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Why The Big 4 Are Leaders in The Audit Market? A Literature Review

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ABSTRACT

The leadership of the large audit firms has generated great interest in the accounting doctrine to explain about the concentration factors of the audit market. The objective of this paper was to make an extensive review about the empirical studies published in the international literature about the reasons why the Big 4 are leaders in the audit market. The methodology used to review the literature contains an important theoretical background, since it is based on a thorough documentary review of the most relevant theoretical and conceptual approaches of international literature. The results indicate that the leadership of the Big 4 in the audit market is due to factors such as; the concentration of the market, the specialization of the audit service by sector and size of the companies audited, the economies of scale, the structured audit methodologies, the demand for the audit service with differentiated quality and the demand of an auditor with reputation.

Keywords: Audit Market Concentration Factors, Audit Services Differentiation, Auditor with Reputation.

INTRODUCTION

The international literature has been collecting various empirical studies on the audit markets of different countries, and through which, researchers have shown in their work the existence of a high concentration of the audit market in the world in favor of a few audit firms, currently known as the Big 4. (Zeff and Fossum, 1967; Metcalf Report, 1976; Danos and Eichenseher, 1986; Beattie and Fearnley, 1994; Pong, 1999; Sarbanes-Oxley Act of 2002; Beattie et al., 2003; GAO 2003; Asthana et al., 2004; Oxera Report, 2006; Abidin et al., 2007; 2010; Ballas and Fafaliou, 2008; European Commission, 2010; Eguasa and Urhoghide, 2017; among others).

This has led accounting research to study the *factors* of the concentration in the audit market by which it can be explained why the Big 4 seem to have a certain competitive advantage in relation to the rest of the other audit firms active in that market (Jensen and Meckling, 1976; Dopuch and Simunic, 1980; De Angelo, 1981; Dopuch, 1984; Turpen, 1990; Craswell and Taylor, 1991; Craswell et al., 1995; Hogan and Jeter, 1999; Francis, 2004; American Assembly Report, 2005; Barton, 2005; Abidin et al., 2006; Velte and Stiglbauer, 2012; Gao et al., 2013; Cairney and Stewart, 2015; Koshykova, 2017; among others).

In this same line, the accounting investigators of the market of audit of the different countries have been analyzed the behavior of the agents involved in this market in *two* lines of study:
On the one hand, there is the line of study on the analysis of the strategic behavior of the Big 4 to get their clients (Eichenseher and Danos, 1981; Simunic, 1980; Dopuch and King, 1996; Kwon, 1996; De Beelde, 1997; DeFond et al., 2000¸ among others).

And on the other hand, there is the line of study on the determination of the behaviors of the companies audited in regard to the election of auditor (Jensen and Meckling, 1976; Dopuch and Simunic, 1980; De Angelo, 1981; Balsam et al., 2003; among others).

Regarding the line of study on the analysis of the strategic behavior of the Big 4 to get their customers, some of the variables or explanatory factors that have aroused more interest among the students of the audit market to submit them to the empirical analysis from the point of view of the strategies followed by the Big 4 audit firms, it has been the *specialization* implemented by these large international firms, taking into account the *sector* of the activity of the audited companies and the *size* of these, as well as the used of *economies of scale* based on their business *size* and the use of structured *audit methodologies.* This line of study is based on the *hypothesis of difference in efficiency* in the audit market (Dopuch and Simunic, 1980; DeAngelo, 1981; Danos and Eichenseher, 1982; Dopuch and Simunic, 1982; Kinney, 1986; Palmrose, 1986; Cushing and Loebbecke, 1986; Simunic and Stein, 1987; Turpen, 1990; Craswell et al., 1995; De Beelde, 1997; Ritson, et al., 1997; Ferguson et al., 2006; Toscano and García Benau, 2011; among others).

