clients. For the business sector (in this case, financial institutions), this study determines which variables are most important to their clients and analyses their needs and behaviour with regard to the use of financial websites.

Considering Colombia's government, the study examined whether citizens believe that government policies have a positive impact on the use of e-banking. This study found that citizens do not believe that government support favours online

commerce, and the reasons behind this result should be examined, as it has been national policy to promote Internet use. One would expect to find a positive impact from this policy on the acceptance of e-banking, particularly as not all citizens have access to financial services and banking due to social gaps, such as education and economic level (Landau, 2012).

The limitation of this study is that despite its high degree of prediction, the proposed model may be missing other variables that would improve the description of the acceptance of e-banking. Other authors (Afshan & Sharif, 2016) analyse different antecedents for trust and integrate other technological constructs, allowing them to analyse differences between men and women to determine the moderating effect of gender (Oliveira et al., 2014). Additionally, the inclusion of the government support variable did not produce the expected result, leaving doubts about its direct or indirect influence on e-banking; thus, further studies are required in similar countries to confirm the result. It is proposed that further studies apply this model in other countries in the region to test for possible differences that can contribute to improving online financial services in Latin America.

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Annex 1

Questionnaire

Construct	Item	Source
(AU)	AU1 ¿How many times during the last year have you used your bank's services online?	Venkatesh (2012) Escobar & Carvajal (2014)
(BI)	BI1. I intend to use online banking if time and costs are reasonable for me. BI2. In the future I will use online banking. BI3. I intend to use online banking in the future.	Venkatesh (2012)
(PE)	PE1. Overall I think online banking makes it easier for me to do my daily financial transactions. PE2. Overall I think online banking is more useful than other traditional forms of banking (Physical office). PE3. Overall I think online banking easier communications with my bank.	San Martín & Herrero (2012) Venkatesh (2012)
(EE)	EE1 Overall I think online banking is easy and simple to use. EE2. Overall I think online banking is clear and understandable. EE3. Overall I think online banking allows different types of operations being easy to learn and remember their use.	San Martín & Herrero (2012) Venkatesh (2012) Escobar & Carvajal (2014)
(GS)	GS1. Overall I think the government has policies that promote the use of internet and e-commerce. GS2. Overall I think the government is promoting the development of online banking. GS3. Overall I think the government has a favorable legislation to use online banking.	Chong *et al.,* (2010)
(PT)	PT1. Overall I think online banking is trusted. PT2. Overall I think online banking fulfills its promises and commitments. PT3. Overall I think that online banking is reliable for electronic procedures offered.	Agudo-Peregrina (2014) Escobar & Carvajal (2014)
(IQ)	IQ1. Overall I think, online banking informs me fully about the transaction and its final check. IQ2. Overall I consider that online banking is easy to	Escobar & Carvajal (2014)

	navigate and content lets me know so detailed and accurate all the information. IQ3. Overall I consider that online banking gives me true and updated information on their products or services.	
(PS)	PS1. I believe that online banks have a secure web for electronic transactions. PS2. I consider that online banks guarantee on its website that throughout the process is not interrupted or transaction information allowing successfully finish is not lost. PS3 I consider that online banks keep and handle my personal information safely.	Escobar & Carvajal (2014)
(PP)	PP1. I am concerned that online banks will use my personal data for their business interests without my permission. PP2. I am concerned that the online banks will exchange my personal data with others with my authorization. PP3. I am concerned that unauthorized persons (i.e. hackers) have access to my personal information.	Escobar & Carvajal (2014)

Table 1

Sample characteristics

Demographic profile		Internet and e-commerce acceptance profile
Gender: Men 54% Women 46%	Age: 18-34 years 70% 35-44 years 20% 45-55 years 10%	Experience with Internet use: More than 10 years 55% Between 5 - 10 years 45%
Educational level: Primary 0% High School 12% Technical degree 26% University 42% Post-graduate 20%	Economic level (income[1]): Very low 3% Low 18% Moderate 45% Upper-middle 20% High 12% Very high 2%	Location: Zone 1 (Antioquia, Caldas, Quindío, Risaralda) 25% Zone 2 (Boyacá, Cundinamarca, Bogotá) 42% Zone 3 (Cauca, Valle del Cauca) 27% Zone 4 (Atlantic, Bolivar, Cesar, San Andrés, Magdalena,
Marital status: Single, separated, widowed 63% Married, Free union 37%	Size of household: 1 person 9% 2 people 18% 3 people 28% 4 people 55% 5 people 16%	Santander) 6% Zone 5 (Arauca, Caquetá, Huila Meta, Nariño, Tolima, Vaupés) 1%

