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The new online banking consumer. An occasional user or a new full-time customer

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**The new online banking consumer.
An occasional user or a new full-time customer.**

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Abstract

This paper studies the determinants of individuals' propensity to use electronic banking and the impact of the pandemic on that. We found that the variables with the greatest significant weight for participation are the variables of the Technology Acceptance Model (TAM). Furthermore, we observe changes in e-banking after the pandemic due to sociodemographic variables with increasing relevance of gender and income variables, indicating that the gender and economic digital divide has increased as well. The educational level variable has decreased, reducing the educational gap in the analysis of the digital divide. However, the most relevant variables are digital skills and frequency of internet use, which have a much stronger influence on e-banking adoption. Finally, based on the findings presented above and below, some policy recommendations are provided.

Keywords: traditional banking, online banking, consumers, survey data, econometric models.

1. Introduction.

One of the events that has shaken financial markets and their relationship with their clients the most is the Covid-19 pandemic. The pandemic has not only left the social and economic sector in deep crisis, but has also affected individuals and companies, and with them the financial markets (Amir and Amir, 2020) and has been felt in all financial markets around the world (Daily, 2020; Economy, 2020 and Shambaugh, 2020).

But firms, including banks, have taken steps to minimize the effects of Covid-19, one of the star measures being the rapid and complete digitization of all their operations and services (Beret et al. 2020). Digital banking implements all banking services and operations on digital devices (Nguyen et al., 2018).

But what is digital banking? All banking operations are conducted in a virtual environment, the essence of digital banking is that both banking and financial services customers can access their bank online (Shah and Clarke, 2009).

The basic difference between online banking and traditional banking is that in the latter, customers have to visit the branch in person. In contrast, in Internet banking, all transactions can be carried out through electronic devices. Digital banking via phone, internet, and mobile has become an important way of delivering multi-channel services to customers, which is challenging traditional banking models (Cortiñas et al., 2010 and Dootson et al., 2016). For all this migration to the digital territory, techniques corresponding to Artificial Intelligence (AI) or blockchain have been used (Sharma, 2017).

Understanding the importance of online banking for the financial sector and the catalytic role of the pandemic in fostering the digitization of society. In this paper, we aim to analyze the factors affecting individuals' willingness to engage in online banking by conducting an in-depth study of those who claim not to have used online banking before the pandemic and those who claim that they will return to traditional banking as soon as possible. Digital inequality is an issue to be considered in terms of what is the impact due to gender or age differences, but e-banking and other digital services could act as a game-changer making services more accessible to all individuals. These will allow us to analyse the profile of those

who are resistant to innovation and to develop a specific marketing strategy for this sector. In the Spanish case for example the removal of a certain number of branches and the impact on the elderly and their families.

So, is the consumer entering online banking after the pandemic an occasional consumer or has he or she become loyal to online banking? How can we approach traditional banking users? Resistance to innovation or lack of e-trust? Is there a disadvantaged group being excluded from this service?

The following chapter of the paper presents the main theoretical background on which we formulated research hypotheses. Then we outline the research design and describe the data and data analysis methods used in our study. Next, we present the study results and relate them to the stated hypothesis. The last section discusses the results, putting them in the context of related work, and concludes the paper by outlining limitations, future research directions, and practical implications of our research.

2. Literature review

During the COVID-19 pandemic, in the banking industry, digital use is becoming increasingly common among customers, the risk of virus transmission and distribution consequences caused by the transfer of cash was probably the reason for banking to direct their customers to become e-banking users Kitsios et al. (2021). The most important things that need to be held in the electronic environment are trust and loyalty van Esterik-Plasmeijer et al. (2017). COVID-19 because of the crisis faced by economies all over the world acted as an accelerator for the digital revolution (Gavrila et al., 2021; Nagel, 2021)

The use of information and communication technology in banking is relatively advanced, e-banking can be in the forms of Automated Teller Machines (ATMs), Electronic Wallets (e-wallets), debit cards with chips, Mobile Banking, Internet Banking, and Bizum transfers, among others (Malaquias et al., 2019). Therefore, face-to-face interaction as a process of consumption activities for customers and banking employees is replaced by customer interactions with technology. The patterns of consumer behavior also change over time with the increasing use of technology in banking services (Najib et al., 2021).

The adaptation of individuals to services such as online banking is also relevant for analysing the current situation and how individuals use this service. Garrido-Lora, Munte-Ramos and Durán (2016) study the use of ICT in Spain and highlight the importance of the generation gap in the adoption of digital services. They conclude that there are two ways of approaching these services, with adults using telecommunications from a work perspective and young people from a social perspective.