The other line of research study about the determination of the behaviors of the companies audited in regard to the election of the auditor, the international literature indicates that following the proposals and results obtained through the studies Empirical studies on the choice of auditor in the Anglo-Saxon audit markets, have been describing different theories or approaches to the processes of auditor election, which have served accounting researchers as a *theoretical* reference *framework* for the completion of empirical studies about the choice of auditor (De Angelo, 1982; Dopuch, 1984; Balvers et al., 1988; Francis and Wilson, 1988; Beattie and Fearnley, 1995, Kwon, 1996; García Benau et al., 1998; Toscano and García-Benau, 2015; among others). This line of study in turn is divided into two groups:
First, there is the group of empirical studies that considers that the provision of the audit service by itself, is not capable of differentiating it due mainly to the regulation of its norms and procedures, the price of the audit service being therefore the determining factor for the election of the auditor. This is what is known as the *homogeneity hypothesis of the audit service* (Simunic, 1980; Doogar and Easley, 1998; Willekens and Achamadi, 2003; McMeeking et al., 2007; among others).

Secondly, there is the group of empirical studies that considers that there are qualitative aspects in the provision of the audit service that allow the differentiation of the existing service among the different audit firms that participate in the audit market. This is what is known as *the audit service differentiation hypothesis* (Shockley and Holt, 1983, Francis and Wilson, 1988, Turpen, 1990, Craswell et al., 1995, Toscano and García-Benau, 2016).

The objective of this paper was to make an extensive review about the empirical studies published in the international literature about the reasons why the Big 4 are leaders in the audit market.

The methodology used to review the literature contains an important theoretical background, since it is based on a thorough documentary review of the most relevant theoretical and conceptual approaches of international literature. International data resources (Google Scholar, SSRN, EBSCO, Science Direct) were included in this literature review. The keywords used in the targeted search were "audit market concentration", "factors of the concentration in the audit market", "auditor choice", "auditor with reputation", "Big 4 audit firms". Due to the limited number of studies available it was not practical to restrict our studies to a certain period of time.

After this introduction, the present work is structured as follows: The second section is devoted to describe the most relevant theoretical and conceptual approaches published in the international literature on the factors of the concentration of the audit market and the possible reasons for leadership of the Big 4 in the audit market. The third section shows the results of this research on some of the most important previous empirical studies published in the international literature. Finally, the last section serves to describe the conclusions about the empirical evidence published in the international literature.

CONCEPTUAL AND THEORETICAL FRAMEWORK

The specialization of the Big 4 audit firms by sector of activity and size of its clients.

The international literature points out that in order to understand the nature of the competition of a particular market it is necessary to analyze the conditions of the cost structure and market demand, placing at the center of the analytical interest the strategies followed by the companies in relation to your leadership in a certain market (Bueno and Morcillo, 1993; among others).

For this reason, *the hypothesis of efficiency difference in the audit market*, has led researchers to accept that the structure of the market and therefore the concentration, is not an exogenous variable but it is explained, both by the basic conditions of the audit market, and in particular by the structure of costs of the industry and the nature of the demand, as well as by the strategic behavior of the large auditing firms that participate in that market (Dopuch and Simunic, 1980; Danos and Eichenseher, 1982; Campbell and McNiel, 1985; Garcia Benau, et. al., 1998; Culvenor and Godfrey, 2000; Dunn et al., 2000; Balsam et al., 2003; among others).

These new variables become the fundamental aspects to understand the dynamics of market functioning and are the determining factors of concentration (Danos and Eichenseher, 1982; among others). Thus, accounting researchers raise the possibility that audit firms may enjoy a certain competitive advantage due to their own strategic behavior (Toscano and García-Benau, 2011; among others).

The two variables that have aroused most interest among accounting researchers have been the *specialization* by *sector* of the activity of the audited companies and the specialization due to the *size* of the companies audited, since it is proposed by the students of the audit market the possibility that there is a specific "accounting technology" by sector of activity, because in certain cases the application and selection of accounting policies are unique for a specific sector of activity.

With regard to the demand for *specialization* of audit firms according to the activity *sector* of the audited companies, the investigation shows that audit firms, in order to meet said demand, will perform certain strategic conducts.

Such strategies are presented as an investment in specialized knowledge, that is, the acquisition of a skill and experience above the average experience required in the audit market, such as recruitment and training of personnel, opening of offices, software development and sophisticated decision tools, which enables these audit firms to enjoy both economies of scale and economies of scope to offer their services in specific segments of the market. say, specialized services at a lower cost than other competing audit firms could offer.

