

DETERMINANTS OF CONTINUITY IN CONTRACTING THE AUDIT ON A VOLUNTARY BASIS: EVIDENCE FOR THE CASE

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Abstract

In the European Union there is currently an intense debate regarding the regulation of auditing of accounts. One of the most relevant and controversial issues is the definition of the size of the companies required to be audited. This work is focused on the study of voluntary contracting of the audit service. Specifically, the factors that determine the continuity of the client when it is no longer obliged to be audited are examined. As a research methodology, a survey was carried out with 275 SMEs in Spain. The results obtained show that the perception of improvement in the quality of financial information and in the control of internal accounting records is the main factor that contributes to continuing to voluntarily contract the service . Furthermore, such continuity is more likely in companies that are already audited voluntarily, in those audited by international firms and in those that maintain a lesser relationship with credit institutions and other lenders.

Introduction

Within the European context, Spain has been one of the economies hardest hit by the financial crisis unleashed in 2008. The situation ~~expands~~ since then by micro , small and

medium companies (MSMEs) that operate in the country, which represent 99.7% of the total companies with employees, is a clear reflection of this fact (Government of Spain , 2016). Under this situation, there are many companies that , although they have managed to remain in the market , have experienced significant reductions in their turnover and staff . This has caused, among other consequences, that the number of companies located above of the size thresholds that require auditing of the annual accounts ~~has~~ decreased significantly . _ _ _ _ According to data from the Institute of Accounting and Audit of Accounts (ICAC, 2015), an organization public that regulates this professional activity in Spain , the number of mandatory audits has decreased by around 24 % since the beginning of the crisis, mainly due to the reduction of companies ~~and~~ ~~for~~ ~~size~~ of size .

On the other hand, it is necessary to refer to the approval of Directive 2014/56/EU (European Parliament and Council , 2014a) and Regulation 2014/537/EU (European Parliament and Council , 2014b), which have intensified the discussion regarding the legal regulation of auditing within the European Union. In the specific case of Spain , since the entry into force of Directive 2006/43/ EC (European Parliament and Council , 2006) and the subsequent publication of the Green Paper on audit policy (European Commission, 2010), there have been several works that have focused on analyzing the effects on the market of _ the different regulatory changes , for example, regarding independence (García Blandón and Argilés Bosch, 2013) . The present work focuses on another of the topics that is currently being the subject of extensive debate : the definition of the size of _ _ companies required to be audited. In our country, the limits that currently mark this obligation are: total assets: 2,850,000 euros; net amount of the annual turnover : 5,700,000 euros, and number of workers: 50. However , Directive 2013 / 34/EU (European Parliament and Council , 2013) raises the first 2 figures up to 4,000,000 and 8,000,000 euros, respectively, providing that the annual accounts of

companies that fall below these thresholds are exempt from the obligation to be audited. If this increase in levels were transferred to Spain , another significant number of companies would no longer be required to be audited (Montoya del Corte , Fernández Laviada and Martínez García , 2014).

What was stated in the previous 2 paragraphs justifies the opportunity and interest in knowing, at the current time, the variables that contribute to explaining the voluntary contracting of the audit service. And the crisis prevailing in recent years and the current trend in the European ~~economy~~ to reduce the mandatory nature of audits can seriously undermine the quality of the information disclosed by companies and, therefore, the market transparency. In this sense , the audit sector in Spain has already raised the alarm about this circumstance, warning that the reduction of audited companies entails numerous undesirable consequences, such as a serious loss in the credibility of financial information, an increase in opacity and corporate fraud, and a greater audit market concentration (ICJCE, 2012).

Given this situation, the present research is proposed with the motivation of contributing to the scarcity of previous literature on the voluntary contracting of the audit service in Spain and providing ~~an overview~~ ^{an overview} in a crisis context , to that obtained in other Member States of the European Union, such as the United Kingdom (Collis, Jarvis and Skerratt, 2004) and Finland (Niemi, Kinnunen, Ojala , & Troberg, 2012). Specifically, the objective of this work is to examine the determining factors of the continuity in the contracting of the audit service for the Spanish case , with the ~~purpose~~ ^{aim} of explaining why the SMEs that demand the service could be interested in continuing to do so voluntarily in the future. For this Information is collected through surveys ~~which~~ ^{which} personally to the managers of 275 Spanish SMEs .

Therefore, it is of interest to address this research at the ~~current~~ ^{current} time and in the Spanish context , fundamentally for 3 reasons . The first is the timeliness of the topic analyzed,



based on the EU proposal to increase the exemption thresholds. The second lies in the institutional differences between Spain and the countries where this type of studies have previously been carried out (see García-Benau, 1991) . The United Kingdom, for example, has a strong auditing tradition and development of the accounting profession , with private initiative being in charge of developing the

auditing standards . The Nordic countries , for their part , have extended mandatory auditing to practically all companies . Spain , however , ~~do~~ not share such characteristics . In fact, it is the public sector that assumes the task of including within the legislation the requirements and standards in this matter, and the Parameters that delimit the legal obligation of the audit are much higher than those established in the Nordic countries (see, for example, Sundgren and Svanström, 2013). Finally , it ~~shall~~ be noted that previous works have been carried out in times of economic prosperity , while the present one is framed in a context of crisis , which _ _ can contribute to the existing literature in this line of research.

