

The accounting reform in Spain. An analysis from the point of view of time and degree of knowledge of accountants

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Abstract

Purpose – The goal of this paper is to prove if there is a change in the Spanish professionals' perception about the accounting reform in Spain due to the adaptation to IFRS, depending on when it is analysed, and also if this opinion depends on their degree of knowledge.

Design/methodology/approach – We have used a survey done to the Spanish accountants in different four times after the accounting reform.

Findings – It is obtained that the degree of knowledge of accountants increases after the first application of the new requirements and it affects their opinion about the accounting reform. It is important to highlight that the perceptions are not the same about each different aspect of accounting areas.

Originality/value – Accountants play an important role in the accounting development and so it is valuable to know their opinion after an accounting reform when trying to get comparability with IFRS. Their perceptions are less critical when they have got experience about the new rules and prefer changing the national regulation to requiring directly IFRS in order to get this comparability.

Keywords – Accounting; IFRS; Financial information; Accountants; Accounting harmonisation.



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1 Introduction

For more than a decade we have been witnessing the international implementation of International Financial Reporting Standards (IFRS). The adoption of these standards is directly through the European Regulation in the case of listed European business groups. Elsewhere, the decision lies with each Member State.

In Spain, it was decided to adapt our regulations to IFRS, so all financial information published by Spanish companies, whatever their type and size, is homogeneous, comparable and in accordance with IFRS. Thus, in 2007, a new General Accounting Plan (GAP) was published (in fact, there were two, as there was also one adapted to SMEs), in which our accounting regulations are reformed and the requirements contained in IFRS are introduced for all our companies. This large regulatory change in Europe has been carried out through an adoption mechanism in which all the potential actors take part - one of them the professionals - and in which they play an important role (Mourik and Walton, 2018). In Spain, we are also involved in our own adoption process, for the type of business to which the successive reforms of our accounting system are directed, and which is carried out by our regulator, although it seems that the capacity of influence of professionals is more limited (Mora, 2017). This is why we are addressing accountancy professionals in Spain following this regulatory change that had to be applied for the first time in the financial statements on business information as of 1 January 2008, and which entailed important changes in some accounting concepts and problems that had not previously been included in our legal system.

Some research has analyzed different aspects of the adoption of IFRS, whether mandatory or voluntary, in Europe or in specific countries, studying the effects on the choice of auditor (Wieczynska, 2016); on the information analyzed by analysts (Kim, Kim, and Kwon, 2016); directly on the relevance of the information published by companies (Kouki, 2018); the costs and benefits

of its implementation (Fox, Hannah, Helliari, and Veneziani, 2013) and only in some cases the opinion of accounting professionals (Fox et al. (2013), Lang and Martin (2016) and Lang and Martin (2017)), which is the focus in this paper. To this we add the answers of a questionnaire carried out among Spanish accounting professionals at four different moments, starting from the first year of application, such that this study develops and expands over time. There are precedents that distinguish between different time periods in this process of adoption and adaptation to IFRS, e.g., Kim, Kim, and Kwon (2016), Wieczynska (2016), or Kouki (2018), but none with four different time periods that range from the first application of the new regulation to eight years later, as is our case.

Hence, we analyze the results obtained in order to check whether the moment influences the perceptions of accounting professionals and, at the same time, whether their degree of knowledge about this new regulation relates positively with the moment at which they evaluate it or whether it depends on the specific accounting problem in question. This should mean that the results of this research are useful for regulators, accounting professionals or any other stakeholders.

The paper is structured as follows. After this introduction, section two offers a review of the literature on this subject, followed by a complete empirical study and analysis of the main results, before ending with the most relevant conclusions.

2 Literature Review

There are antecedents on how accounting professionals have approached the normative changes, and their opinion of them, since in our subject the analysis of the interrelation between theory and practice is fundamental, and determinant in the evolution and the passage of time (García Benau, 1997, pp. 263-276). Professionals play a vital role in accounting harmonization processes, as Ding, Ole-Kristian, Jeanjean and Stolowy (2007) argue, since even

the reduction in differences between domestic regulations and IFRS is associated with the level of economic development and the importance of the accounting profession. Those who apply IFRS in their daily work must be directly involved in these processes, as they are users of the standard and will benefit from the advantages of its adoption (Hoogendoorn, 2006). Accounting professionals are one of the most important stakeholders, both in the process of preparing IFRS and in the process of their adoption by the European Union, and their voice is listened to in the mechanisms established for this purpose (Mourik and Walton, 2018). Hence, it is their opinions that we gather through a questionnaire, specifically those on the huge change that the adaptation of our regulations to IFRS has meant in Spain as a consequence of this European harmonizing process.

There are studies analyzing the costs and benefits of this accounting reform, as there are studies analyzing the effects of the adoption of IFRS (Preiato, Brown, and Tarca 2015) and the implications for the accounting profession (Carmona and Trombetta, 2008), concluding that there are more advantages than disadvantages (in the case of Spain we would highlight Callao, Jarne, and Laínez (2007), Castillo-Merino, Menéndez-Plans, and Orgaz-Guerrero (2014), Gonzalo (2014) and Doadrio, Alvarado, and Carrera (2015)), or that the cost-benefit function of applying IFRS continues to be generally positive, even when considering the cost of training professionals, since IFRS have increased the complexity of preparing financial statements (European Commission, 2015). There are, however, also works like Fox et al. (2013), which through interviews with accountancy professionals from several European countries verify that the costs for these interest groups have exceeded the benefits and that the regulators need to be aware of them.