In this same script, the investigation has reached the conclusion that the audit market can be segmented, allowing *specialization* according to the nature of the audited company, being one of the fundamental aspects with respect to the *sector* of activity to which belong the audited company (Shockley and Holt, 1983, Simunic, 1987; Williams and Dirsmtih, 1988; Turpen, 1990; Craswell et al., 1995; Gramling and Stone, 2001; Casterella et al., 2004; among others).

In regard to the demand for *specialization* of audit firms according to the *size* of the audited company, accounting researchers consider that the demand for it derives from the size of the audited company, as aspects such as; The planning of the audit, the internal control compliance tests, and the audit program are dependent on the size of the audited company. However, in practice it is difficult for a given company to follow only one of these strategies indicated in a pure sense, either in terms of leadership in *costs* or *specialization*, there being rather a combination of both strategies.

Economies of scale and structured audit methodologies used by the Big 4 audit firms
The international literature also highlights that the study of the relationships between the offer of audit services and market structure can not only be made from a perspective of the analysis of the strategic behavior of auditors, but also studies can be carried out where the strategic variable or behavioral is not the explanatory variable.

In this same line, accounting researchers have always shown great interest in inferring the existence of relationships between the *size* of audit firms and their market power, especially as a result of the controversial Metcalf Report (1978), for the reason that the Big 4 audit firms, due to their high market share in the audit market, could influence their favor over the regulatory bodies of the US accounting profession and thereby prevent the existence of adequate competition with respect to the rest of the other, firms audit.

For this reason, the research has considered important to analyze the way in which there can be an empirically testable relationship between business *size* and *cost* leadership strategy, acquiring special importance in terms of the audit market exploit the advantages of having a position more favorable in the curve of average costs and the use of technologies that allow the production of the audit service at more competitive prices.

Thus, accounting researchers distinguish *two* variables or explanatory factors that can explain the high concentration of the audit market, such as the existence of *economies of scale* and the possible use of structured audit *methodologies*.

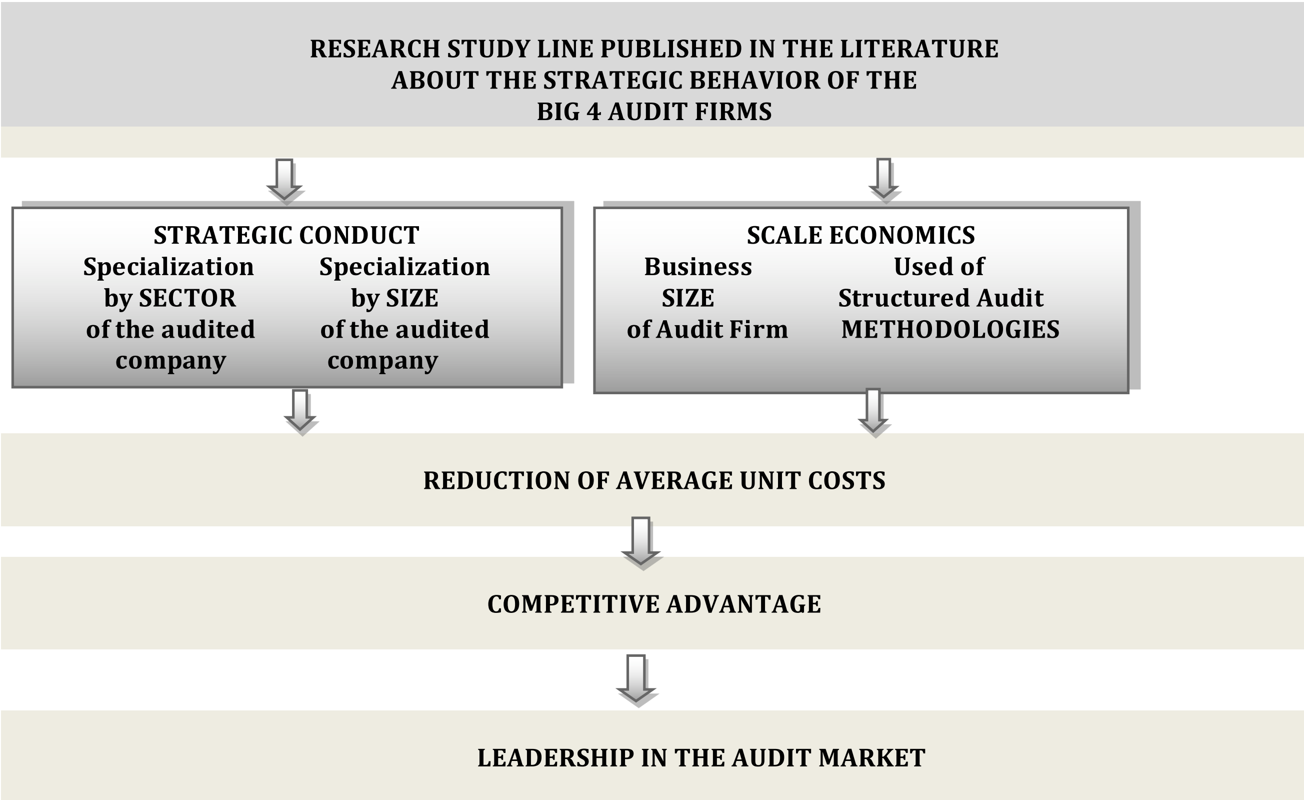
As regards the existence of *economies of scale*, the literature highlights the possibility that certain auditing firms, due to their size, may be more efficient than others by reducing costs of the service offered.

