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*Accounting Treatment for Joint Controlled Entities:
Theoretical issues and evidences from Italian setting*

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*A mia sorella Ilaria,
per l'amore incondizionato*

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Introduction

This thesis is a research study concerned with the accounting issues of the consolidation of interests in Joint Controlled Entities (here after JCEs).

The main purpose of the thesis is to observe the accounting convergence for the consolidation of interests in JCEs using the Equity method or the Proportionate consolidation and to investigate the factors that influence managers' decision to reporting one of the two alternative methods. These goals are addressed through the implementation of different methodologies as well as of multiple theoretical frameworks.

Starting from 2005, with the mandatory introduction of the International Accounting Standard (IAS), all the companies adopting such principles have been applying IAS 31 for the accounting of interests in JCEs. The International Standards allows the recognition of investments held in JCEs, in the venturer financial statement, through one of the two methods between Equity method or the Proportionate consolidation. The impact on venturer financial statement will be different according to the accounting method chosen. In particular, under the Equity method an interest in a JCEs is initially recorded at cost and thereafter adjusted for the post-acquisition change in the venturer's share of net assets of the JCEs. Otherwise, under the Proportionate method a venturer's share of each of the assets, liabilities, revenues and expenses of a JCEs is combined line by line with similar items in the venturer's financial statements or reported as separate line items in the venturer's financial statements. Although both methods do not affect

venturer's net income, retained earnings and shareholders equity, they have a relevant impact in terms of components displayed in consolidated accounts. Empirical findings confirm and reveal that when the International Accounting Standards offering multiple options for the valuation of the same items decrease the convergence among financial statements. (Mechelli, 2009; Morais & Curto, 2009). The accounting choice literature (Fields et al., 2001), instead, suggests that, in the agency costs framework, the accounting choice is determined to influence firms's contractual arrangements, including executive compensation agreements and debt covenants, ex-post the choice may be made to increase compensation or avoid the covenant violation, with various objectives, as the contractual motivation, the internal agency conflict-executive compensation, the managerial opportunism, the external agency conflict- bond covenants.

This background makes this thesis particularly appealing since the consolidation of interests in JCEs raises a relevant problem of harmonization and comparability, with both conceptual and operational implications and incentives to investigate the determinants of the managers' decision to reporting Equity or Proportionate.

Moreover, the reporting of JCEs, has always been a controversial accounting issue among scholars, practitioners and regulators. Overall literature on the topic raises several questions in terms of which are the market consequences deriving from the alternative reporting method (Kothavala, 2003; Lim et al., 2003; Graham et al., 2003; Stoltzfus & Epps, 2005; Soonawalla, 2006; Bauman, 2007) differently, relatively little attention has been dedicated to the determinants for the accounting treatments of JCEs (Lourenço & Curto, 2010; Giner & Veron, 2012).

The relevance and the timeliness of the topic are witnessed by the recent issue of IFRS (International Financial Reporting Standard) 11, *Joint Arrangements*, which

removes the multiple accounting options, in prescribing merely the Equity method. The IASB (*International Accounting standard Board*) aims to increase comparability within IFRS and convergence with US GAAP. The recently issued IFRS 11 is a reflection of the role played by the JCEs on the global markets and extensively within the entire economic system.

The study is conducted in the Italian market, as some of its features make it a setting specifically suitable. First, a previous study observed a medium level of comparability among Italian consolidated financial statements in the reporting of JCEs (Catuogno & Allini, 2011). Second, there is a need for more accounting choice studies, and specifically those on JCEs, for countries characterized by predominance of small and medium size listed companies, concentrated ownership and debt financing as the main source of capital (Di Pietra et al., 2008). Third, Italy may be considered as representative of a family business environment in which family members play a relevant role in ownership, management and board composition (Miller et al., 2013).

This thesis fits in the research stream of the accounting choices, that considers the firms rational and that the accounting information produces economics effects. As consequences the managers are not indifferent to the accounting method selected.

The study is structured in three chapters:

- Theoretical aspects of the JCEs;
- Joint Controlled Entities: comparability in a multiple accounting choices. Evidences from Italian setting;
- Behind the Equity method for Interests in JCE.

Each chapter is structured as a specific research design, in terms of research question, methodology and theoretical approach, but the overall research design has been represented as a whole.