The remainder of the work is structured as follows. After this introduction, the main contributions of previous literature on the topic are reviewed and the research hypotheses are presented. In the third section, the research methodology and the variables used in the empirical study are described . TO Next, the results achieved are analyzed and discussed. Finally, before the bibliographical references, the most interesting conclusions and the implications that are derived are presented.

Previous literature and hypotheses

Within the general framework of agency theory, the voluntary demand for the audit service is studied as a control element that seeks to reduce management problems caused by the existence of information asymmetries and conflicts of interest between principals and agents (Jensen and Meckling, 1976). Because of the separation of ownership and control, the owner cannot directly observe the level of effort and quality of those who manage it, who could act according to their own interests. Thus, an important factor in the survival of companies is the control of agency problems (Fama, 1980; Fama and Jensen, 1983).

Along these lines, there are numerous investigations that analyze the influence of

size on the propensity of a company to hire an audit voluntarily , since it is understood that as ~~size~~ become larger and more complex , become more difficult to control , requiring more exhaustive supervision (Knechel , Niemi and Sundgren, 2008). Although there are some studies that do not obtain significant differences between companies of different sizes (Carey , Simnett and Tanewski , 2000; Senkow, Rennie , Rennie and Wong , 2001), the majority reveal an ~~increase~~ of the voluntary demand for audit as companies increase their size (Chow, 1982; Abdel-Khalik, 1993; Tauringana and Clarke, 2000; Collis, 2003, 2008, 2012; Collis et al., 2004; Hay and Davis, 2004; Haw, Qi and Wu, 2008; Niemi et al., 2012; Dedman, Kausar , & Lennox, 2014). On the other hand, regarding the suitability, sufficiency and validity of the triple size criterion established by regulators to set the audit obligation, ~~Chen~~ et al . (2004) demonstrate how the net amount of the annual turnover alone can represent size , while the variables referring to the total amount of the asset items and the average number of workers could be excluded. _ _ _ _ _ Taking into account the above, the first hypothesis of investigation:

H₁ . *Ceteris paribus* , the continuity in the voluntary audit demand is positively associated with the size of the company , ~~namely~~ through the net amount of the annual turnover .

However , although it is true that the aforementioned agency relationships are more common in large companies, disputes ~~between~~ investors can also arise in smaller ones, with the audit of the annual accounts providing essential protection (Freedman and Godwin, 1993). In relation to the latter,

Several investigations differentiate between companies that have a family character and those that do not. Initially, all of them present a negative relationship with the voluntary demand for the audit service , since a lower dispersion of ownership causes fewer information asymmetries and conflicts of interest and , therefore , a lower need for supervision . However , only some show that the fact that a company is family-owned represents a lower incentive to contract an audit voluntarily (Collis, 2003; Collis et al., 2004), while others do not find a significant relationship between family nature and the voluntary demand for the service (Collis, 2012; Niemi et al., 2012). Consequently, the second research hypothesis is proposed:

H₂ . *Ceteris paribus* , the continuity in the demand for audit on a voluntary basis is negatively associated with the fact that the company is family.

On the other hand, in large companies it is understood that " Principals " are the shareholders, who delegate responsibility for managing the business to the " agents " or directors. In small companies , on the contrary, as ownership is more concentrated, the " principals " include not only external investors, but also lenders and creditors who are distant from the actions of management (Power ,1999). So much so that there are several authors who maintain that, in small In companies , agency relationships with debt providers are more important than those between owners and management when demanding an audit (Chung and Narasimhan , 2001 ; Seow, 2001; Hay and Davis, 2004). In this sense, audited annual accounts are a crucial element in the granting of loans by financial entities , since they can contribute to the mitigation of information asymmetries between the parties (Berry, Faulkner, Hughes , & Jarvis, 1993). Along these lines, a study carried out in Spain shows that audited SMEs benefit from a discount on the financial cost of debt (Huguet and Gandía , 2014)Thus, it is pertinent to include as a third research hypothesis:

H₃ . *Ceteris paribus* , the continuity in the demand for audit on a voluntary basis is

positively associated with the existence of agency relationships between the company and its lenders.

Furthermore, small businesses usually have few resources and knowledge to carry out accounting tasks , such as preparing annual accounts, filing taxes , preparing payrolls , etc. , so They usually require the figure of an external consultant to advise them (Carsberg, Page, Sindall and Waring, 1985; Gooderham, Tobiassen, Døving and Nordhaug, 2004). In this sense, the results of Collis (2012) reinforce previous literature that highlights the key role that accountants play in advising on regulation in general (Blackburn, Eadson, Lefebvre and Gans, 2006) and on accounting and auditing in general. particular (Collis, 2003; Collis et al., 2004). Niemi et to the. (2012) , for their part, empirically demonstrate that the outsourcing of critical accounting functions increases the probability of hiring a voluntary audit, in order to control the possible problem of moral hazard and ensure that the external accountant does not behave inappropriately . opportunistically . Therefore , following this reasoning, the fourth research hypothesis is proposed :

H₄ . *Ceteris paribus* , the continuity in the demand for audit on a voluntary basis is positively associated with the fact that the company uses the figure of an external consultant or advisor to keep the accounting and prepare the annual accounts .