Based on this premise, the accounting researchers study if the high market shares held by large international audit firms could be explained by the existence of these economies of size (Francis and Stokes, 1986; among others).

Regarding the use of structured *methodologies* of audits, the research shows that their use can also be an element that allows the audit firms to reach a competitive position through the reduction of average unit costs, since it is presumed that the recurrent use of contrasted procedures and methods must, in principle, lead to a reduction in costs. However, it should be noted that this is questionable, for the reason that the same methodology can not necessarily be applied with the same level of effectiveness to two different companies audited.

Next, in graphic 1., the study lines followed by the accounting researchers on the relationships between the offer of audit services and market structure from a point of view of large audit firms are synthesized.

GRAPHIC 1.



The homogeneous audit service.

The international literature points out that the audit service has some unique characteristics that make it different from other professional services, due to its mandatory nature and the deep regulation that affects it, that is, certain companies, particularly those that arouse more interest for the company. society, are required to submit their financial statements to the review process involved in the audit.

The obligation of certain companies to submit their financial information to the control of the audit is justified from a normative point of view because it is considered that through this activity a better informed and organized society is enabled, aspects that can increase the general welfare of the same.

Likewise, although the contracting of the audit service may be voluntary on the part of any entity, the reality is that the vast majority of the auditing services demanded come from contracts for the execution of mandatory audits of the annual financial statements.

Thus, the situation can be presented that certain companies that must choose an auditor do not perceive the prior need to hire the audit service on a voluntary basis.

If this is the case, in principle, it is assumed that the process of choosing the auditor will not have in itself the greatest relative importance with respect to the type of auditor necessary, since, there is no internal stimulus for the demand for the audit, this It would then result that, in view of the companies obliged to hire the independent audit service, they could not see any difference between all the audit firms that offer this service.

In this sense, the auditor election process is simply reduced to the mere fact of hiring any auditor in order to cover their obligation, and in that case, the most rational solution for certain companies, it seems that is, the hiring of the auditor who offers the service at the lowest possible *price.*

In addition, the practice of auditing the financial statements of companies is highly regulated both by the technical standards issued by the organized profession, as well as by the procedures and other legal requirements imposed by the supervisory bodies in relation to their own execution and the substrate in which it is carried out, that is, the financial information.

Therefore, based on the fact that the audit is a professional service subject to permanent regulation and considering that all the suppliers of the audit service adequately apply it, the hypothesis can be established that there is little capacity for different auditors to provide the audit service in different ways, or at least that there is less differentiation capacity than if the service were provided in an environment with little regulation.

Based on this premise, the argument of rational choice of certain companies to hire the mandatory audit and the reduced possibility of finding differences between the different suppliers of the audit service, would be the choice of the auditor that offers the service at a lower possible price.

Therefore, *the hypothesis* of homogeneity in the provision of the audit service consists, then, in the consideration of the price as an explanatory variable of the auditor election processes.