The recommended method to study the adoption of services such as e-banking would be the Technology Acceptance Model (TAM), which combines Perceived Usefulness (PU) and Perceived Ease of Use by the consumer. Garín-Muñoz et al. (2019) conclude that in order to analyse adaptation to online services, it is necessary to focus on the socio-demographic characteristics of individuals, as well as their digital literacy, as these determine their ease of adopting innovations. In the same study, Garín-Muñoz et al. (2019), criticise the visible socio-demographic gap in online activities and encourage policies to reduce distortions and educate people with their internet skills to help them enjoy these new services.

E-Banking and Customer Satisfaction.

Customer satisfaction would be achieved if the e-banking service provider offers the best of what customers need efficiently in terms of services offered (Casaló et al., 2008). Variables such as ease of use and accessibility positively affected customers' satisfaction and maintained longstanding customer loyalty (Liébana-Cabanillas et al., 2013). Online customers expect more options available to them when paying, buying, or searching for goods online (Tan and Teo, 2000; Loonam and O'loughlin, 2008; Jiang et al., 2013). In the e-banking case, website attributes offered play an important role in increasing customer satisfaction (Bauer et al., 2005; Amin, 2016). Furthermore, the usability of a website has a positive impact on consumer satisfaction (Casaló et al., 2008). Reliability is a core service scale to measure the quality of e-banking services (Zeithaml et al., 2002).

Many activities are conducted online due to the covid-19 pandemic. People must be able to adapt to the changing environment. There are many kinds of services offered by e-banking such as transferring online, paying a bill online, checking balance, and mutation information. These services offered are expected to fulfill customer needs moreover during COVID-19. According to an empirical review of consumer perceptions of service quality in US banks, higher e-banking service quality contributes to user satisfaction (Foroughi et al., 2019).

E-banking and inequality

Inequalities occur when, despite access to and frequent and extensive use of ICTs, this does not lead to beneficial socio-economic results (Van Deursen et al., 2015, Baller et al., 2016).

Inequality is treated for financial purposes as financial inclusion, World Bank (2018) explains that financial inclusion enables individuals and businesses to access affordable and helpful financial products. Two key financial concepts raised during and after the pandemic:

- Digital banking, including e-banking, comes from the digitalization of traditional banking services, activities, or products offered via online channels, applications, and mobile platforms.

- Fintech, which has experienced exponential advance as a global phenomenon since the pandemic refers to newly developed digital technologies to support or enable financial services and processes (Schüffel, 2016).

Against e-banking, fintech adoption significantly improves female employment and reduces gender inequality, the effect being more pronounced in firms without traditional financial access. Fintech not only increases the number and ratio of female employees in the workforce but also mitigates the financial constraints of female-headed firms. (Loko and Yang, 2022). Fintech can leverage digital financial tools to increase access to and usage of financial services, benefiting populations who have been disproportionately excluded from the traditional financial system (Sahay et al., 2020).

There is only a limited number of studies that investigate e-banking adoption by elderly people G20/GPII (2019), OECD (2020) all of them from institutional or policy advice non from an empirical field.

3. Data and Methodology.

In this part of the paper, we will focus on explaining the data we have to carry out the study, the variables of interest and the methods to analyse them. Different models will be proposed, according to the needs of the study in question and an adequate descriptive analysis. It will be divided into two sections: Data and Methodology.

3.1. Data

The data come from a survey carried out annually by the National Statistics Institute (INE). This is the Survey on the Equipment and Use of Information and Communication Technologies in Households. For this study, the data used are from the years 2019 and 2022. For 2019 the sample consists of 14980 respondents (INE, 2019), for 2020 12627 respondents (INE, 2020), for 2021 14839 respondents (INE, 2021) and for 2020 15027 respondents (INE, 2022). This annual survey collects information on the ICT equipment of Spanish households with individuals aged 10 and over, with a special attention to those aged 16-74. Both samples are representative at the national level and in terms of gender, age and educational level.

It should be noted that although this survey should be able to be transformed into a panel data, the same individuals are not kept throughout the survey, and individuals are only repeated for four annual periods in the Telecommunications Survey.

The main statistics, mean, standard deviation, minimum and maximum values of the variables used in this study are presented in Table 1.

	Obs.	Mean	Std. Dev.	Min.	Max.
e-Banking	12,34	.7083367	.4545465	0	1
Male	14,84	.4606779	.4984682	0	1
Income	13,25	7.209686	.7013116	6.109248	8.294049
Age	14,84	54.96637	18.12602	16	102
Age ²	14,84	3349832	1991893	256	10404
Formation	14,02	3.555143	2.121579	1	8
Internet Daily	10,92	.9499863	.2179833	0	1
e-Government	12,44	.55041	.4974723	0	1
e-Commerce	11,76	.6820269	.4657088	0	1

e-Health	12,34	.7802803	.4140735	0	1
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Table 1. Main statistics.