Based on the above , the control of agency problems represents an incentive for companies when contracting an audit voluntarily. To achieve this , those companies with greater information asymmetries

They also choose to hire an international audit firm, generally a Big-4 (Hay and Davis, 2004). This is because, although some studies show that there are no significant differences between the quality of large international firms and other smaller ones (Boone, Khurana and Raman, 2010; Lawrence, Minutti-Meza and

Zhang, 2011; Campa, 2013) , generally large auditors have greater reputation and are considered more competent in professional terms , which is why it is understood that they intensify the quality and *credibility* of financial information, thus reducing the costs of supervision of stakeholders (DeAngelo, 1981; Beatty, 1989; DeFond, 1992; Willenborg, 1999; Francis, Maydew and Sparks, 1999; Khurana and Raman, 2004; Pittman and Fortin, 2004; Fan and Wong, 2005; Cano Rodríguez, 2007; Ruiz Barbadillo and Gómez Aguilar, 2007; Niskanen, Karjalainen and Niskanen, 2011; De Fuentes, García Benau, Pucheta Martínez and Ruiz Barbadillo, 2015). On the other hand , some previous work shows that companies audited by this type of firm benefit , for example , from obtaining lower interest rates (Pittman and Fortin , 2004 ; Karjalainen, 2011; Chu, Mathieu and Mbagwu, 2013; Koren, Kosi and Valentincic, 2014). With all this , in order to know if such positive effects derived from hiring a larger firm represent a incentive to continue requesting the audit service voluntarily , as demonstrated in the study by Dedman et al . (2014) , the fifth research hypothesis is proposed:

H₅ . *Ceteris paribus* , the continuity in the voluntary audit demand is positively associated with the fact that the company is audited by an international audit firm .

From another perspective , some works try to find out, through surveys of managers, the benefits that small companies perceive from the audit service and, above all , whether they consider that these exceed its cost .The results obtained within this line are contradictory . On the one hand, there are several studies in which it is considered that the benefits of the audit are above its cost (Chung and Narasimhan, 2001; Collis, 2003, 2008, 2010; Collis and Jarvis, 2000 ; Collis et al., 2004 ; Duréndez Gómez-Guillamón, 2006; Niemi et al., 2012). However , there is research that shows that the price of the audit is perceived as high compared to the benefit it provides . to the company and the third parties with which it relates (Freedman and

Godwin , 1993; Rennie, Senkow, Rennie and Wong , 2003; Carey , Knechel and Tanewski, 2013). Johnson and Lys (1990) go so far as to state that the price of the audit is a key factor when deciding whether to contract the service, even regardless of the utility . that is attributed to him . Along these ~~lines~~ and following the position of the European Union to reduce the administrative burdens of small companies by exempting them from auditing, the following research hypotheses are proposed :

H₆ . *Ceteris paribus* , the continuity in the demand for audit on a voluntary basis is negatively associated with the price of the service.

H₇ . *Ceteris paribus* , the continuation of the voluntary audit demand is negatively associated with the perception that the cost of the service is high.

Among the benefits that companies can find in the audit service, some research focuses on the study of improving their image with external third parties. Thus, for example, among the results obtained , it is worth highlighting that companies that voluntarily audit their annual accounts have easier access to credit (Pittman and Fortin , 2004; Allee and Yohn, 2009; Hope, Thomas and Vyas, 2011). They pay lower interest rates on their debt (Blackwell, Noland and Winters , 1998; Kim, Simunic, Stein and Yi, 2011; Minnis, 2011) and enjoy better credit scores (Lennox and Pittman, 2011; Dedman and Kausar, 2012). However, in the specific case of small companies , the main users of the annual accounts are , generally, their own managers (Pag, 1984; Carsberg et al., 1985) . In these types of companies , internal control systems tend to be less formal and less developed, in which case auditing can help them correct their weaknesses (Carey et al . , 2000). Hence, previous studies find that the perception of benefits for improving the company's internal management is a fundamental determinant of the demand for voluntary audit, especially in terms of improving the quality of financial information and control of records. internal accountants (Collis, 2003; Collis and Jarvis,

2000; Collis et al . , 2004; Niemi et al., 2012). Based on this literature, the eighth and ninth research hypotheses are finally included in this work:

H₈ . *Ceteris paribus* , continued demand for auditing on a voluntary basis is positively associated with the perception that the audit provides control of internal accounting records .

H₉ . *Ceteris paribus* , the continuity in the demand for audit on a voluntary basis is positively associated with the perception that the audit improves the quality of financial information .

Methodology

Sample selection and data collection

After reviewing previous studies on the subject and ~~finally~~ working hypotheses, a quantitative investigation is carried out on the SMEs receiving the audit service throughout the Spanish national territory . To define SMEs the size criteria established in Spanish legislation on accounting matters ~~at~~ taken as reference . to the formulation of abbreviated annual accounts. Table 1 summarizes these thresholds, which allow companies to be classified according to their size . In this way, micro and large companies are excluded from this study, limiting it only to small and medium - sized ~~ons~~

The selection of participating companies is carried out using the Iberian Balance Sheet Analysis System (SABI) database, from which a sample frame consisting of 12,336 SMEs is obtained , which represents 22.1 % of the total of 55,723 companies audited obligatorily . - publicly and voluntarily in Spain in 2010 _ _ _ (ICAC, 2011), leaving out listed entities , credit , insurance and investment services . The collection of information is carried out between May and June 2011 through a structured questionnaire , administered through personal interviews with the directors . _ generals or managers of the companies. The final sample under study is made up of 275 audited

SMEs, which were selected through a simple randomized procedure and previously contacted by telephone, obtaining a response rate of 13.75% (out of a total of 2,000 calls made). It should be noted that of the total number of respondents, 91.6 % are men, the age The average is 50 years old, and the majority have completed university studies — or postgraduate (78.6%).