Finally, the international literature highlights that these approaches of accounting researchers based on the premise of the homogeneity of the audit service, represent the starting point of a series of works on the behavior of the agents of the audit markets fundamentally of the English-speaking countries (Simunic, 1980; DeAngelo, 1981; Francis, 1984; Danos y Eichenseher, 1986; Kinney, 1986; Palmrose, 1986; Kaplan, 1990; Turpen, 1990; Pong and Wittington, 1994; among others).

Tbe differentiated audit service.

As a counterpart to what is considered in the studies referred to in the previous sub-section, the international literature also highlights a second group of scientific studies on audit markets that considers that *the audit service is not homogeneous*.

This is equivalent to saying that their claimants can differentiate the service provided by the different auditors, for the reason that they perceive the existence of different qualities.

Thus, the works based on the differentiation of the audit service, describe different scenarios in which the companies that demand the audit service require the contracting of a certain audit service, that is, an audit service with a *quality differential* (Chow, 1982; Watts and Zimmerman, 1983; Simunic y Stein, 1987; Francis y Wilson, 1988; Beatty, 1989; Wilson and Grimlund 1990;

DeFond, 1992; Beattie y Fearnley, 1995; Tomczyk, 1996; Colbert and Murray, 1998; Toscano and Garcia-Benau, 2016; among others).

One of these scenarios is made up of companies that produce high agency costs, such as companies that have a large shareholder dispersion.

In these cases, the accounting researchers have focused on analyzing the behavior of certain companies that due to their corporate characteristics could be expected to demand superior quality services, that is, the corporate characteristics of these companies will be the determinants of the benefits can they get a quality audit (Francis y Wilson, 1988; Knapp, 1991; DeFond, 1992; Agrawal y Knoeber, 1996; Garcia-Benau et al., 1999; among others).

Among the corporate features that have generated the most attention in the international literature are the *agency costs* that take place within the companies.

Since Jensen and Meckling (1976) argued that the audit requires a special highlight to control agency costs, part of the research has been oriented to the analysis of how the nature of these agency costs in certain audited companies can explain a differentiated demand of the quality of the audit service and, therefore, the election of a given auditor.

Likewise, the international literature points out scenarios such as those presented in those companies that, for the first time, will launch their shares on the stock market. In these cases, the international literature pays attention to the type of auditor chosen by these companies, revealing in their work that companies prefer to prefer large international audit firms for their reputation and image (Palmrose, 1984; Firth and Smith, 1992; Moizer, 1997; Lennox, 1999; Fargher et al., 2001; Krishnamurthy at al., 2002; Mayhew and Wilkins, 2002; entre otros).

In this way, they can serve as a means to reduce uncertainties among future investors, and thus be able to ensure an exit to financial markets in the most favorable conditions (Menon and Williams, 1991; Simunic and Stein, 1995; Hogan, 1997; among others).

Finally, the international literature has also been gathering various works in which the accounting researchers instead of defining a priori the scenarios in which certain audits are demanded, that is, audits with a quality differential, let them be their own audited companies that make clear which are the attributes that define the concept of quality. To this type of studies, the accounting investigators frame them within which it could be denominated like the theory of the behavior or signals (Schroeder et al., 1986; Sutton and Lampe, 1990; Beattie and Fearnley, 1995; Butterworth and Houghton, 1995; among others).

Next, in figure 2, we synthesize the main aspects that make up each of the two theories.

GRAPHIC 2.

THEORIES PUBLISHED IN THE INTERNATIONAL LITERATURE ABOUT THE DEMAND OF THE AUDIT SERVICE BY THE CLIENTS OF THE BIG 4 AUDIT FIRMS

PREMISE

The Audit Service does not admit easy differentiation | **Audited companies can differentiate between qualities of the audit service**

HYPOTHESIS

The homogeneity of the audit service
The price is the only variable that affect the process of choosing auditor

The differentiation of the audit service
There are multiples factors that affect the process of- choosing auditor

APPROACHES FROM WHICH THE MOST RELEVANT WORKS ARE PRESENTED

Predatory pricing policy	**Scenarios that demand quality auditing**
Scale economics	**Agency costs**
Structured methodologies	**Securities issues on the stock market**
Scope economies	**Behavioral theory or signals**

RESULTS OF LITERATURE REVIEW

More than four decades ago, the international journal *The Accounting Review* published the article entitled "An Analysis of Large Audit Clients" by the authors Zeff and Fossum (1967), which provided empirical evidence on the worrying high level of market concentration audit.