The *first chapter* aims to describe, the features of the JCEs, as a technical instruments, and the theoretical aspects that may help to explain the reasons that incentive companies to recur to this instruments, and summarizes the main empirical evidences on this topic.

Firstly a review of the principal studies on JCEs is conducted in order to identify the principal theoretical and empirical directions. In the literature, three theoretical approaches are used to explain the motivation and the choice of JCEs: the Theory of Transaction Costs (Williamson, 1975,1985); Strategic Behavior Theory (Kogut, 1989); Organizational Knowledge and Learning Theory (Polanyi, 1967).

Secondly, the JCEs accounting issue is faced, in particular, the convergence process steps for their accounting treatment. Until 2005 the Italian regulation (Legislative Decree n. 127/1991 art. 33) established the application of the Equity method if the company not consolidated the JCEs, and the Proportionate method for the consolidation of JCEs. Starting from 2005, the IAS 31 has required the application of two alternatives accounting method: Equity or Proportionate. Since the Board considered the multiple evaluation options allowed by IAS 31 as an impediment to high quality reporting of joint arrangements and in order to reduce differences between IFRS and US GAAP, it was necessary a project to replace IAS 31, with the aims to provide more transparent and relevant financial information for the investors and creditors. As a result, the IFRS 11 Joint Arrangements was published in 2011 by the IASB as part of its new suite of consolidation and related

standards, also replacing existing requirements for subsidiaries. The new standard prescribes the only application of Equity Method starting from 2014.

The chapter ends with a summary of previous empirical findings on JCEs, divided into two broad categories: Effects and Determinants of the use of Equity or Proportionate.

The *second chapter* focuses on the accounting converge for the reporting of interests in JCEs using the Equity method or the Proportionate consolidation under the IAS 31, and explores the determinants that could affect the management's accounting choice. After measuring convergence, the research intends to observe if the market is indirectly affects by the lack of accounting convergence practice and rewards firms applying Equity method with better key performance indicators.

The research employs an exploratory research design. To measure the convergence for the consolidation of the interests in JCEs is used the van der Tas Herfindahl *H index*, since it is particularly suitable for the measurement of the comparability within one country (van der Tas, 1988). Subsequently is observed the Price Earning distribution - as a measure of firm's investors reputation - associated with the application of each accounting method required by IAS 31 (Darryl et al.,1987). Finally is adopted an exploratory research design, the Principal Component Analysis (PCA), (Ghauri et al., 1995) based on two parameters, Price/Earnings (as a measure of firm's investors reputation) (Little, 1999) and method of consolidation for JCEs (Equity or Proportionate) with the aim to investigate the existence of latent variables that could explain the accounting choices for the consolidation of JCEs.

The *third chapter* is framed in the contracting-based theory, coherently with previous studies on the accounting choices determinants (Missonier-Piera, 2004;

Astami & Tower, 2006; Quagli & Avallone, 2010; Waweru et al., 2011) and aims at investigating factors that influence managers' decision to use the Equity method for the accounting of JCEs under IAS 31.

The opportunistic view suggests that managers choose accounting policies for their own benefit which depends on debt covenants, political costs and bonus plans (Watts & Zimmerman 1978; 1986; Holthausen, 1990). Since the Equity method results in a performance-improving accounting technique while the Proportionate consolidation represents a performance-decreasing accounting technique for the venturer, the analysis aims to show that contractual efficiency and managerial opportunism drive the Equity method choice. This research employs a quantitative method and the hypotheses are tested by using a mixed-effects logistic model.

The resulting findings are interpreted in light of theoretical frameworks as well as of peculiarities of the context.

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Chapter 1

Theoretical aspects of the JCEs

1.Introduction

The Joint Controlled Entities are one of the most used forms of enterprise set up to achieve a strategic alliance.

In the current context of a globalized economy and formalization of the strategic agreements the JCEs represent a tool of enterprise flexible, allowing to quickly deal the technological change in the competitive markets and to achieve the strategic objectives of the enterprise. In particular the JCEs are a useful tool set up to start a process of internationalization or in a logic of reduction of transaction costs.

In its most traditional definition the JCEs are firms jointly controlled by two or more separate entities, which retain their legal and economic autonomy.