The questionnaire consists of 4 different sections: 1) general data —7 questions—; 2) accounting data —12 questions—; 3) audit data —10 questions—, and 4) general opinion on the audit of accounts —4 questions . In the first of them, general information about the company is collected, such as its age, the sector of activity in which it operates or personal data of the manager. In the second, some — key figures, such as the amount of turnover, assets or number of employees. Furthermore, it is asked who is the person in charge of keeping the company 's accounts, as well as who receives, if applicable, a copy of the annual accounts . In the third section, questions related to the audit of the annual accounts that the company has contracted are formulated. company. For example, who was the auditor, what price the service had or if it seemed high. It is also asked about your intention to contract the service voluntarily in the future. Finally, they are asked to give their opinion on the audit of accounts in general. One of these questions is made up of 19 items on the usefulness of the audit, which respondents had to rate using a Likert scale (1-5). An example is the following: « Express your degree of agreement with the statement “The audit of accounts increases the reliability and credibility of the company's financial information” » .

Description of the variables and methodology

The choice and definition of variables is done fundamentally following the work of Collis et al. (2004) and Niemi et al. (2012). Table 2 presents a summary of the

variables included in the subsequent analysis .

« Cont aud vol » is the dependent variable used in the analysis. It reflects whether SMEs would continue to audit their annual accounts voluntarily in the future. A 1 is assigned if, indeed, they intend to continue contracting the service voluntarily , and a 0 otherwise .

« Incan » (H_1) is the size of the company , measured as the natural logarithm of the net amount of the annual turnover (Niemi et al., 2012). According to the study by Collis et al. (2004) , this variable alone can represent the size , resulting in the _ total asset items and number of workers non-significant variables. As in most previous works, it is expected to have a positive influence on the dependent variable.

To test the second hypothesis, the variable is included « familiar » (H_2). Following the study by Carey et al . (2000) , this variable indicates whether the company is family-owned or not depending on whether more than 50% of the capital belongs to the same family (value 1) or not (value 0). This definition is chosen since those proposed by Collis et al . _ (2004) and Niemi et al. (2012) They are considered excessively restrictive and permissive, respectively. A negative association is expected with the continuity in the demand for audit on a voluntary basis .

A third variable is « lenders » (H_3), which reflects the agency relationships between the company and third-party debt providers. To measure the relationship of the SME with external financing agents, the same surrogate is used as in the research of Collis (2003, 2010) and Collis et al. (2004) . In this way, it is measured whether the company normally delivers to the credit institutions or other lenders a copy of your annual accounts _

Classification of companies according to their size

Criteria	Micro	Small	Median	Big
Total assets (TA), in euros	TA ≤ 1,000,000	1,000,001 ≤ TA ≤ 2,850,000	2,850,001 ≤ TA ≤ 11,400,000	TA > 11,400,000
Net amount of the annual figure of business (INCAN), in euros	INCAN ≤ 2,000,000	2,000,001 ≤ INCAN ≤ 5,700,000	5,700,001 ≤ INCAN ≤ 22,800,000	INCAN > 22,800,000
Average number of workers (NMT)	NMT ≤ 10	11 ≤ NMT ≤ 50	51 ≤ NMT ≤ 250	NMT > 250

Table 2

Variables included in the analysis of continuity in contracting the audit service on a voluntary basis _ _

Variable	Description	Measure ment	Expected sign	Hyp contra othe sted sis
Cont aud vol	Reflects whether SMEs would continue auditing their accounts annually on a voluntary basis in the future	Dummy	Dependen t variable	
incan	Size of the company according to the natural logarithm of its net amount of annual turnover (in euros) _	Continuo us variable	+	H 1
Familiar	Indicates whether the company is family or not according to more than 50% of the capital belongs to the same family	Dummy	—	H 2
Lenders	It is measured according to the	Dummy	+	H 3

	company normally delivers to credit institutions or other lenders a copy of your _ annual accounts			
External	Indicate if the company hires a consultant or advisor _ external for the maintenance of accounting and the preparation _ of the annual accounts	Dummy	+	H 4
int signature	Indicates whether the firm that audits the company 's annual accounts _ It is international	Dummy	+	H 5
Price	Amount paid for the account audit service _ _	Intervals	—	H 6
Perceive d cost	Indicates whether managers consider the price to be high _	Dummy	—	H 7
Control	Degree of agreement that the audit favors control _ _	Likert scale	+	H 8
	— of the company 's accounting information systems			
Quality	Level of agreement that auditing improves reliability _ _	Likert scale	+	H 9
	—			

	and credibility of the company		
	's financial information _		
Audit	If the company has been	Dummy	Control
type	audited on a mandatory or		variable _
	voluntary basis		
	in 2010		

(value 1) or not (value 0), since these are vital in the credit evaluation or rating processes (Guiral Contreras, Gonzalo Angulo and Rodgers , 2007). A positive association with the dependent variable is expected .