Most of the variables used in this study are dichotomous, taking the value 1 if the individual study meets a certain attribute and 0 otherwise. These variables range from the gender variable to those related to the digital services used by the individual. These include the dependent variable of this study, e-banking, which takes on a value of 1 if the individual has used this service in the last year and 0 otherwise.

The explanatory variables used in this study would be socio-demographic variables: gender, the logarithm of income (to avoid extreme values), age, the individual's education, in ascending order according to their level of study, and variables related to their digital skills, dichotomous variables that include the digital services used by the individual. These would be appropriate variables for the estimation of a TAM model (Liébana-Cabanillas, Muñoz-Leiva & Sánchez-Fernández, 2013).

For a better understanding of the variables and their coding, the following table summarises and explains the explanatory and dependent variables used.

Variable		Values
MALE	Male	Male = 1, otherwise = 0
AGE	Age	Age of all individuals
AGE2	Age ²	Age of all individuals squared
INCO	Income	Between 0 and 900 = 450, between 900 and 1600 = 1050, between 1600 and 2500 = 2500, between 2500 and 3000 = 2650 and above 3000 = 4000.
FORM	Formation	No studies = 1, Primary studies = 2, Secondary studies = 3, Post-Secondary = 4, Professional Formation = 5, Degree = 6, Masters = 7, PhD = 1,
INTD	Int Daily	Use Internet Everyday = 1, otherwise = 0
ECOM	E-Commerce	E-Commerce = 1, otherwise = 0
EGOV	E-Government	E-Government = 1, otherwise = 0

EHE	E-Health	E-Health = 1, otherwise = 0
EBANK	E-Banking	E-Bank = 1, otherwise = 0

Table 2. Variables of Interest.

Having explained the variables in this study, it is necessary, in order to be able to work with them properly, to understand the relationships that exist between them. In order to understand these relationships a correlation matrix will be used, table 3. It could be understood that having a study that covers 4 cross sections it would be necessary to present the four correlation matrices again, but as they have very similar values and are always related in the same way, the correlation matrix expressed in table 3 is the one that corresponds to the most recent year of study, 2022.

	e-Banking	Male	Income	Age	Age ²	Formation	Internet Daily	e-Govern	e-Comm	e-Health
e-Banking	1.000									
Male	0.056	1.000								
Income	0.212	0.094	1.000							
Age	-0.146	-0.047	-0.038	1.000						
Age ²	-0.187	-0.049	-0.052	0.981	1.000					
Formation	0.297	-0.037	0.398	-0.099	-0.137	1.000				
Internet Daily	0.166	0.008	0.073	-0.151	-0.159	0.088	1.000			
e-Government	0.365	0.060	0.189	-0.150	-0.189	0.308	0.129	1.000		
e-Commerce	0.441	0.051	0.223	-0.342	-0.374	0.336	0.193	0.374	1.000	
e-Health	0.292	-0.067	0.140	-0.127	-0.154	0.205	0.130	0.325	0.315	1.000

Table 3. Correlation Matrix

The correlation tables show that, for the estimation of the e-banking variable, most of the explanatory variables have a relevant relationship with it. Therefore, the estimates are adequate, with optimal goodness-of-fit criteria and able to explain the dependent variable.

Moreover, the relationship of the variables with electronic banking and among themselves does not exceed 0.7, so there is no multicollinearity, which avoids problems of this type in the estimation. Focusing on the relationship between the online activities variables, academic education and income are positively related to the dependent variable. A positive but apparently less relevant relationship would correspond to the gender variable, to see if there is a relevant gender gap, we need to estimate the models. The only variable that appears to have a negative effect on the dependent variable would be the age variable, so it should have the same relationship in the estimation.

Once all the relationships are known, the methodology section will set out the working method to be followed to make the best use of the data.

3.2. Methodology.

Technology Acceptance Models (TAM) developed by Davis (1989) and the extended model of Venkatesh and Davis (2000) are the typical models for estimating the behaviour of individuals as online consumers. TAM models capture both Perceived Usefulness (PU) and Perceived Usefulness Facility (PUF) in relation to online shopping.

For this study, the dependent variable is a dummy variable that takes the value 1 if the individual uses online banking and 0 otherwise. For this type of dependent variable and with cross-sectional data, this model cannot be estimated using ordinary least squares (OLS). Models that could be used are the linear probability model (LPM), the logit and the probit. The most obvious problem with the LPM is that the estimated probability values fall outside the range of '0' and '1'. The problems associated with linear probability models are explained, among others, by Wooldridge (2010).