Faced with a regulatory reform of this magnitude, the degree of knowledge of professionals is a variable that will initially come from training, and will subsequently evolve with

the practice and application over time of the new regulations. In this sense, there are precedents that focus on the importance of training accounting experts, e.g., Arquero (2000) who analyses the deficiencies that can be found in training for the practice of this subject. Milanés and Texeira (2006) relate the training of entrepreneurs with the value they give to financial information, concluding that their training is necessary to obtain returns from accounting. In an earlier study these same authors (Milanés and Texeira, 2006) point to managers as being responsible in part for the non-compliance with the objectives of accounting information in SMEs, since they consider accounting an expense and, therefore, so is training in this field. Marín, Antón, and Palacios (2008) conclude that Spanish economists evaluated as important or very important the knowledge acquired in accounting and finance for the development of their profession and subsequent performance. Kouki (2018) does refer specifically to the fact that professionals have had to improve their training and knowledge in the face of the normative change implied by IFRS. Implementing a new standard that is foreign to the accounting system in some concepts, may lead to the question of whether the process has been overhasty (Markelevich, Shaw, and Weihs 2011). Such an adoption may pose difficulties from the point of view of the cultural idiosyncrasy of each accounting system (Mukoro and Ojeka, 2011). So, finally, we must introduce the moment at which we analyze the degree of knowledge of professionals about this change in accounting regulation.

In the case of Spain, and with regard to the degree of knowledge of professionals about the requirements of IFRS, the White Paper for the accounting reform by ICAC (Spanish Institute of Accounting and Account Auditing) (2002), shows that 10.51% of those surveyed have a high level of knowledge; 42.99% a good knowledge; 38.55% low knowledge, and 7.95% none at all. Condor et al. (2006) also conclude that 71.95% of the companies surveyed claim

to know International Accounting Standards (IAS) (4.88% in detail). In Navarro, Sánchez, and Lorenzo (2007), 30% of the financial managers of the companies and 92% of the auditors acknowledge knowing the international standards. Millán (2007) points out, with regard to the report, how with the entry into force of the Spanish PGC of 2007, its contents would be substantially expanded in view of the obligations derived from IAS/IFRS; and in Gonzalo Angulo (2014), it is indicated that the accounting reform carried out in Spain has changed the cardinal rules of the existing regulations and has shown that the accounting profession can successfully assume these changes and quality requirements in financial information. Therefore, although there are studies that analyze the effects of a change in accounting standards, they focus on short-term changes (ICAEW, 2015) and do not check in practice how it works over long periods. One of the main characteristics of any transition is that professionals learn with time (ICAEW, 2015), even though they were initially trained and, in addition, IFRS are not static, and therefore early results on the implementation of the standard may not be sustained over time, since, in the face of change, behavior does not adjust so quickly (Brown, 2011).

Estima and Mota (2015) point out that the consequences of the adoption of IFRS will probably begin to be detected after many years of their application. This progress is linked to the degree of knowledge that professionals have about all aspects of the new standards. It is not surprising that although the degree of knowledge of the new regulations advances over time, there are certain problems whose theoretical acceptance begins to decrease and translates into a need for new regulations (Navarro et al., 2007). Two recent studies which have taken into account the passage of time in the perspective of professionals after the imposition of IFRS in Europe through the corresponding Regulations and Directives are those carried out within the European Federation of Accountants and Auditors for SMEs, EFAA),

in which the aim is first to ascertain how the 2013 Accounting Directive has been transposed in the Member States (Lang and Martin, 2016), and, second, to study whether there has been a trickle-down effect from large companies to European SMEs as regards the requirements of the European Regulations imposed by IFRS (Lang and Martin, 2017).

Specifically, the changes that our adoption of IFRS has entailed in Spanish regulations for those companies to which they are not obligatorily applied, and the fact that we can draw on responses at different times from the first application of this new regulation, has led to our first hypotheses:

H1: *The degree of knowledge that Spanish professionals have about the new accounting regulations is positively associated with the moment in time in which it is assessed from its first application and its development.*

H2: *The degree of knowledge that Spanish professionals have about the new accounting regulations is determined by the type of accounting problem they face.*

Kim, Kim, and Kwon (2016) also analyze the effect of the application of IFRS, but in the case of Korea, where they are mandatory. Their baseline hypothesis also establishes a positive relationship, but they focus on the effect on analysts and their predictions. Kouki (2018) also introduces the temporal differentiation in the effect of the adoption or not of IFRS, but in his case adoption by companies is voluntarily, comparing two moments: 5 years before and 6 years after, and focusing on the relevance of financial information. Wiczynska (2016) also analyses the consequences of the normative change due to the adoption of IFRS but for the change of the audit firm, finding that there is clearly a change from small firms to large auditors in the first year of adoption. Therefore, the initial moments after the regulatory change are decisive, as we have stated in our hypotheses, and these

extend to subsequent moments. The second hypothesis and the specific type of accounting problem is closely linked to the sector or the activity carried out by the companies in which the accounting professional operates and, hence, the antecedents, although they focus on the work of financial analysts, prove clearly that the sector, and thus the accounting problem they face, determine the effects that the adoption of IFRS has on the information they use to make their forecasts (Bae, Tan, and Welker, 2008); Byard, Li and Yu, 2011; Horton, Serafeim, and Serafeim, 2013; Beuselinck, Joos, Khurana, and Meulen, 2017).