For its part, « external » (H_4) indicates whether the company hires (value 1) or not (value 0) an external consultant or advisor to keep the accounting and prepare the accounts (Collis, 2012; Niemi et al., 2012). Given that this relationship can generate information asymmetries, it is expected that the variable is positively related to the intention to continue requesting the audit service voluntarily.

« Firm int » (H_5) refers to the size of the firm that audits the company 's annual accounts . _ _ _ The value 1 is assigned if the signature audit is international in scope, and the value 0 otherwise (Dedman et al., 2014; Koren et al., 2014). In this study, the Big-4 international firms (Deloitte, PwC, KPMG and Ernst & Young) are considered , along with BDO, Grant Thornton, Confeauditores, Auren, Gassó RSM and Mazars, as they are the 10 audit firms with the highest turnover. total in Spain in the year _ _ _ or study. Given the benefits that hiring an international firm can bring , a positive relationship with the dependent variable is expected .

Next, « price » (H_6) and « perceived cost » (H_7) refer to the price of the audit. The first reflects , in 6 intervals , the amount paid for contracting the service (1: less than 1,000 euros; 2: between 1,000 and 5,000 euros; 3: between 5,001 and 10,000 euros; 4: between 10,001 and 15,000 euros; 5: between 15,001 and 20,000 euros, and 6: more than 20,000 euros). The second indicates whether managers consider this cost to be high (value 1) or not (value 0). This definition is similar to the one proposed in the study by Collis (2012) , which assesses whether the cost of the audit is perceived as a significant burden . A negative relationship is expected between these 2 variables and the continuity of voluntary audit contracting.

The variables « control » (H_8) and « quality » (H_9) measure the degree of

agreement that the audit favors the control of the company 's accounting information systems and that it improves the reliability and credibility of the financial information . of the company, respectively. These variables, measured through a Likert scale (1: highest degree of disagreement; 5: highest degree of agreement), are expected to be positively associated with the dependent variable (Collis , 2003, 2010, 2012 ; Collis et al., 2004; Niemi et al., 2012).

Finally , “ audit type ” is included as a control variable , which indicates whether the companies in the sample have been audited in a manner mandatory (value 0) or voluntary (value 1) in the year of study . Since no data is available on the nature of the assignment, a surrogate measure of it is used in this research . In this way , it is considered that companies that exceed , for 2 or 3 consecutive years in the period 2008-2010 , at least _ _ 2 of the 3 size criteria used to set the exemption thresholds Likewise , those that are , for 2 or 3 consecutive years in the same period, below at least 2 of those 3 criteria.

To contrast the proposed hypotheses , a multivariate binary logistic regression model is used , which allows predicting the result of the dependent variable based on multiple independent variables. In this study , as already mentioned , the objective is to explain what factors influence the attitude of companies faced with the possibility of auditing their annual accounts voluntarily. The choice of this type of analysis is pertinent given its wide use in accounting and auditing research (eg Caso Pardo, García Díez, López Díaz and Martínez Arias, 2003; Piñeiro Sánchez, de Llano Monelos and Rodríguez López , 2012; González-Díaz, García -Fernández and López-Díaz, 2015), fundamentally justified by its flexibility and its robustness (Hair, Anderson, Tatham and Black, 1999). The estimation is carried out using a *backward* method , which starts from the model with all the selected variables and eliminates those without statistical significance in successive steps . In this case the number of

iterations is equal to 6.

Results

Table 3 collects descriptive statistics of the data . On the one hand, panel A shows information on the frequencies of the categorical variables (« cont aud`vol » — dependent variable— , « family » , « lenders » , « external » , « firm int » , " price " , " perceived cost " and " audit type "). On the other hand, panel B includes both the frequencies and the mean values of the 3 continuous variables included in the analysis (" incan " , " control " and « quality »).

A first analysis allows us to differentiate 2 groups of companies based on their attitude towards voluntary auditing: those willing to continue auditing their annual accounts on a voluntary basis .

Table 3

Descriptive statistics

Panel	A.	Percent
Categorical variables		age (%)
Volume Cont 0 - No		33.8
1		66.2
-		
Y		
es		
Family 0 - No		55.5
1		44.5
-		
Y		
es		
Lenders 0 - No		45.1
1		54.9
-		
Y		
es		
External 0 - No		72.3
1		27.7

-	
Y	
es	
Signature int 0 - No	76
1	24
-	
Y	
es	
Price 1 - Less than	1.3
1,000 D	
2 -	30.7
1,000-	
5,000 D	
3 -	41.2
5,001-	
10,000 D	
4 - 10,001-15,000	15.1
D	
5 - 15,001-20,000	5.9
D	
6 - More than	5.9
20,000 D	
Perceived cost 0 -	49.2
No	
1	50.8

-				
Y				
es				
Audit type	0	-		77.5
Mandatory				
	1	-		22.5
Volunteer				
Panel B. Continuous variables	Percent	Half		
		age (%)		
Incan variable	Continuous		8,961,5	
			02.94	
			D	
Control disagreement	1	-	Total 3.6	
	2	-	Somewhat 7.6	
			disagree _	
3	-	Neither	fifteen	3.87
agreement		nor		
disagreement				
	4	-	Somewhat 45.8	
			agree _	
	5	-	Total 28	
			agreement	
Quality	1	-	Total 1.4	
disagreement				

2	-	Somewhat	3.3	
		disagree	_	
3	-	Neither	10.9	4.25
		agreement		
		nor		
		disagreement		
4	-	Somewhat	37.1	
		agree	_	
5	-	Total	47.3	
		agreement		

volunteer in the future (n = 182) and those who would give it up (n = 93). Consequently, it is clear that the majority of the companies surveyed (66.2%) would continue contracting the service voluntarily. This percentage is similar to the 63% obtained in the United Kingdom (Collis et al., 2004) and 60% in Finland (Niemi et al., 2012). Additionally, the general profile of the sample companies is observed with respect to the variables included in the model. It should be noted , in this sense, that most of the companies are audited, in ~~the~~ year of study, on a mandatory basis (77.5%) and by a non-international firm (76%).