To ensure that the model adequately estimates the independent variable and to observe its predictive value, it is recommended to use the confusion matrix and the area under the ROC curve. The confusion matrix gives the percentage of cases that the model predicted

adequately. The area under the ROC curve allows the ability of the model to discriminate between individuals with different characteristics to be observed. Both are recommended by Mihalovič (2016). To perform these estimations, it is recommended to use a logit model.

The Logit model is not a linear model, but a probabilistic Logit model, which gives a result between 0 and 1, which is consistent with a probabilistic result. Equation 1 shows the theoretical logit model.

$$Pr(y_i = 1|x_i; \beta) = \Lambda(x_i'\beta) = \frac{e^{(x_i'\beta)}}{1+e^{(x_i'\beta)}} \quad (1)$$

The logit model is tested with the Chi-square test and the existence of each independent variable in the model is tested with the "Wald statistical test". However, in cases where there is a ranking and assignment process and where the assumption of normal distribution and continuity is not a prerequisite, the data should be analysed using the logit model.

This model uses the maximum likelihood estimator (Wooldridge, 2010). It is also the most widely used in the literature and allows the use of the odd ratio, the odds ratio, which makes it possible to see the influence of the explanatory variables on the dependent variable. This results in 4 explanatory models, one for each year:

- Model 1: Logit models for e-banking and its determinants for 2019.
- Model 2: Logit models for e-banking and its determinants for 2020.
- Model 3: Logit models for e-banking and its determinants for 2021.
- Model 4: Logit models for e-banking and its determinants for 2022.

However, before carrying out this quantitative analysis, a descriptive analysis will be carried out to reflect the current situation of the dependent variable. One of the objectives of the work is to find out which individuals remain unaware of the use of online banking, whether the pandemic has had a positive impact on the retention of new users and whether they have remained regular users two years after the coronavirus. This descriptive study should also observe:

- The evolution of online banking users in relation to the population as a whole, to see if they are increasing, if the trend is stable, if it is slowing down, to see if it is a growing, declining or stagnating sector.

- The analysis of online banking in terms of its demographic profile and whether this has changed in two years. Analysing who uses online banking and who does not. And the different profiles of people that this market has absorbed throughout the years to grow and if this new segment will remain using online banking.

4. Results

This section will present the results obtained through the analysis proposed in section 3: firstly, the descriptive analysis of individuals who do and do not participate in e-banking and, secondly, the estimation of the logistic regression models explained in section 4.

Description of the e-Banking user

The penetration of e-Banking in the Spanish market, as shown in Table 4, has been manifest from 2020 onwards, increasing its market share by 10% of the Spanish population, rising from 58% of the market in 2019 to 70.8% in 2022 and increasing steadily each year.

		2019	2020	2021	2022
e-Bank	Not User	41.36	36.35	32.23	29.17
	User	58.61	63.65	67.77	70.83

Table 4. Description of the percentages of e-Banking

It is therefore not unreasonable to think that the e-banking user has diversified and penetrated new layers of Spanish society. This makes it essential to conceptualise what the regular user of electronic banking in Spain is like, as well as the individual most susceptible to a breach of access to this service.

e-Bank	2019		2020		2021		2022	
	Female	Male	Female	Male	Female	Male	Female	Male
Not a user	2,304	1,654	2,504	1,888	2,304	1,654	2,053	1,547
User	4,291	4,030	3,922	3,769	4,291	4,030	4,460	4,283

Table 5. e-Banking by gender

Table 5 presents a year-on-year comparison of e-banking users and non-users by gender over the 4 years of the study. The first thing that emerges is a gender gap that does not seem to narrow over time. While the comparison between the first and the last year shows that the percentage of women willing to participate in e-banking is increasing, the gender gap is also increasing. This is because e-banking penetrates both markets in the same way.