3 Methodology and Sample

In order to obtain the results and conclusions of this work, a questionnaire was used addressed to the members of the specialized body of the General Council of Economists of Spain, whose members are accounting economists, that is, those who are professionally dedicated to financial information in general and to accounting in particular. Therefore, the various antecedents of the aforementioned works were taken into account for the design of the questionnaire, while always approaching their study from the point of view of the professionals, and a pre-test and a control test in the initial process of elaboration of the first survey with the members of the Board of Directors of Economist Accountants was carried out. This specialized body has changed its name over time, going from being the Economists Experts in Accounting and Financial Information (ECIF) to the current Accounting Economists - General Council of Economists (EC-CGE), which includes the Register of Accounting Experts (REC). The questionnaire was administered via the Internet at four different times: 2008, 2009, 2013, and 2015, treating the answers in an aggregate and anonymous manner in at all times. There may be some difference with respect to the results of previous years due to our having refined the number of statistically valid questionnaires for our analysis. The global population of the survey was all the economists

who are members of the General Council of Economists EC-CGE. This global population is close to 2,000 members and with a presence throughout the national territory. The responses received in each of the four years have allowed us to make estimates with a confidence level of at least 90% and with a maximum sampling error of $\pm 4.7\%$. The response rate obtained in all years is above 15% of the population, which is high for tasks using the Internet survey as a basic tool of empirical methodology (Couper, 2000) (In 2008 395 responses were received out of a total of 1,700 members, and the rest of the years, 2009, 2013 and 2015, there were 297 responses out of a total of 1,750; 300 out of a total of 1,900 and 331 out of a total of 1,995 members, respectively).

Statistical analysis was performed with SPSS 23.0 for Windows. The differences considered statistically significant are those whose $p < .05$. The number of cases present in each category and the corresponding percentage have been obtained for qualitative variables, and the minimum, maximum, mean and standard deviation values for quantitative variables. Since we have answers to the same questions at four different times: 2008 (as soon as the new accounting standard was applied), 2009, 2013, and recently 2015, eight years after this new standard came into force, we plan to take into account the passage of time when assessing the responses of professionals. The statistical treatment to be applied will be the appropriate one for two independent samples, since although they are the same questions, their being asked at different times means that neither the number of responses nor, therefore, the interviewees coincide. When subjects are randomly assigned to each of the samples, we can statistically guarantee that they are independent samples, Molinero (2001). For all these reasons, the comparison between groups for the qualitative variables was carried out using the Chi-square test and the Z test for equal proportions of the columns. For the comparison between two groups, the Mann-Whitney U test and the Kruskal-Wallis test were used for more than two groups.

In addition, we used a multiple regression model to determine which variables have a significant effect on the degree of knowledge. The methodology followed in the statistical analysis of the calculated model was: (1) Point estimate of the model parameters; (2) Individual significance of the variables and the model constant; (3) Regression contrast (ANOVA) to study the overall validity of the model and verify that (jointly) the explanatory variables provide information in the explanation of the response variable. Evaluation of the goodness of fit of the model through the determination coefficient (R²) and (4). Verification of the hypotheses of the model through the analysis of the residues (Hair, Anderson, Tatham, and Black 1999).

4 Analysis of the Results

4.1 Analysis of the overall results and the effect of the passage of time

In this first section we focus on the overall results obtained in the responses of the professionals, following the same order as in the questionnaires carried out.

Regarding the degree of knowledge that professionals believe they have about the new regulations, we can highlight that in the first year of their application they thought they knew them well. This perception changed after the first experience, although with time it has increased such that after the first application of the reform, the professionals estimate that they have gained more knowledge and have a high degree of knowledge of the new GAP, reaching a

level similar to the optimistic data obtained from the first survey carried out (ANOVA: $F(3,1185)=50,92, p<0,001$) (data that we have included in Image 1).

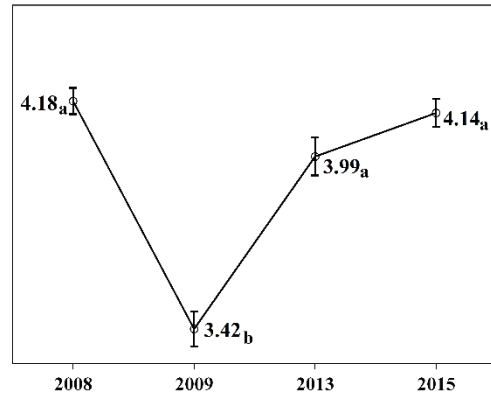


Image 1. Degree of knowledge of the new GAP

Note. ANOVA: $F(3,1185)=50,92, p<0,001$.

With regard to the competitive and informative costs and improvements implied by this new regulation, the perceptions of professionals are varied (Table 1). However, the results obtained do show us that in the responses chosen most (A, B and C) in the first year of implementation it was perceived that it was going to mean mainly few costs and few competitive and informative advantages for the companies (40% of the responses obtained), while the perception changes after experience to a higher cost for subsequent years, while the competitive and informative improvement continues to be valued as scarce (the percentages and the significance of the differences can be seen in Table 1).

Table 1

Do you consider that the adoption of the new regulations has meant ...

	2008	2009	2013	2015
	N (%)			
A- High costs and little competitive and informational improvement for businesses in general	106a (26.8)	139b (46.8)	71b (42.5)	126b (38.5)
B- Few costs and few competitive and informational advantages for businesses	158a (40)	79b (26.6)	48a,b (28.7)	107a,b (32.7)
C- Few costs and competitive and informational improvement for businesses.	79a (20)	34b (11.4)	28a,b (16.8)	59a,b (18)
D- High costs and improved competitiveness and information for businesses	52a (13.2)	45a (15.2)	20a (12)	35a (10.7)

Note. a-b: different letters indicate statistically significant differences of $p < .05$ in the equality test for proportions in the columns (Contingency and chi-squared tables).

Of the areas in which the new regulations have introduced greater complexity for these professionals, equity is where they believe the complexity is greatest (the highest affirmative percentages are found in this area) (we include the results obtained in Table 2, without taking into account the first year of the questionnaire, as the results are not statistically significant).

However, the passage of time conditions their responses in this sense, since statistically significant differences are obtained between the results of the survey up to the second year after the entry into force of the new regulations and the subsequent results, in the sense that once the first two years have elapsed since the entry into force of the new GAP, the perception of this complexity increases.