Next , Table 4 shows the associations between the dependent variable and the variables to be tested . As in the previous case , panel A shows the results obtained for the categorical variables (contingency tables), while panel B collects the information related to the continuous variables (mean difference test). The results obtained in The contingency analyzes (panel A) show that there is a significant association between the dependent variable (" cont aud vol ") and 6 of the categorical variables included in the study. In particular, the intention of companies to continue contracting the audit service

voluntarily in the future is significantly related to family character (" family " , sig . = 0.029), the relationships with lenders (" lenders " , sig. = 0.029), the size of the firm that audits the annual accounts (" int firm " , sig. = 0.036), the price of the service (" price " , sig. = 0.016), the perception of cost (" perceived cost " , sig. = 0.089) and the voluntary or obligatory nature of the contract (" audit type " , next. = 0.000). On the other hand, the results obtained in the mean difference tests show that indeed the mean values of the variables « incan » (sig. = 0.064), « control » (sig. = 0.000) and « quality » (sig. . = 0.000) are statistically different according to the 2 categories of the dependent variable (intention or not to continue contracting the audit service on a voluntary basis in the future).

Table 4

Bivariate analysis

Panel A. Categorical variables Sig.		
Cont aud vol (bilat		
Contingency tables No (%) Yes		
(%)		
Family No 28.1 71.9	0.02	
	9 **	
Yes 41 59		
Lenders No 26.6 73.4	0.02	
	9 **	
Yes 39.7 60.3		
External No 32.2 67.8	0.32	
	0	
Yes 38.7 61.3		
Signature int No 37.3 62.7	0.03	
	6 **	
Yes 22.7 77.3		
Price Less than 1,000 D 66.7 0.01		
33.3	6 **	
1,000-5,000 D 22.4 77.6		

5,001-10,000 D 38.9 61.1

10,001-15,000 D 48.8 51.2

15,001-20,000 D 35.3 64.7

More than 20,000 D 15.8

84.2

Perceived cost Adequate 29.5 0.08

70.5 9 *

Elevated 39.8 60.2

Type of audit Voluntary 3.2 0.00

96.8 0

Mandatory 42.7 57.3

Panel B. Continuous variables Next.

Cont aud vol

Difference Tests _ _ (bilat
eral)

socks No Yes

Incan 10,167,617.15 D 0.06

8,501,783.84 D 4 *

Control 3.48 4.07 0.00

Quality 3.87 4.45	0

	0.00
	0

* Sig. < 0.1.

** Sig. < 0.05.

*** Sig. < 0.01.

Logistic regression results _ _

Panel A of Table 5 presents a summary of the model goodness -of - fit measures : the first is the value of the $-2LL$ statistic, which measures the extent to which a model fits the data well , and the another 2 are coefficients of determination (R^2), which express the proportion, by one, of the variation explained by the model. In this sense , the goodness of fit of the model is greater for reduced values of $-2LL$ and R^2 close to one.

First , the $-2LL$ statistic in the final model is 231.385 . This value represents a better fit than previous research by Collis et al . _ (2004) and Niemi et al . (2012) , with values of 311.09 and 313.46, respectively. Furthermore, the determination coefficients are very similar, and even slightly higher , with 27.5 % for the R^2 of Cox and Snell and 37.9 % for the R^2 of Nagelkerke, compared to 34.8% in the study by Collis et al. (2004) and 29% of that of Niemi et al . (2012) . Although it is true that

these 2 studies. They use McFadden's pseudo R^2 as the coefficient of determination; both measures are similar and have the same interpretation. Even so, other previous works that have also studied the voluntary demand for the audit service have reported lower values of these coefficients, such as that of Carey et al. (2000), with 14.1 %, or that of Hay and Davis (2004), with 10.8 %.

For its part, panel B shows the results obtained. It is observed how the estimated model supports the influence of 4 of the variables considered: « lenders » (H_3), « int firm » (H_5),

« control » (H₈) and « quality » (H₉). Likewise, the control variable included in the model (" audit type ") is also significant .

Starting the analysis of the results of the logistic regression with the control variable " audit type ", it is revealed that companies that contract the audit without being obliged to do so are more likely to continue with the service voluntarily in the future ($p = 0.000$). In fact, 96.8% of SMEs surveyed that voluntarily audit themselves state that will continue with the service

Table 5

Binary logistic regression

Panel	A.	Model	-2 t verisimil	C	Nagelkerk
fitting _			Log hitude	ox Snel	e R 2 _
			_ e	's 1	
				R	
				2	
				an	
				d	

Step 6		231		0.		0.
		,		27		37
Panel	B. Model	385	E.T.	Wal 5 gl	Nex 9	Exp (B)
estimation _				d	t.	
		b				
Step 6 Lenders		0.98	0.347	8,0	1	0.0
		6		97		04

int		—	0.406	7,0	1	0.0
signature		1,079		52		08

Control		0.51	0.186	7,7	1	0.0
		6		44		05

Quality		0.62	0.200	9,7	1	0.0
		4		28		02

Audit type		—	0.790	17,	1	0.0
		3,276		20		00
				9		***
Constant		—	1,184	0.2	1	0.5
		0.622		76		99

The coefficients and values obtained must be interpreted following the definition of the independent variables and their expected relationship with the dependent variable (see table 2).