[1]Adapted from the classification used in Colombia according to public sources

Table 2

Loads of the indicators

Non-buyers		
Indicator	Load	t-value*
(BI24) < - intention to use e-banking	0.976	357,981
(BI34) < - intention to use e-banking	0.974	339,876
(EE14) < - effort expectancy	0.969	270,843
(EE14) < - effort expectancy	0.962	213,590
(EE14) < - effort expectancy	0.963	233,034
(IQ14) < - quality of information	0.949	141,041
(IQ24) < - quality of information	0.960	226,804
(IQ34) < - quality of information	0.948	109,565
(PE14) < - performance expectancy	0.952	172,376
(PE24) < - performance expectancy	0.949	162,282
(PE34) < - performance expectancy	0.911	62,156
(PP14) < - perceived privacy	0.892	83,988
(PP24) < - perceived privacy	0.881	63,207
(PP34) < - perceived privacy	0.843	51,748
(PS14) < - perceived security	0.936	136,743
(PS24) < - perceived security	0.935	136,360
(PS34) < - perceived security	0.904	87,439
(PT14) < - trust	0.967	246,806
(PT24) <- trust	0.960	213,168
(PT34) < - trust	0.965	210,118
B14 < - intention to use e-banking	0.946	122,314
GS1 < - government support	0.926	104,844
GS2 < - government support	0.957	198,713
GS3 < - government support	0.888	55,464

*All items had significance with p-value < 0.001.

Table 3

Convergent validity of indicators

Non-buyers			
Variables	Cronbach's Alpha	Composite reliability	Average Variance Extracted (AVE)
Quality of information	0.949	0.967	0.907
Trust	0.962	0.975	0.929
Performance expectancy	0.931	0.956	0.879
Effort expectancy	0.963	0.976	0.931

Intention to use e-banking	0.963	0.976	0.932
Perceived privacy	0.843	0.905	0.761
Perceived security	0.916	0.947	0.856
Government support	0.915	0.946	0.854

Table 4

Discriminant validity of indicators - Fornell & Larcker test

	Quality of information	Trust	Performance expectancy	Effort expectancy	Intention to use e-banking	Perceived privacy	Perceived security	Government support	Use of e-banking
Quality of information	0.953								
Trust	0.896	0.964							
Performance expectancy	0.844	0.854	0.937						
Effort expectancy	0.836	0.849	0.885	0.965					
Intention to use e-banking	0.812	0.816	0.868	0.779	0.965				
Perceived privacy	0.669	0.693	0.635	0.603	0.615	0.872			
Perceived security	0.869	0.887	0.788	0.773	0.759	0.737	0.925		
Government support	0.230	0.217	0.253	0.251	0.234	0.237	0.247	0.924	
Use of e-banking	0.352	0.375	0.360	0.350	0.414	0.256	0.325	0.006	1.000

Table 5
Summary of the validity of the structural model

Hypothesis		Effect	Original Sample (O)*	R squared	Standard Deviation (STDEV)	T Statistics (|O/STDEV)	P Values
H1	Accept	effort expectancy - > intention to use e-banking	-0.182*	Intention to use e-banking R= 0.774	0.057	1,941	0.050
H2	Accept	performance expectancy - >intention to use e-banking	0.679**		0.074	9.215	0.000
H3	Reject	government support - > intention to use e-banking	0.019		0.019	0.984	0.325
H4	Accept	trust -> intention to use e-banking	0.301**	Trust: R= 0.853	0.061	4,978	0.000
H5	Accept	trust -> use of e-banking	0.181*		0.065	1,936	0.017
H6	Accept	quality of information - > trust	0.506*	Use of e-banking R= 0.215	0.063	7,965	0.000
H7	Reject	perceived privacy -> trust	0.054		0.030	1,819	0.069
H8	Accept	perceived security -> trust	0.408**		0.058	7,082	0.000
H9	Accept	intention to use e-banking - > use of e-banking	0.326**		0.063	5.168	0.000