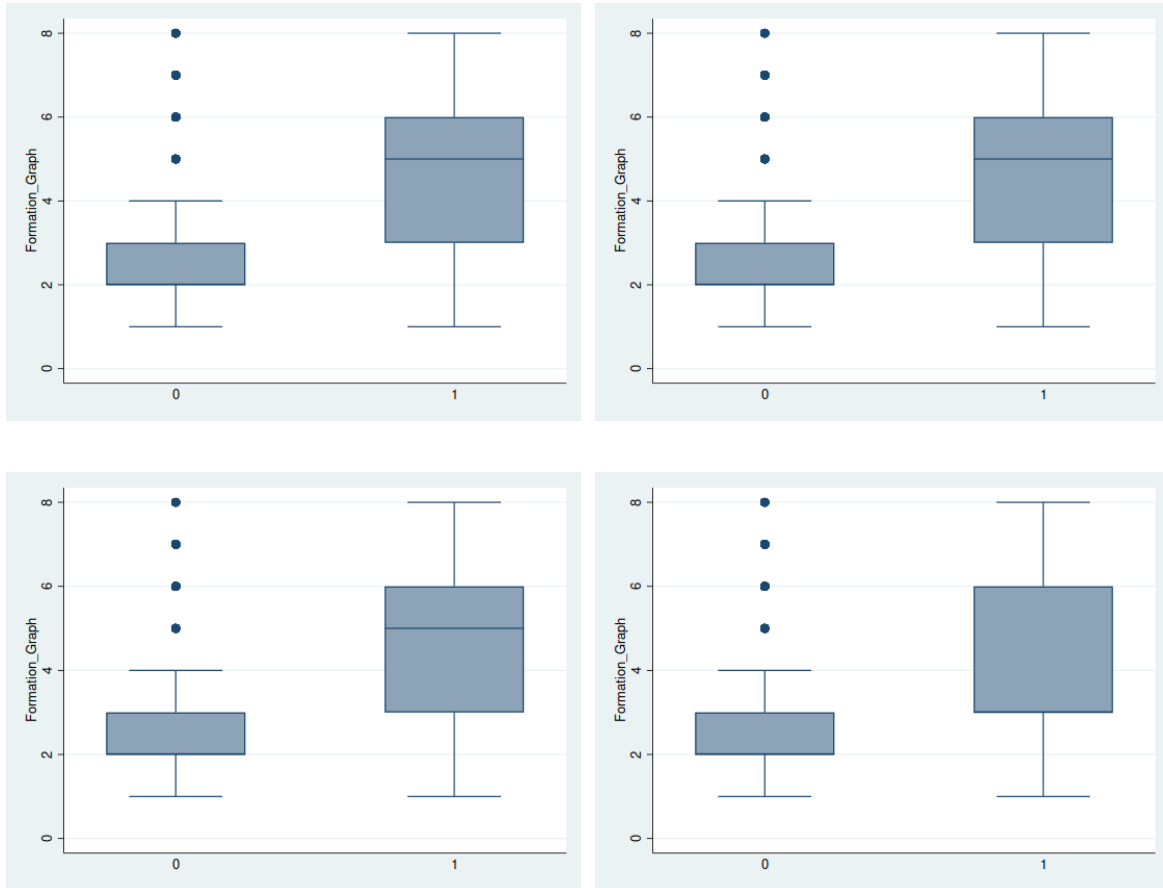


Figure 1. e-Banking by academic level

If the focus is on educational level, the educational profiles of individuals who choose to use or not to use e-banking services remain the same over time. The profile of individuals who choose to use e-banking services is broader and includes people of all educational levels. However, the norm of the profile of the most frequent users of this service is people who have completed compulsory education or higher education. It is therefore attractive to a large part of the Spanish population.

Nevertheless, the profile of people who suffer from this usage gap is reinforced in people with a low academic level, most of whom have not completed compulsory education or have only completed it, with very low values in people with higher education. It can be deduced that the reason for their lack of access to this service is related to digital skills and inequality of access, which can be resolved by social policies that help these people to acquire them.