Table 2

Areas supposing greatest quantitative changes with respect to the previous legislation

	2009	2013	2015
Equity			
No	126a (42.4)	49b (29.5)	105b (32.2)
Yes	171a (57.6)	117b (70.5)	221b (67.8)
Liabilities			
No	275a (92.6)	117b (70.5)	249b (76.1)
Yes	22a (7.4)	49b (29.5)	78b (23.9)
Assets			
No	193a (65)	104a (62.7)	220a (67.5)
Yes	104a (35)	62a (37.3)	106a (32.5)

Note. a-b: different letters indicate statistically significant differences of $p < .05$ in the equality test for proportions in the columns (Contingency and chi-squared tables).

We now refer to the concepts that have presented the greatest operational complications for adaptation to the new standards (including the results in Table 3). The results are very diverse a priori. There are concepts in which the opinion on their complexity is maintained throughout the years, regardless of whether it is the first year of application of the new regulations, or whether more time has elapsed, as is the case with financial investments in hybrids (Table 3 shows that there are no significant differences between the different years and the median of responses that are maintained at values of 4 or 5 within the same interquartile range, and therefore quite complex). While at the other extreme we may find concepts such as sectoral adaptations, which do not follow any pattern, presenting significant differences in the responses between all the years analyzed. In the first case commented – hybrids – it is true that they imply a very high complexity and that their use is not generalized, which does not happen in the case of sectoral adaptations, which, although very specific, are mainly used in those sectors/ fields to which they refer.

The remaining concepts, according to the opinion of the professionals, can be said to have a complexity determined by the passage of time. In some cases, the determining factor in the assessment of their complexity is the first year of application of the new regulations, as happens with Groups 8 and 9 and with provisions (the first year is statistically different from the other three years of the survey, according to the results of Table 3). In both cases the perception of complexity also increases after the first application (groups 8 and 9 go from a median of 4 to the same with higher interquartile ranges; and provisions from a median of 3 to the same with higher interquartile ranges). In this line of results, there are also other concepts in which it is not only the first year of application of the new regulation that marks the differences with respect to subsequent years, but also the first two years of use of the new regulation, which appear with statistically significant results in subsequent years, both for the case of increasing its complexity, and for the opposite, which is reduced.

Table 3

Which concepts have supposed the greatest operational complications in adapting to the new regulations (1.Few, 5. Many)

Median (Med) Interquartile range (IR)	2008	2009	2013	2015	Kruskal Wallis Test	
	Med (IR)	Med (IR)	Med (IR)	Med (IR)	$\chi^2(3)$	p-value
Amortized cost	5 (4-5) a	4 (3-4) b	3 (2-4) c	3 (2-4) c	178.778	<0.001
Leases	3 (1-3) a,b	2 (2-3) a,b	2 (1-3) a	2 (2-3) b	14.951	0.002
Sectoral adaptations	4 (2-4) a	4 (2-4) b	3 (2-3) c	3 (2-4) d	82.52	<0.001
Financial assets	4 (3-5) b	4 (4-5) a	4 (3-5) b	4 (3-5) b,c	7.49	0.058
Annual accounts	3 (1-3) a,b	3 (3-4) b	2 (2-3) a	3 (2-4) b	109.475	<0.001
Hybrid financial instruments	4 (4-5) a	5 (4-5) b	4 (4-5) a	5 (4-5) b	16.644	0.001
Effective interest rate (eir)	4 (2-4) a	4 (3-4) a	4 (3-4) a	4 (3-5) b	24.317	<0.001
New terminology	3 (2-3) a,b	3 (2-4) a	3 (2-3) a	3 (2-4) b	24.113	<0.001
Groups 8 and 9	4 (2-4) a	4 (3-4) b	4 (3-4) b	4 (3-5) b	68.894	<0.001
Subsidies	2 (2-4)	2 (2-4)	3 (2-3)	3 (2-3)	5.33	0.149
Provisions	3 (1-3) a	3 (2-4) b	3 (2-3) b	3 (2-4) b	50.383	<0.001
Related parties	4 (3-4) a,b	4 (3-4) a	4 (3-4) b	4 (3-5) a,b	6.234	0.101
First application	4 (2-4) a	3 (3-5) a	3 (2-4) b	3 (2-4) b	22.896	<0.001
Derivatives	5 (4-5) a	4 (4-5) a,b	4 (4-5) b,c	4 (3-5) c	19.544	<0.001
Annual accounts format	2 (2-4) a	4 (3-4) b	3 (2-4) a,c	3 (2-4) c	131.67	<0.001

Note. a-c: Kruskal Wallis Test. Two-by-two column comparisons. Different letters indicate statistically significant differences in the years compared of $p < .05$.

This happens with the first application of this regulation, which seems to reach its maximum complexity in its second year of implementation and then descends in subsequent years, given that the issues raised in a first application are then resolved with practice and the passage of time (the maximum interquartile rank is obtained in the second questionnaire). There is also the example of the amortized cost, in which it is the years after the second implementation of the new regulation that imply a perception of its lesser complexity. In other cases the opposite occurs, as in the case of the clear example of the effective interest rate (EIR), it is not the first years of application of the new regulation that determine the appreciation of its complexity, but as time goes by and they are studied in greater detail, or these concepts have to be applied to more cases, the complexity is greater (with the same median but greater interquartile ranges).

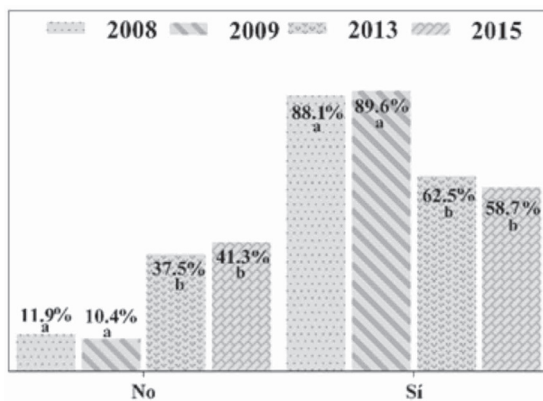


Image 2. The ICAC should make the effects of the new regulation on Sectoral Adaptations and Resolutions public

Note. $\chi^2(3) = 129.69, p < 0.001$.