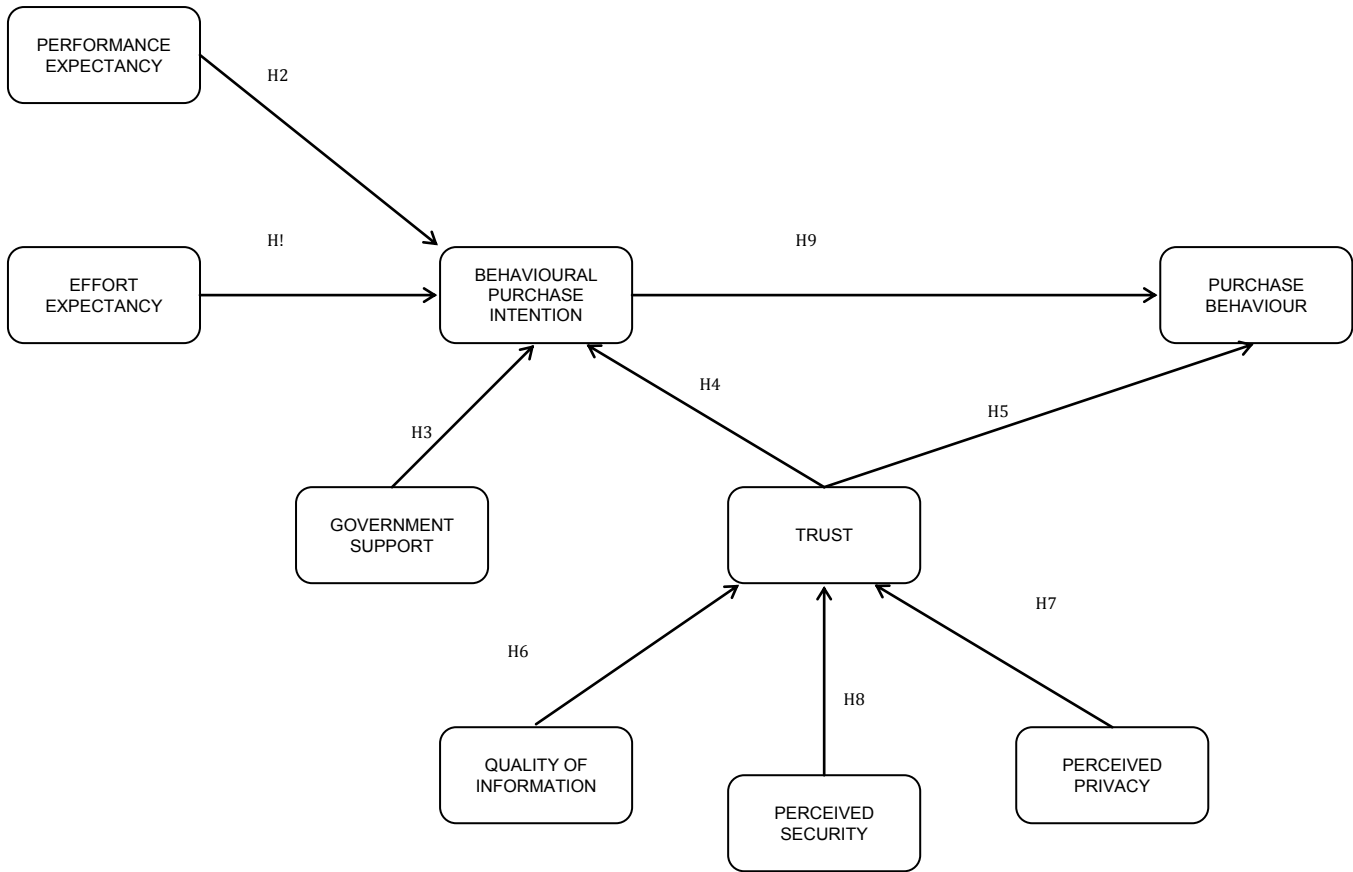Notes: Significant at: *p<0,05 t-value 1,960; **p<0,01, t-value 2,576

Figure 1. Proposed model

Figure 2. Validation of the model

PERFORMANCE EXPECTANCY

H2:
B = 0.679**

EFFORT EXPECTANCY

H1:
B =-0.182

RSq= 0.774

BEHAVIOURAL PURCHASE INTENTION

H9:
B = 0.326**

RSq= 0.215

PURCHASE BEHAVIOUR

H3:
B = 0.019

GOVERNMENT SUPPORT

H4:
B=0.301**

H5:
B = 0.181*

RSq= 0.853

TRUST

H7:
B = 0.054

H6:
** B = 0.506

H8:
B = 0.408**

QUALITY OF INFORMATION

PERCEIVED SECURITY

PERCEIVED PRIVACY