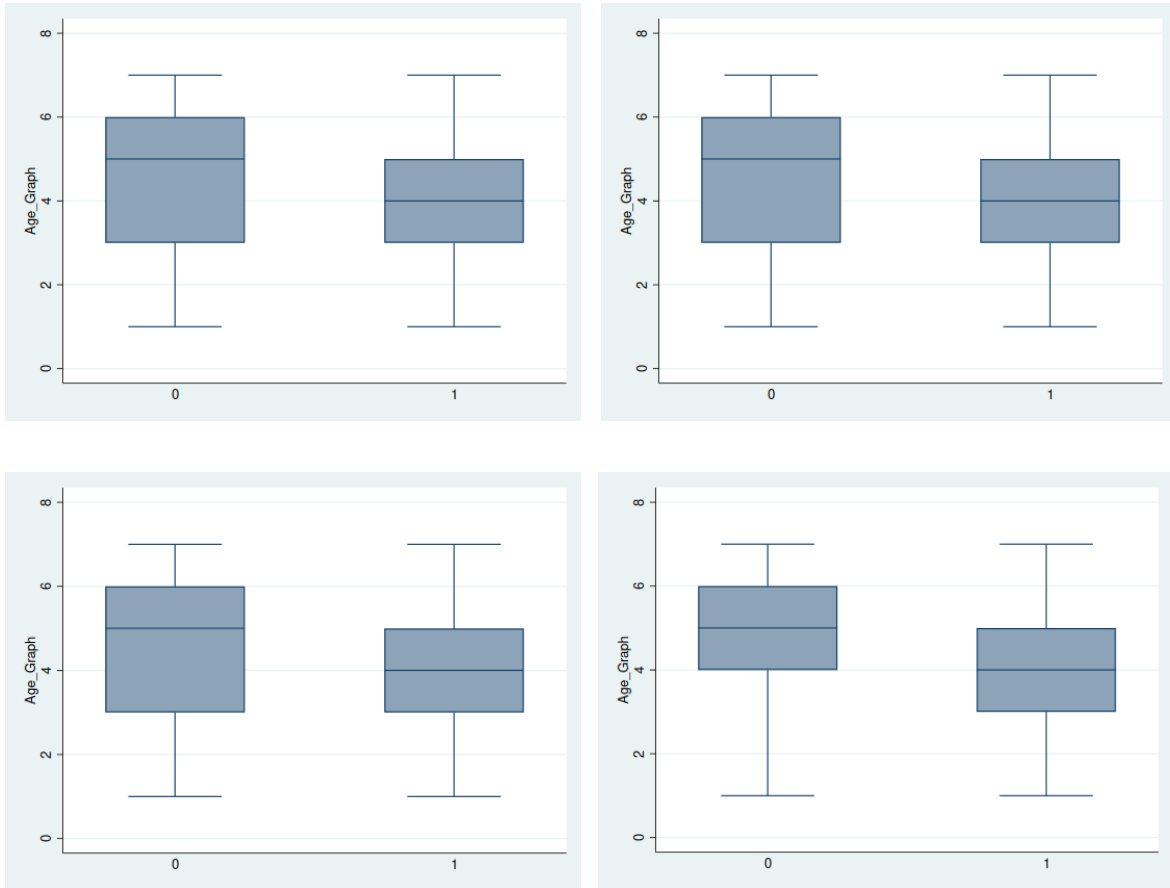


Figure 2. e-Banking by age.

The age profile shown in Figure 2 also reveals important information about the evolution of online banking users. Whereas until 2021 there was a demographic profile where the use of online banking attracted mainly middle-aged people and the profile of non-users ranged from respondents in their 40s to older respondents, in 2022 the most common profile of non-users of online banking will be those who do not use online banking, However, thanks to the penetration of online banking, the most common profile of non-users of online banking in 2022 will be those who are older, mainly in their 50s and 70s, widening the gap in access to digital services by age.

However, it reflects a current reality that children are taking over from their elders in online banking services. This may hinder penetration in this market.