The majority opinion of professionals is that the Institute of Accounting and Auditing (ICAC) should report on the changes that the new GAP includes in the sectoral adaptations and resolutions, although with the passage of time the professionals believe it to be less and less necessary, a consequence of the fact that the ICAC has been carrying out this work throughout the years that have passed since the first application of the new

GAP (in Image 2 these results are included and the significant differences between the opinions of the first two years and the following are clearly appreciated, as is the fall in the percentages of positive responses) ($\chi^2(3) = 129.69, p < 0.001$).

Since this normative change has resulted from the application of IAS/IFRS in Europe, professionals were asked whether they would have preferred to apply these international standards directly, with the prevailing opinion at all times being that they prefer this accounting reform (Image 3). In this case, no statistically significant patterns of response behavior have been found depending on when the survey of professionals was carried out ($\chi^2(3) = 5.79, p = 0.122$).

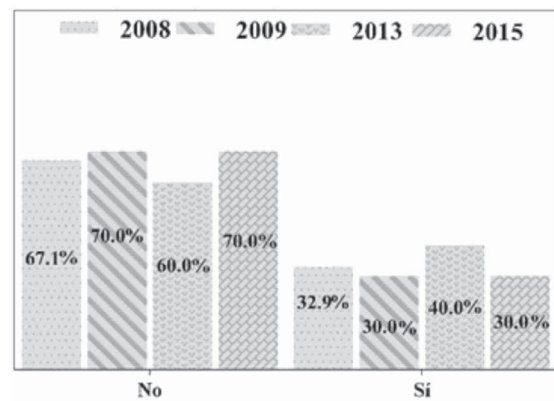


Image 3. Would have preferred a direct application of the NIC/NIIF

Note. $\chi^2(3) = 5.79, p = 0.122$.

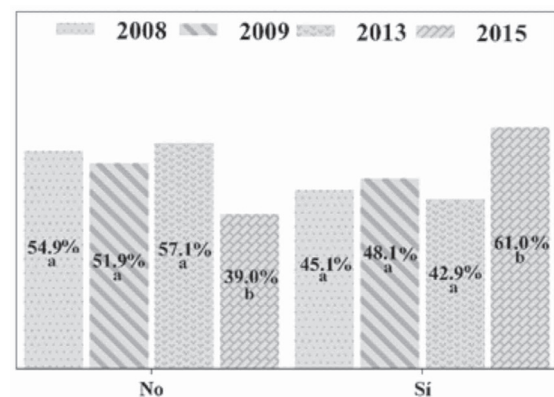


Image 4. Enough time was available

Note. $\chi^2(3) = 22.54, p < 0.001$.

The next question refers to whether professionals consider that they had enough time to comply with the deadlines set by the ICAC in the face of the changes in the regulations (Image 4). The responses of the professionals are conditioned by the passage of time, because when the new regulations have some history most believe that they have had enough time, unlike the perception in the previous years. This change of opinion is statistically verified by seeing the differences according to the time at which the survey was carried out (Image 4), since there are significant differences between the last year of the questionnaire, when more time has passed since the new regulation, and the first six years of its implementation ($\chi^2(3) = 22.54, p < 0.001$).

We will then try to check whether there is any relationship between the responses in

the first year after applying the new regulations (survey carried out in 2008) and eight years later (survey carried out in 2015), for the questionnaire questions whose response was a dichotomous variable. In this way, we can combine these results with those of the tests carried out, taking into account the four different time periods at which the survey was conducted. In this sense we obtain that when professionals already have a greater knowledge of what the accounting reform has implied, they consider that the time periods established by the ICAC are sufficient in the face of new regulations or clarifications issued (Table 4). This is the only hypothesis of independence that we can reject between the answers at these two moments of time ($\chi^2(1) = 4.02, p < 0.045$).

Table 4

Contingency table between the first year the new regulations were applied and eight years later and whether the deadlines foreseen by the ICAC are sufficient

2008	2015 n (%)	
	Deadlines foreseen by the ICAC are insufficient	Deadlines foreseen by the ICAC are sufficient
Deadlines foreseen by the ICAC are insufficient	46 (32,9)	94 (67,1)
Deadlines foreseen by the ICAC are sufficient	74 (44)	94 (56)

Note. $\chi^2(1) = 4.02, p < 0.045$.

That is to say, in the answer to this question there is a determining role in the moment at which the opinion is sought, whether in the first year in force of the new legislation, or after a sufficiently long period of adaptation. On the other hand, this result on the effect of the passage of time in the first application of this accounting regulation leads professionals to have a greater knowledge of it and so they may relativize it. From the results in the contingency table we can highlight that 67.1% of the professionals who thought that the deadlines foreseen by the ICAC were not sufficient now think that they are, so that with the passage of time it is considered that

the deadlines foreseen by the ICAC are going to be sufficient.

4.2 Statistical analysis of the relationships between professionals' responses to the new regulations and their degree of knowledge of them

In this second section we are going to study the relationships between the responses of professionals to the different questionnaires, and the degree of knowledge they claim to have about the new regulations, although at all times the effect of the passage of time prevails.

The first statistically significant result that we obtain (included in Table 5), tells us that professionals who seem to have a little more knowledge do not consider it necessary to update the value of assets (the median degree of knowledge is 4 within the highest interquartile range (4-5)) in order not to consider reasonable value necessary, and within a somewhat lower interquartile range (3-4) for those who consider it necessary). There is also a relationship between

the degree of knowledge that professionals claim to have, and whether or not they would have preferred to apply IAS/IFRS directly. Those professionals who claim to have a little more knowledge of the new regulations prefer the route that has been used: the adaptation of their own regulations and not the direct application of IAS/NIFF (the median degree of knowledge is 4 for not applying directly and somewhat lower, 3, for those who do advocate direct application).