From the pioneering work of Zeff and Fossum (1967) the analysis of the concentration of the audit market has been to this day, a topic widely debated both in the academic and professional fields (Rhode et al., 1974; Moizer and Turley, 1989; Beattie and Fearnley, 1994; Johnson et al., 1995; García-Benau, et al., 1998; Wolk et al., 2001; Thavapalan et al., 2002; Beattie et al., 2003; Toscano and Garcia-Benau, 2014; among others).

In this same sense, the different regulatory and professional bodies have also ceased to express their concern regarding the great power achieved by the large international firms, especially due to the negative consequences that could derive for the proper functioning of the audit market. by the fact that the supply of audit services in the world is dominated by a few audit firms (Metcalf Report, 1976; AICPA Report, 1978; The Sarbanes-Oxley Act of 2002; GAO Report, 2003; Accountancy Age, 2005; American Assembly Report, 2005; The Oxera Report, 2006; European Commission-Green Paper, 2010).

Therefore, we present a brief description of the previous studies that we believe are the most important that have been published in the international literature:
The academic researchers Dopuch and Simunic, 1980; Eichenseher and Danos (1981), Danos and Eichenseher (1982), Campbell and McNiel, 1985; Kwon (1996) and Hogan and Jeter (1999) focused on the study of concentration in different segments of the US audit market, as well as observing specialization in certain segments.

De Beelde (1997), carries out a research work on the specialization industry of the large auditing firms, as well as on the level of concentration of the audit market in Belgium. The results indicate that the level of market concentration for the first four auditing firms (C4) is variable in terms of specialized countries and industries, and that the presence of the Big Six or Big 6 in certain specific industries is not consistent among the countries analyzed.

For their part, Simunic (1980), Dopuch and Simunic (1980), Danos and Eichenseher (1982) and Tonge and Wootton (1991), with respect to the analysis of the prices established in the audit market, observed that these prices were consistent with a competitive situation, that is, regardless of whether the audit market at that time was divided into different segments.

Bigus and Zimmermann (2008) analyze auditors' market shares and concentration in Germany on the basis of audit fees, which have been subject to disclosure since 2005. Audit firms specialize in certain industries or stock market segments. Market concentration increases over time. At present, concentration seems to be higher in Switzerland, although it is lower in the United States of America (USA) and the United Kingdom (UK).

Bills et al., (2015) examine the audit pricing effects when auditors specialize in industries conducive to transferable audit processes. The results indicate that industry specialists charge incrementally lower fees in industries with homogenous operations, and particularly in industries with both homogenous operations and complex accounting practices.

Empirical studies on the factors of concentration in audit markets argue that economies of scale in the preparation of audits of client companies benefit the high concentration of the supply of services held by a few audit firms (Eichenseher and Danos, 1981, Danos and Eichenseher, 1986, Toscano and García-Benau, 2011, among others).

Among the studies that focus on analyzing whether different audit firms can effectively exploit economies derived from their business size, that is, economies of scale as a means of explaining efficiency differences, we highlight those of Palmrose (1986) and Danos and Eichenseher (1986). They have verified the existence of economies of scale in the US audit market, which means that the high market shares of large international audit firms are explained because they operate at lower costs, an aspect that is consistent with the hypothesis of that the choice of auditor is determined by the price of the service.

The search by auditing firms of economies of increasing scales has aroused academic interest in the effect that mergers among large international firms can have on concentration levels (Tonge and Wootton, 1991, Minyard and Tabos, 1991; Wootton et al., 1994; among others). In this sense, several studies have shown that the choice of auditor is explained by the economies of scope; among them, the works of Simunic (1984), Beck et al. (1988) and Turpen (1990).

The works of Kinney (1986), Kaplan et al. (1990) and Mutchler and Williams (1990) have shown that the pressure of competition, the need to control labor costs, as well as the need to reduce audit risk, are factors that cause auditing firms to make efforts to improve the audit process through the use of structured methodologies, which allow the development of work in a shorter time and with greater precision. This produces a positive effect on the prices of the audit that these firms can offer, and there is empirical evidence that shows that companies that use structured methodologies obtain a greater number of clients. These ideas have given rise to many investigations that try to explain the behavior of the market by observing different levels in the execution of the audit work and, therefore, in the possibility that there is an overprice in the provision of the audit service (Palmrose, 1986, De Fond et al., 2000, and Casterella et al., 2004, Toscano and García-Benau, 2011).