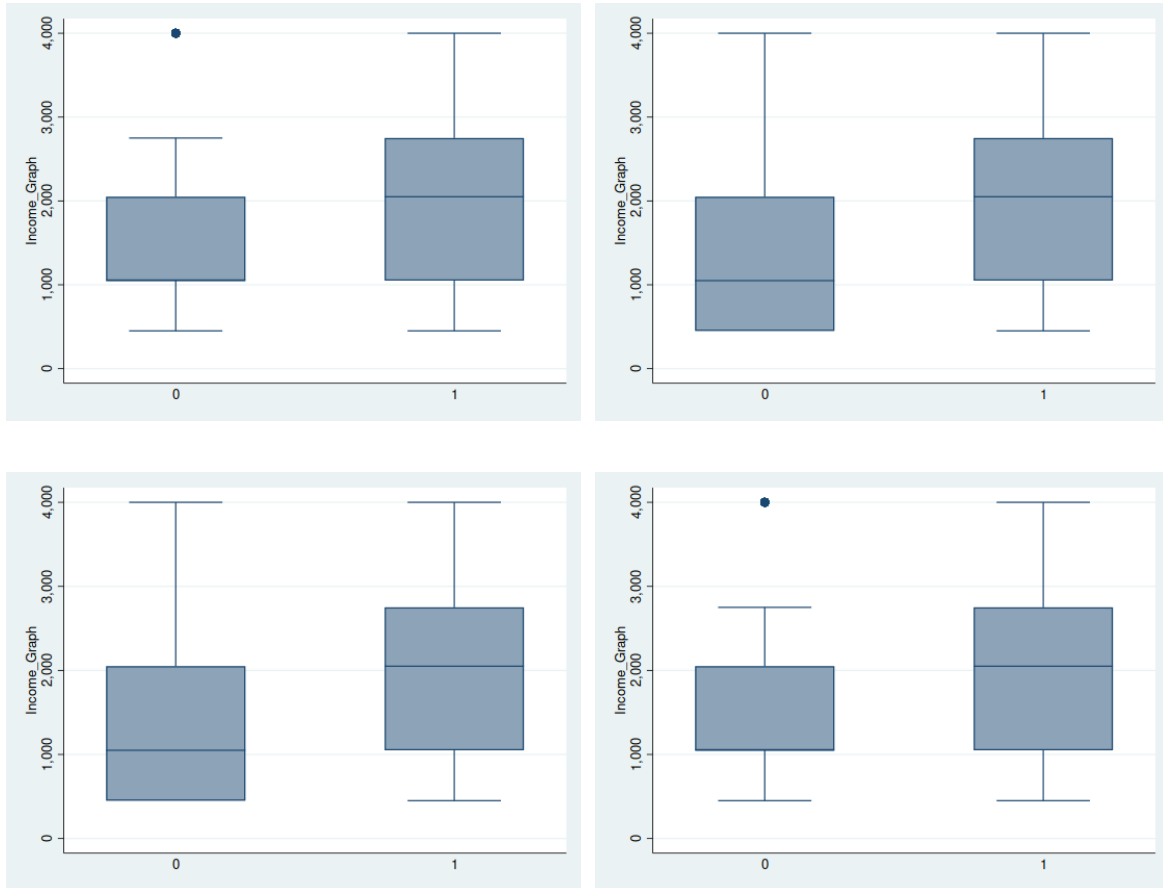


Figure 3. e-Banking by income.

As in Figure 2, Figure 3 also shows a change in the profile of those who do not use e-banking. While the use of e-banking seems to be spread across all income brackets, the non-users are already concentrated in the lower income brackets in 2020 and even more so in 2022.

Taking this into account, it can be concluded that the e-banking users are more difficult to define than the non-users, as most of them have a more transversal profile and appeal to all levels of education, age, and income. However, the profile of the non-user offers more prima facie conclusions, and these coincide with the general characteristics of the digital divide. Individuals who do not use e-banking in 2022 are predominantly female, low income, older and less educated. This is consistent with the experience of the digital divide and the uptake of online services examined in the literature review.

Logit models for e-banking.

To carry out an analysis beyond the socio-demographic, the following models will be used to estimate the dependent variable e-banking with the explanatory variables proposed by the TAM model, including socio-demographic and ICT-related variables (see table 6).

	e-bank - 2019	e-bank - 2020	e-bank - 2021	e-bank - 2022
	Odd Ratio	Odd Ratio	Odd Ratio	Odd Ratio
Male	1.172*** (.064)	1.274*** (.077)	1.317*** (.078)	1.258*** (.076)
Income	1.254*** (.053)	1.281*** (.060)	1.264*** (.058)	1.304*** (.061)
Age	1.106*** (.0104)	1.106*** (.011)	1.117*** (.010)	1.088*** (.010)
Age²	.998*** (.0000)	.998*** (.000)	.998*** (.000)	.999*** (.000)
Formation	1.233*** (.018)	1.206*** (.020)	1.219*** (.020)	1.169*** (.020)
Internet Daily	1.444*** (.1848)	1.338*** (.202)	1.579*** (.196)	2.053*** (.252)
e-Government	2.474*** (.145)	2.632*** (.171)	2.556*** (.169)	2.573 (.165)
e-Commerce	4.248*** (.264)	4.490*** (.307)	3.974*** (.270)	4.036*** (.277)
e-Health	1.377*** (.082)	1.820*** (.135)	1.878*** (.115)	1.903*** (.140)
Constant	.002*** (.0008)	.002*** (.000)	.001*** (.000)	.003*** (.001)
n	9012	8284	9193	9229
Pseudo-R²	0.243	0.2681	0.2578	0.2576
PCPC	78.43%	80.77%	82.06%	82.92%
ROC	0.817	0.8319	0.8297	0.8317

Table 6. Logistic model of e-Banking from 2019 to 2022

The results in table 6 show a great similarity between all the models. In all of them, all explanatory variables are significant, there is a very similar number of observations in all of them and very good values in the goodness-of-fit criteria.

Starting with the goodness-of-fit measures, it can be observed that all models seem to have a high ability to explain the dependent variable. For all the models, the pseudo-R² values are high, around 25%, the "percentage of cases correctly predicted" is above 80% for all the years

since 2020, increasing each year, and the area under the ROC curve exceeds 0.8 in all the estimations, indicating the ability of these models to discriminate between individuals according to their characteristics. All of this indicates that the model can adequately predict the explanatory variable and is sensitive in discriminating between individuals.