Table 5

Degree of knowledge and whether it would have been preferable to apply the IAS/IFRS directly (2015) and whether the fair value of properties (upward) or the updated value (2015) should be applied

	Min-Max	Median (RI)	Mann-Whitney U test	
			U; z	p-value
NIFF			70672,5; -15,349	<0,001
No	3-5	4 (4-5)		
Yes	1-5	3 (3-4)		
Fair value			98496; -10,773	<0,001
No	3-5	4 (4-5)		
Yes	1-5	4 (3-4)		

Table 6 includes the results of the multiple regression models carried out for the years 2013 and 2015 in order to determine which variables influence the degree of knowledge and Table 7 includes the correlation matrix of all the variables included in the regression model for the same years, which has also served to test the validity of the scale used to exploit the results of this questionnaire. We have previously calculated the Variance Inflation Factor (VIF) to rule out that there is no multicollinearity between the independent variables for each of the models proposed.

For 2013 (Table 6), as we have seen, the new regulations according to professionals introduce the greatest quantitative changes in equity, but this perception is linked to those surveyed who have a lower level of knowledge. This same relationship is obtained for the quantitative changes implied by the new regulation on assets, which is associated

with those professionals who have a lower level of knowledge. In the regression to 2015 (Table 6) this significant relationship disappears, with which once again it is verified that the passage of time, and therefore the repeated application of this regulation, lead to a lesser sensation of complexity, as well as to a greater knowledge of it. In Table 7, the correlations obtained show that with the passage of time the perception of complexity by economists is reduced (there are fewer concepts related to the time available in 2015, and these are problems that persist today, such as the need to simplify for SMEs).

From the concepts that generated the greatest complications in 2013, as a result of the introduction of the new accounting regulations, it can be seen that those most related to the new accounting treatment of financial instruments, such as the calculation of amortized cost, financial assets and the effective interest rate, generate

the greatest operational complications, but are associated with a lower level of knowledge of those surveyed (Table 6). This problem lies outside the scope of operations of many SMEs and, therefore, of professionals. Hence, a priori, this first difficulty is associated with the lower level of knowledge. In addition, these are the only concepts that maintain the significant relationship in the 2015 regression (Table 6), associating it again with a lower level of knowledge (the sign of the relationship is again negative). Eight years after the first application of this accounting regulation, its complexity or knowledge does not depend on the day-to-day operations in this case, but rather on the type of operations carried out by the company, which is not confronted with financial instruments, and hence professionals do not know its accounting treatment. In Table 7 again, the greatest correlations are obtained between all the concepts derived from the new accounting treatment of financial instruments, and also the greatest number of significant relationships between variables (such as the relationship, both in 2013 and 2015, between the complications introduced by the derivatives and the hybrid financial instruments, which at both times is the greatest).

The same reasoning can be used for the significance obtained in 2013 (Table 6) as regards the operational complications introduced by related parties, which are again associated with a lower level of knowledge. The same type of

relationship is obtained in 2013 between the opinion of those surveyed as to whether it is necessary for the ICAC to analyze the effects of the new regulations by publishing the corresponding adaptations and resolutions, linked to a lower degree of knowledge of the same. After two more years, in the 2015 regression, this variable no longer appears as significant, verifying how the passage of time has gradually led to a better knowledge of the new regulation and therefore this need is no longer manifest as such. The significant relationship obtained between the time available to assume the new regulation and the need for ICAC adaptations and resolutions based on the results of the correlations between both variables in 2015 (Table 7) again supports the results obtained previously.

Finally we ascertain the opinion of those surveyed as to whether it would have been better to apply IFRS directly without reforming our legislation. In this case, in both 2013 and 2015 an affirmative response to the direct adoption of IFRS is associated with a lower degree of professional knowledge. These results are also verified in the correlations, since in 2015 it is obtained that there is a significant relationship expressly between these two variables, the degree of knowledge and our having carried out an adaptation of our GAP. These results are consistent with what we have already highlighted above: that professionals prefer the solution chosen in Spain, i.e., the reform of our legal system.

Table 6
Multiple linear regression models to determine the effect of the variables on the prediction of the degree of knowledge

	Year 2013 (n = 116)		Year 2015 (n = 261)	
	Beta (SE)	p	Beta (SE)	p
Areas_greatest_quantitative_changes_PN	-0,301 (0,158)	0,009	-0,102 (0,119)	0,193
Areas_greatest_quantitative_changes_P	-0,063 (0,143)	0,508	0,017 (0,114)	0,803
Areas_greatest_quantitative_changes_A	-0,216 (0,152)	0,048	-0,009 (0,113)	0,901
Concepts_greatest_operational_complications_AMORTIZEDCOST	-0,145 (0,059)	0,038	-0,032 (0,041)	0,028
Concepts_greatest_operational_complications_FINANCIALASSETS	-0,095 (0,082)	0,002	-0,059 (0,053)	0,009
Concepts_greatest_operational_complications_HYBRIDFINANINSTR	-0,01 (0,117)	0,948	0,041 (0,052)	0,625
Concepts_greatest_operational_complications_EIR	-0,148 (0,079)	0,027	-0,013 (0,055)	0,018
Concepts_greatest_operational_complications_GROUPS8&9	-0,176 (0,063)	0,093	-0,048 (0,038)	0,495
Concepts_greatest_operational_complications_RELATPARTIES	-0,39 (0,069)	0,001	0,072 (0,041)	0,269
Concepts_greatest_operational_complications_DERIV	-0,08 (0,116)	0,573	0,014 (0,046)	0,865
Effects_adaptationandresolution ICAC	-0,204 (0,126)	0,025	0,051 (0,093)	0,432
ICAC_shorten_more_smes	-0,088 (0,145)	0,401	0,027 (0,11)	0,673
ICAC_firm_expeconmists	-0,008 (0,134)	0,932	-0,018 (0,094)	0,781
NIF_without_GAP	-0,038 (0,124)	0,008	-0,109 (0,101)	0,039
Time_sufficient_deadlines	0,139 (0,139)	0,180	0,191 (0,096)	0,121
R ² adjusted (%)		29,9		27,9
Model		F(15,100) = 2,85***		F(15,245) = 1,93**
Assumptions				
Normality [†]		p=0,238		p=0,321
Independence [‡]		2,03		1,99
Homoscedasticity [‡]		p=0,868		p=0,745