* Sig. < 0.1.

** Sig. < 0.05.

*** Sig. < 0.01.

of audits even though they are not required, compared to 57.3% of those that are audited due to legal imperative.

In relation to the variables « control » (H_8) and « quality » (H_9), both are significant, in the expected positive sense, when explaining the behavior of companies with respect to the voluntary demand for the audit service . ($p = 0.005$ and $p = 0.002$, respectively). Specifically , in line with other works that analyze the usefulness of _ audit for their clients, companies that perceive significant improvements in the control of their internal accounting records and in the quality of financial information are more likely to continue hiring an auditor in the future without being obliged to do so (Collis , 2003 ; Collis and Jarvis, 2000; Collis et al., 2004; Niemi et al., 2012).

Likewise, for the variable « signature int » (H_5) statistical significance is also obtained in the expected positive direction ($p = 0.008$). Therefore, companies whose annual accounts are audited by an international firm are more likely to continue contracting the service voluntarily, thus confirming the findings of Dedman et al. (2014) . In this way, it provides evi- additional evidence to the extensive line of research that supports the hypothesis that larger audit firms provide higher quality service, whether due to their high level of resources and infrastructure, their experience in different sectors, or their greater incentives to maintain its strong brand reputation (DeAngelo, 1981; Beatty, 1989; DeFond, 1992; Willenborg, 1999; Francis et al., 1999; Khurana and Raman, 2004; Pittman and Fortin, 2004; Fan and Wong, 2005; Cano Rodríguez, 2007; Ruiz Barbadillo and Gómez Aguilar, 2007; Niskanen et al., 2011; De Fuentes et al., 2015).

Regarding the « lenders » variable (H_3), it is worth highlighting the negative coefficient associated with it in the estimated model ($p = 0.004$; $B = -0.986$). This sign is contrary to what was expected , showing that companies that maintain a greater relationship with external financing agents (they normally provide them a copy of their

annual accounts) are less likely to continue contracting the audit service on a voluntary basis. Therefore, the evidence obtained does not contribute in the same line as previous research that supports that companies that hire the audit service perceive an improvement in relations with their lenders, reducing agency problems (Abdel-Khalik , 1993 ; Senkow et al., 2001; Collis, 2003, 2008, 2010, 2012; Collis et al., 2004; Niemi et al., 2012), facilitating access to credit (Pittman and Fortin, 2004; Allee and Yohn, 2009; Hope et al., 2011) and obtaining more favorable conditions, for example, in interest rates (Blackwell et al., 1998; Kim et al., 2011; Minnis, 2011).

Given this result, some additional analyzes are carried out , with the purpose of shedding light on the evidence obtained. First

Secondly, when taking into consideration the «audit type» variable , it is observed that only the companies required to be audited and that maintain a closer relationship with credit institutions and other lenders are the ones that are least likely to continue contracting the service voluntarily. (Chi-square $p = 0.054$). This suggests that this type of company sees in the audit only compliance with a legal requirement, without perceiving that the service received is useful or provides added value in their relationships with third parties . Additionally, the same thing happens when considering the variable « int firm » , in such a way that only SMEs audited by firms that are not international and that maintain a greater relationship with credit institutions and Other lenders are the least likely to continue contracting the service voluntarily (Chi-square $p = 0.021$). This can be related to the reputation of the auditor , measured through its size in the market (Ruiz Barbadillo and Gómez Aguilar , 2007) . _ In this sense, the existence of a greater reputation would be supported. tation of international firms, which would be recognized by external financing providers with important benefits for the companies audited by this group (Pittman and Fortin, 2004; Mansi, Maxwell and Miller, 2004; Cano Rodríguez, Sánchez Alegría and Arenas Torres, 2008 ;

Karjalainen, 2011; Chu et al., 2013; Koren et al., 2014).

These 4 factors (« lenders » [H₃], « int firm » [H₅], « control » [H₈] and « quality » [H₉]) are relevant regardless of whether the person preparing the annual accounts belongs to the company or is a third party outside it, since the « external » variable (H₄) is not significant. In this sense, the model does not allow us to contribute along the lines of the studies by Collis (2012) and Niemi et al. (2012) , and could be indicative of the absence of information asymmetries and conflicts of interest when an external advisor is hired, in whom the company may have the same or even more confidence than in its own employees.

On the other hand, it is observed that neither the real cost of the audit (" price " [H₆]) nor the perception that company managers have of it (" perceived cost " [H₇]) are decisive in the time to continue voluntarily contracting the service. In this way, the reasoning of other previous investigations is supported , which determine that the audit contributes an added value to companies , which also perceive it as higher than its price (Chung and Narasimhan , 2001; Collis, 2003 , 2008 , 2010 ; Collis and Jarvis, 2000; Collis et al., 2004; Duréndez Gómez-Guillamón, 2006; Niemi et al., 2012).