At first glance, the impact of the explanatory variables on e-banking has not changed much over the years. The relationship with the dependent variable remains the same and the odds ratio is similar. There is no change in the influence of the variables on the dependent variable, the variables that positively influenced the propensity to e-bank in 2019 continue to influence it in the same way in 2022. All these influences coincide with those found in Table 3, correlation matrix, except for the variable age, but its influence is not very large, the odd ratio is close to 1, which could be due to the majority of e-banking use in middle age, it also has the negative compensating influence of the variable age².

The socio-demographic variables included in this model are related to the gender, age, income and education of the users. They are all significant and positively related to the dependent variable; however, among all the explanatory variables, they are the ones with odd ratios closer to one, so they have little weight in the final probability. These results are almost identical in the pre- and post-pandemic models.

Some of the most relevant data from the more detailed study of these socio-demographic variables would be the gradual reduction of the weight of academic level in the final decision, as the value of the odd ratio decreases. However, the opposite is true for the variables family income and gender, which increase their importance in the final decision. It can therefore be concluded that the gender and income gap is increasing, while the educational gap is decreasing in the adoption of digital activities.

However, the most relevant values are related to ICT-related variables, whose odd ratios show a significant influence on the probability of the final decision. The performance of online activities such as e-commerce, e-health and regular use of the Internet have a very positive influence on the adoption of e-banking. This is consistent with the study's proposition that individuals with more regular Internet use and more acquired skills have lower barriers to use and access and are more willing to use ICT. The only activity that does not increase its

influence on decision making is 'e-commerce', which, although influential as discussed, has a lower odd ratio today than in 2019.

As a final consideration before concluding, the characteristics of individuals show that there is still work to be done to reach some individuals and ensure that they have effective access to certain essential digital activities such as e-banking. However, the area that needs to be emphasized is digital literacy, as encouraging individuals to consume online will increase their propensity to use online services to improve their usability.

5. Conclusions.

The objective of this study was to identify and estimate the determinants of individuals' propensity to use electronic banking. To study the impact of the pandemic on the influence of these factors on the final estimate. In the analysis of online banking and any other online service, it is concluded that the variables with the greatest significant weight for participation are the variables of the Technology Acceptance Model (TAM), as discussed by Garín-Muñoz and Pérez-Amaral et al. (2011). Variables related to the perceived usefulness and the reduction in the difficulty of access perceived by the user.

Considering each dependent variable separately and the impact of the pandemic. We observed changes in e-banking after the pandemic. According to odd ratios, which reflect the weight of a variable in the estimation of the dependent variable, the changes brought about by Covid-19 would be as follows:

Sociodemographic variables are determinant in the study of the adoption of this online service, electronic banking. Among these variables, and throughout the study, we observe an increase in the relevance of the gender and income variables, indicating that in electronic banking after the pandemic, the gender and economic digital divide has increased, but the impact of the educational level variable has decreased, reducing the educational gap in the analysis of the digital divide. In other words, according to the socio-demographic analysis, the digital usage gap has narrowed because education is less of a handicap, but the access gap has widened because the income gap has widened.

However, the most relevant variables are digital skills and frequency of internet use, which have a much stronger influence on e-banking adoption. Therefore, the e-banking variable is much more related to the digital skills of users, and improving these skills will ensure greater participation in online activities such as e-banking.

From this study and the descriptive analysis of the e-banking variable, the profile of e-banking users is more cross-sectional than the profile of non-users, which is explained by the fact that the influence of digital literacy variables is much more important than socio-demographic variables. However, this study reflects that people suffering from the digital

divide are much more likely to be people with lower incomes, lower levels of education and older people, as these profiles are more likely to need help to benefit from services such as e-banking and to ensure equal opportunities.

Finally, based on the findings presented above and below, some policy recommendations could be suggested:

- To stimulate the effective use of online services, policy makers should promote measures aimed at increasing ICT literacy and accessibility, boosting competitiveness, developing e-confidence and maximising the benefits for citizens. These actions should target groups with less developed ICT skills. In this way, all digital barriers related to socio-demographic characteristics can be reduced.

- From the point of view of 'entrepreneurs', the most important thing would be to stimulate innovation, banks should take measures to stimulate users' perceived e-confidence and improve their satisfaction of use with tools such as: ensuring proper handling of customer complaints.

- Similarly, business should focus their marketing campaigns without targeting those market segments that are less likely to use it, thus reducing digital access and gender gaps. In this respect, they should invest in the development of digital skills training for their employees within the company itself.

Future research and limitations.

Given the importance of the time dimension in this type of research, it would be relevant to replicate this study with panel or time series data beyond the cross-sectional data proposed here.

In turn, changes in household opinions are difficult to compare. Furthermore, in the survey: some questions change and household units are lost from the sample or respondents change. This is because the survey represents households, not families. Another limitation is the lack of knowledge about people's behavior.

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