Note. B: non standardized coefficients. ET: typical error. Beta: standardized coefficients. R²: determination coefficient. † Kolmogorov-Smirnov test for normality of residuals. ‡ Durbin-Watson test. + Levene test between residual and expected values.

Table 7
Correlation matrix of the variables from the multiple linear regression model 2013 and 2015 (Pearson's p)

GC	PN	P	A	CA	AF	IFH	TIE	8y9	PV	DER	RES	PY	EC	PGC	T
DK	1														
PN	-0,87	1													
P	-0,06	-0,321**	1												
A	-0,42	-0,276**	0,133*	1											
CA	-0,83	-0,456**	0,347**	0,077	1										
AF	-0,45	-0,80	0,080	0,016	0,256**	1									
IFH	-0,48	-0,210**	0,100	0,229**	0,382**	0,440**	1								
EIR	-0,151	-0,122	0,036	0,182*	0,568**	0,372**	0,385**	1							
8y9	0,41	-0,084	0,084	0,169*	0,480**	0,509**	0,314**	0,314**	1						
PV	-0,023	-0,118	0,049	0,061	0,102	0,347**	0,383**	1	0,155**	0,369**	-0,059	-0,003	0,003	-0,051	0,029
DER	0,139	-0,072	-0,020	0,120	0,162*	0,110	0,346**	0,274**	1	0,265**	0,067	0,048	0,045	-0,021	-0,180**
RES	0,029	-0,167*	0,074	0,127	0,367**	0,691**	0,468**	0,542**	0,315**	1	-0,073	-0,007	-0,118*	-0,053	0,049
PY	0,108	0,018	-0,058	-0,003	0,004	-0,144	0,128	-0,023	-0,003	-0,100	1	0,014	0,124*	-0,036	-0,169**
EC	-0,082	0,043	0,044	0,007	0,161*	0,122	0,269**	0,087	0,318**	0,159	-0,014	1	-0,064	0,008	-0,191**
GAP	0,040	-0,176*	0,322**	0,182*	0,045	0,065	0,076	0,080	0,100	0,130	-0,031	0,183*	1	0,149**	0,062
T	0,010	0,058	0,052	0,061	0,097	0,116	0,160*	0,015	-0,043	0,027	0,060	0,117	0,163*	1	-0,067
	0,239**	-0,017	0,068	0,013	-0,218**	-0,022	-0,092	-0,212**	-0,173*	-0,135	-0,157	-0,318**	-0,010	0,130	1

Results for 2015 shaded

DK: Degree of Knowledge; PN: Areas_greatest_quantitative_changes_PN; P: Areas_greatest_quantitative_changes_P; A: Areas_greatest_quantitative_changes_A; CA: Concepts_greatest_operational_complications_AMORTIZEDCOSTS; AF: Concepts_greatest_operational_complications_FINANCIASSETS; IFH: Concepts_greatest_operational_complications_HYBRIDFINANINSTR; EIR: Concepts_greatest_operational_complications_EIR; 8&9: Concepts_greatest_operational_complications_GROUPS8&9; PV: Concepts_greatest_operational_complications_RELATPARTIES; DER: Concepts_greatest_operational_complications_DERIV; RES: Effects_adaptationandresolutionICAC; PY: ICAC_shorten_more_smes; EC: ICAC_firm_expeconomists; PGC: NIIF_without_GAP; T: Time_sufficient_deadline *p<0.05 **p<0.01



5 Conclusions

From the reading and analysis of this work we can conclude, in a general way, that the two hypotheses that we wished to test are confirmed. Specifically we confirm, coinciding with Brown (2011), Estima and Mota (2015), ICAEW (2015), and Kim et al. (2016), among others, that the degree of knowledge that Spanish professionals have about the new accounting regulations increases in general with the passage of time and the development of the same regulations. And, on the other hand, and in this case coinciding with Milanés and Texeira (2006), Marín et al. (2008), and Beusenlinck et al. (2017), among others, that the degree of knowledge of professionals about the new accounting regulations in Spain, although increasing with the passage of time, is determined by the type of problem they face.

The specific conclusions also allow us to point out that:

- Having a series of responses at different times after the implementation of the new regulations allows us to conclude that perceptions effectively change depending on when the professional assesses the changes he or she has to apply in practice. Thus, the professional may change from the opinion that the new regulations imply few costs and few competitive and informative advantages for companies to conclude that they have meant a higher cost and with the same scarcity of competitive and informational advantages.
- Specifically by areas, it is equity that has been considered the most complex according to the new requirements. In terms of concepts, the perception of its complexity is also determined by the passage of time in the application of its new treatment. The complexity perceived by professionals increases in, for example, the case of groups 8 and 9, the amortized cost, or the calculation of the EIR, either once the first application

has elapsed, or after the first two years of this first implementation. However, these more complex perceptions, both in terms of equity and in terms of the concepts related to the new accounting treatment of financial instruments, are linked to professionals with less knowledge of the changes introduced by the new regulations.