Traditionally, it is considered that the audit market has to show the characteristics of monopolistic markets with their associated drawbacks, due to the dominance exercised by the large international firms. However, when this market is dissected in different segments (for example, the segment of large customers) it is observed that the established prices are consistent with a competitive situation (Simunic, 1980, Danos and Eichensher, 1982, Simon et al., 1986, Tonge and Wootton, 1991, García Benau, et al., 1998, Pong and Burnett, 2006).

Davies and Lyon (1982) point out that companies prefer to use the so-called differentiation of products rather than entering into the price war. However, we must not forget that the evidence of many of the works of recent years, including the contribution of DeAngelo (1981 and 1982), which have highlighted the position contrary to that put forward by Davies and Lyon to emphasize the practice of offering audit services below cost, which in the Anglo-Saxon literature is usually expressed using the term "*low balling*", using it as a barrier to entry to avoid auditor change (Simon and Taylor, 1997; Dopuch and King, 1996; among others).

Ferguson and Scott (2013) examines intra-Big 4 audit fee premiums in the Australian market. During the period examined (2002–2004), they find the main feature of the Australian audit market over this period is a PwC brand premium, which suggests price competition and thus no collusive pricing. Within the Big 4, audit pricing effects are likely to be a growing area of inquiry in future audit pricing literature. Overall, the study implies that regulatory concerns about a lack of a competition in the audit market during this period are inconsistent with the audit pricing evidence.

Cairney and Stewart (2015) examine the relationship between a client industry's homogeneity and audit fees. They find that specialist auditors charge lower fees in homogenous industries. They observe a lower standard deviation of fees in more homogenous industries. Together, these results suggest that auditors sustain lower costs in audits of homogenous clients and that the similarly lower costs incurred across auditors are passed on to clients in the form of lower fees.

In other previous works collected by the international literature, other factors have been identified that potentially affect the choice of the auditing firm, such as the level of rivalry existing in a given industry and the prices set by the auditor. In particular, the investigations of Eichenseher and Danos (1981), Kwon, (1996), and Hogan and Jeter (1999) conclude that the level of competition in a given industry is a factor that affects the choice of auditor while the company The client may be reluctant to hire a firm that audits its direct rivals.

Among the corporate features that have generated the most attention in the international literature are the agency costs that take place within the companies. Since Jensen and Meckling (1976) argued that the audit requires a special emphasis to control the costs of agency, part of the research has been oriented to the analysis of how the nature of these agency costs, can explain a differentiated quality demand of the audit and, therefore, the election of a given auditor (Fan and Wong, 2005; Huang et al., 2016; Eguasa and Urhoghide, 2017).

In this sense, the specialized literature has collected several works that have investigated factors related to the costs of agency of the company that explain that the demand for audits of higher quality and, therefore, a greater demand for the audit services provided by the large auditing firms. In particular, it has been found that factors such as the diffusion of property, the existence of incentive contracts based on results and the future issuance of debt are positively related to the demand for higher quality audits (DeFond, 1988; Francis and Wilson, 1988, Palmrose, 1988, Arruñada, 2000, Piot, 2001, among others).

The literature has also been collecting various works in which accounting researchers instead of defining a priori the scenarios in which certain audits are demanded, that is, audits with a quality differential, allow the audited companies themselves to that they reveal the attributes that define the concept of quality (Barton, 2005, Francis and Wang, 2008, Monterrey and Sánchez-Segura, 2008, Cahan et al., 2011, Lawrence et al., 2011, Boone et al. , 2012, Veltea and Stiglbauer, 2012, Francis et al., 2013, Choi et al., 2016, among others).

To this type of studies, the accounting researchers frame them within what could be called the theory of behavior or signals (Mock and Samet, 1982, Schroeder et al., 1986, Sutton and Lampe, 1990, Beattie and Fearnley, 1995, Butterworth and Houghton, 1995, Hay and Davis, 2004, among others).