Finally, it should be noted that contrary to what was initially expected , the size (« incan » [H₁]) and the family nature of the companies (« family » [H₂]) do not have a significant influence on the dependent variable . Even so, there are jobs in the previous literature that also does not confirm the relationship between the size of the companies (Carey et al., 2000 ; Senkow et al., 2001) and their family nature (Collis, 2012 ; Niemi et al., 2012) with the demand for voluntary audit . In the context of this work, these results seem to be consistent with the moment of crisis in which the study was carried out, since economic and financial difficulties affected all types of companies, and at that time perhaps they could see the audit as a service

whose cost could be eliminated . However , both variables must be interpreted with due caution , according to the proposed definition and the sample size . of the present study.

Conclusions

This work contributes to the previous literature focused on the study of the determining factors of continuity in contracting the audit service on a voluntary basis. Specifically, the results obtained by Collis et al. are corroborated. (2004) and Niemi et al. (2012) , in such a way that companies willing to continue auditing themselves voluntarily perceive important benefits in the service . In this sense, it is verified that the improvement in the quality of financial information and in the control of accounting records , measured through the perception of those audited , are factors that increase the probability that companies continue contracting the service without being obliged .

On the other hand , in line with other previous research , the results obtained are indicative that the audit service in SMEs has higher quality when it is provided by larger audit firms , since these companies are more likely to continue contracting the service voluntarily when it is It is provided by international auditing companies . In this regard, it is also worth highlighting that the existence of agency relationships between the company and its lenders, mainly credit institutions , reduces the probability of contracting the audit service voluntarily . However , this situation does not occur in companies that are already audited _ voluntarily nor in those that are audited by international firms. In the latter case, companies audited by large firms, which, for their part, have a greater reputation in the market, seem to perceive important advantages in their relationships with third parties.

These results allow us to reach the following conclusion. In principle, SMEs may prefer more personalized monitoring and treatment of smaller firms, understanding that

large audit firms , given the lower visibility and risk of litigation of this type of company, could make more mistakes when be less worried about reputational risk (Azkue _ Irigoyen, 2012; Aguiar-Díaz and Díaz-Díaz, 2015). However, when these types of companies have the need to go to third parties in search of financing , they seem to value more the greater reputation that the market attributes to international firms, since hiring a more prestigious auditing company can result in easier or advantages in both access and credit conditions (Pittman and Fortin, 2004; Mansi et al., 2004; Cano Rodríguez et al., 2008; Karjalainen, 2011; Chu et al., 2013; Koren et al., 2014). The study presented here is very current, offering very valuable information content from which practical implications of interest for different groups emerge . First of all , for the regulatory bodies in the European Union , in order to evaluate the suitability of the proposed measures for all Member States . Raising the levels for exemption from the audit obligation with the aim of reducing the administrative burdens of small companies _ _ _ _ _ companies is a measure that deserves further reflection . In view of the benefits that contracting the service brings to SMEs , especially in terms of internal management , it could be advisable to review such an initiative. In this sense, this work supports the decision of the ICAC , in Spain , which has chosen not to adopt , at least for the moment , this ~~point~~ of the European Union . In addition, relevant information is offered for the SMEs themselves , especially for those that have never contracted the audit service, since they may be unaware of the benefits it can provide them. Likewise , this work serves as guidance to audit firms, since by knowing the aspects that SMEs value most when contracting the service voluntarily, they can ~~dis~~ more appropriate client acquisition programs . All of the above must be interpreted with due caution, as there are some limitations. It should be ~~take~~ into account that the geographical scope of the study is limited to the Spanish environment , with particular characteristics that may differ from those of other contexts . The measure of the

probability of opting for a voluntary audit is based on the expected behavior _ of the companies, and not in their actual decision . It has not been possible to obtain exact data on the percentage of ownership of the companies analyzed and the fees paid for the audit , so the definition of the variables related to family nature and price can be influence the results . For the variable referring to the mandatory or voluntary nature of the audit , a surrogate is used depending on the size of the audited company , and there may be a company whose audit is considered voluntary in this study that actually entity is obliged to be audited, as is the case when a minority of partners entrust it to the commercial registrar, it is ruled by a judge or the entity is part of a consolidated audited group . Finally, no distinction is made between the Big-4 and the rest of the international audit firms, so that there could be differences in the perception of the quality of these and the rest of the big firms . .

Finally, this work proposes different future lines of research. Firstly, the present study could be expanded, considering the inclusion of other variables of interest, such as the level and type of training of the companies' managers and the duration of the contract with the audit company. Furthermore, it would be interesting to consult the real decisions of companies in other Member States of the European Union where the new thresholds have already been adopted, analyzing their motivation to continue with the voluntary contracting of the audit or to dispense with this service. The motivation of SMEs that already hire could also be examined in greater depth . the audit voluntarily, in order to be able to convey to others who have never been audited the advantages or benefits that this service can bring them. Likewise, it is necessary to carry out additional analyzes about the possible differences in the audits carried out by international firms, especially differentiating the Big-4, and by smaller audit firms, in such a way that complementary evidence is obtained on the quality and the perception of the cost-benefit relationship of the service. Finally, the focus could be placed on the study of



voluntary audit from the perspective of other *stakeholder* groups , such as financial entities or credit rating agencies.

Conflict of interest

The authors declare that they have no conflict of interest.



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