- Professionals clearly prefer the reform of Spanish regulations to the direct application of IFRS in Spain. While the latter opinion is independent of the moment in which professionals are asked, it is not independent of their degree of knowledge, since it is those with the greatest degree of knowledge who prefer the route that has been used: the reform of our legal system to adapt it to IFRS.
- Another clear and statistically significant conclusion is the effect of the passage of time on professionals' own perception of whether they have had sufficient time to adopt the new standards. If 67.1% of the professionals thought that the deadlines set by the ICAC were not sufficient, after eight years of their application they thought that they were, so professionals are increasing their degree of knowledge and may be relativizing.

To conclude, as limitations we could highlight those of any study based on a questionnaire. However, in our case we have overcome the main limitation of the size of the sample, as we have a very large target population committed to the professional exercise of accounting. There is also the comparative advantage of having a sufficiently long historical series to be able to draw significant conclusions. This, in turn, may raise possibilities in terms of future work, in which we can, with an even longer time horizon, re-launch the questionnaire, and check how this time perspective further removed from the first moments of application of a GAP

adapted to the requirements of IFRS affects the responses of professionals, and even introduce new variables that provide information on the application of the new regulations by applicable business sectors.

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Appendix 1

Questionnaire

1. What do you consider to be your degree of knowledge (or that of your company/office) of the Accounting Regulation in force (PGC 2008 and later provisions)?:

1. Low
- 2.
- 3.
- 4.
5. High.

2. Do you consider that the adoption and development of the new accounting regulation has supposed:

- A- high costs and scarce competitive and informational improvement for businesses in general
- B- few costs and few competitive and informational advantages for businesses
- C- few costs and competitive and informational advantages for businesses
- D- high costs and competitive and informational improvements for businesses

3. After eight years of application, which areas have, in your opinion, meant the biggest quantitative changes with respect to the previous regulations?:

- A- Equity
- B- Liabilities
- C- Assets

4. Which concepts have caused the greatest operational complications in applying the new regulation or in its subsequent development?:

- A- Applying Amortized Costs
- B- 1. Few 2. 3. 4. 5. Many.
- C- Leases 1. Few 2. 3. 4. 5. Many.
- D- Adaptation/Comparison of the Sectoral Adaptations 1. Few 2. 3. 4. 5. Many.
- E- Classifying and valuing Financial Assets 1. Few 2. 3. 4. 5. Many.
- F- Definition of Annual Accounts Elements 1. Few 2. 3. 4. 5. Many.
- G- Hybrid Financial Instruments 1. Few 2. 3. 4. 5. Many.
- H- Applying the effective interest rate 1. Few 2. 3. 4. 5. Many.
- I- New terminology 1. Few 2. 3. 4. 5. Many.
- J- Groups 8 and 9 1. Few 2. 3. 4. 5. Many.
- K- Subsidies 1. Few 2. 3. 4. 5. Many.
- L- Provisions 1. Few 2. 3. 4. 5. Many.
- M- Related Parties 1. Few 2. 3. 4. 5. Many.

- N- First Application 1. Few 2. 3. 4. 5. Many.
- O- Derivatives 1. Few 2. 3. 4. 5. Many.
- P- Annual Accounts Format 1. Few 2. 3. 4. 5. Many.
- Q- Others (please specify).....

5. Adapting and applying the new regulation has meant a change in equity. Which concepts have caused the greatest change in this area? (Indicate briefly the FOUR most complicated or outstanding ones since the change in your opinion)

- 1.:
- 2.:
- 3.:
- 4.:

6. Adapting to the new regulation has meant a change in assets. Which concepts have caused the greatest change in this area? (Indicate briefly the FOUR most complicated or outstanding ones since the change in your opinion).

- 1.:
- 2.:
- 3.:
- 4.:

7. Adapting to the new regulation has meant a change in liabilities. Which concepts have caused the greatest change in this area? (Indicate briefly the FOUR most complicated or outstanding ones since the change in your opinion)

- 1.:
- 2.:
- 3.:
- 4.:

8. Adapting to the new regulation has meant a change in the result. Which concepts have caused the greatest change in this area? (Indicate briefly the FOUR most complicated or outstanding ones since the change in your opinion)

- 1.:
- 2.:
- 3.:
- 4.:

9. Do you consider that the ICAC should make more effort to publish the effects of the new regulation on sectoral adaptations and resolutions that, at the time of this survey, are not sufficiently clear or undertaken?:

- 1. Yes
- 2. No

10. If your answer to the previous question was YES, please indicate in order of precedence the four that you consider the ICAC should give priority to and in the shortest possible time:

- 1.:
- 2.:
- 3.:
- 4.:

11. The ICAC should shorten the accounting and financing regulation for SMEs more. Please mark Yes or No and give a brief reason for your choice. Please click on Other and begin your reasoning with Yes or No accordingly.

1. Yes
2. No
3. Other _____

12. Would you have preferred the NIC/NIIF to have been applied directly, with no GAP? Mark Yes or No and give a brief reason for your choice. Please click on Other and begin your reasoning with Yes or No accordingly.

1. Yes
2. No
3. Other _____

13. Would you have preferred the NIC/NIIF to have been applied directly, with no GAP? Mark Yes or No and give a brief reason for your choice. Please click on Other and begin your reasoning with Yes or No accordingly.


1. Yes
2. No
3. Other _____

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Contribution of each author

Contribution	Esther Ortiz-Martínez	Marcos Antón-Renart	Salvador Marín-Hernández
1. Definition of research problem	√	√	√
2. Development of hypotheses or research questions (empirical studies)	√	√	√
3. Development of theoretical propositions (theoretical Work)			
4. Theoretical foundation/ Literature review	√	√	√
5. Definition of methodological procedures			√
6. Data collection		√	
7. Statistical analysis	√		
8. Analysis and interpretation of data	√	√	√
9. Critical revision of the manuscript	√	√	√
10. Manuscript Writing	√	√	√
11. Other (please specify which)			