Francis and Wilson (1988), DeFond (1992), Citron and Manalis (2001), Eisenberg and Macey, 2003; Hay and Davis (2004), Barton (2005) and Monterrey and Sánchez-Segura (2008) contrast the hypothesis that there is a demand for quality audits, as it is empirically contrasted that those companies in which the highlighted situations take place systematically choose the large international firms (Carlin et al., 2008).

In this sense, although from the side of the demand of the companies, the researchers De Fond (1988) and Francis and Wilson (1988) focused their work in shaping the relationship that exists between the factors that intervene in the costs, the companies (the existence of incentive contracts based on results and the future issuance of debt) and the demand for higher quality audits (Citron and Manalis, 2001, Toscano and García-Benau, 2016, Huang et al., 2016, Eguasa and Urhoghide, 2017; among others).

Another type of study focuses on the launch of a package of shares, and to guarantee a maximum price, auditors that offer high quality in their service use as a means of reducing the uncertainties of future investors. Among this type of studies, they would highlight the empirical works of Simunic and Stein (1987), Balvers et al. (1988), Beatty (1989), Menon and Williams (1991), Hogan (1997), Wallace, 1998 and Pittman and Fortin (2004).

Dopuch and Simunic (1980), DeAngelo (1981), Francis and Wilson (1988), Boone et al., (2000) and Wolk, et al., (2001), observed that the Big 8 achieved high quotas of the audit market because they provided differentiated quality audit services and also had a high reputation. Based on these results, another group of works related to the study of the effects on the audit market derived from mergers among large international firms (see, Tonge and Wootton, 1991, Minyard and Tabor, 1991, Wootton et al. al., 1994; Wolk et al., 2001; and Thavapalan et al., 2002, among others).

The international literature points out scenarios such as those presented in those companies that, for the first time, will launch their shares on the stock market. In these cases, the literature pays attention to the type of auditor chosen by these companies, revealing in their work that companies prefer to prefer large international firms for their reputation and image. In this way, they can serve as a means to reduce uncertainties among future investors, and thus ensure an exit to financial markets in the most favorable conditions (Menon and Williams, 1991, Simunic and Stein, 1995, García-Benau et al., 2000, Citron and Manalis, 2004, Pittman and Fortin, 2004, Barton, 2005, Toscano and García-Benau, 2016, Huang et al., 2016, Eguasa and Urhoghide, 2017).

CONCLUSIONS

In this article, we have presented a research paper whose objective was to make an extensive

review of the most relevant empirical studies published in the international literature on some of the factors that may explain the concentration of the market in favor of the Big 4. After the elaboration of this work, we have reached the following conclusions:
The main research published by the international literature points to a series of *factors* that explain the high level of concentration in the audit markets (Francis, 1984, Simon, 1985, Baber et al., 1987; Haskins and Williams, 1990, Craswell and Taylor, 1991, Steven, 1991, Beattie and Fearnley, 1994, Corona Romero et al., 1995, Simunic and Stein, 1995, Taylor, 1997, García-Benau et al., 1998, Taylor and Simon, 2003, Abidin et al., 2007; among others).

Among the *factors* that accounting research has also highlighted as explanations of the high concentration in power of the large international firms, currently known as the Big 4, are the strategic behaviors on the part of the audit firms to *specialize* in both the *size* of the company audited as the economic *sector* of the audited company (Eichenseher and Danos, 1981, Danos and Eichenseher, 1982, Ritson et al., 1997, Hogan and Jeter, 1999, Neal and Riley, 2004; among others).

Likewise, the *factors* that explain the reasons for the high concentration is the provision of the audit service at more competitive prices in the presence of *economies of scale* and *structured audit methodologies*, sometimes offering prices below the cost of the audit service. (Dopuch and King, 1996), a phenomenon that was pointed out more than two decades ago by DeAngelo (1981) and known as *low balling*.

Finally, the effect of *reputation* is another determining *factor*, that is, it is based on the fact that the offered audit service is not homogeneous, therefore there are different qualities, so that the *differential quality* appears as a explanatory variable that implies the hiring of a certain type of auditor to the detriment of the remaining auditors (Beattie, 1989, Wilson and Grimlund, 1990, Craswell et al., 1995, Tomczyk, 1996, Moizer, 1997, Fargher et al., 2001, Doogar et al., 2003, Barton, 2005, Toscano and Garcia-Benau, 2016; among others).

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