The uniqueness and complexity of the instrument requires an in-depth knowledge of the economic reality underlying the alliance.

In this first introductory chapter, will be analyze briefly, the figure of the JCEs, as technical instrument, and the theoretical aspects that may help to explain the reasons that incentive companies to recur to this instrument.

Finally, the accounting issue will be also reviewed.

The JCEs, or jointly controlled entity, are defined as agreements between two or

more parties, also called venturers, who share investments, capabilities, time, knowledge and other resources, to implement a particular project or to constitute an separately entity. The agreement qualifies the common interest and determines the sharing of profits and losses.

At an organizational level, this type of agreement originates from associative relationships, known in the English commercial practice since the early Middle Ages.

From a legal perspective, however, the JCEs have US origins. In fact, the aim of many of the members of the Negotiated Acquisitions Committee of the Business Law Section of Washington DC was the formalization of this model. The members worked on the preparation of an archetype of the JCEs agreement from the spring of 1994, giving rise to an evolutionary trend towards the modelling of the contract. Currently, the JCEs represent an intermediate tool, that allows enterprises to achieve both the need for organizational independence, and the need to cooperate and share resources in order to create a competitive advantage.

In academic context, several definitions have been given to this kind of instrument. Among the main important is worth to remind the Friedmann and Kalmanoff definition (1961): “the JCEs are partnerships between companies, involving a collaboration for a period of time not limited”, that one of Sciarelli (1973), “In a JCEs all participants have benefits by the association of their technical resources, financial and otherwise”, and, according to Hall (1984), “a JCEs can be any type of agreement by which two or more parties come together and combine resources to fulfill a specific economic goal”.

Thanks to a joint analysis of academic definitions, it is possible to draw a number of elements that seem to recur constantly in these agreements:

- ❖ The will of a jointly agreement of the partners;
- ❖ The joint of interest;
- ❖ The integration of resources;
- ❖ The retention of the operational and legal autonomy of the co-venturers;
- ❖ The division of the shares held by the partner companies;
- ❖ The active role played by the participants to the agreement;
- ❖ The division of income, expenses, profits and losses resulting from the common control.

2. JCEs taxonomy

The definition of JCEs, given above, reflect the point of view used to describe the agreement. These different definitions give rise to different types of agreements (Ferrari & Montanari, 2012).

There are several configurations based upon the JCEs peculiarities. The most important distinction, for practical purposes, considering the legal nature of the relationship as the focal point, is the difference between Equity and non-Equity JCEs (or Contractual JCEs).

The first involves the formation of a new company, whereas the second envisages the ratification of an agreement in order to achieve common goals.

It is important to emphasize that the choice between the two types is run to the needs for more or less flexibility and different types of targets, such as, for example (i) a long-term collaboration or (ii) the achievement of a specific and predetermined goal. Sometimes, this choice is conditioned by national regulations. Taking into account the object underlying the agreement it is possible to come up

with a differentiation between “operational” and “instrumental” JCEs.

The firsts are referred to durable agreements, involving the performance of critical activities, or that pursue long-term goals unreachable without no specific collaborations.

The seconds have a predetermined duration, an occasional nature and finish with the achievement of the purpose for which they were established.

Additionally we consider the participants to the agreement, and we can distinguish between JCEs of first and second degree. In the first case, each venturer is represented by a single firm. In the second case each venturer is the expression of a group of companies, which, however, want to participate in this agreement as if they were a single component. This second type is certainly very useful for small and medium enterprises, as joining themselves into each other, they can reach the size threshold, to participate in an agreement, or at least obtain a greater contractual power.

Depending on the industry in which the JCEs will operate, we distinguish horizontal, vertical and conglomerate JCEs. This distinction is based upon the sector in which the venturers operate. The horizontal JCEs operate in the same sector of the venturers, the venturers and the JCEs have the same strategic activities. In the vertical agreements the JCEs activities are in a stage of the venturer product process, the conglomerate JCEs operate in new sector, unknown for the venturer.

Based upon the equity share held by each venturer we can distinguish between equal and not equal JCEs. In the first case, the amount of capital owned by every participant is equal, unlike in the second one. This discriminant is erroneously associated with the degree of control within the agreement but, in reality, there is

no direct correspondence between the amount of equity held and right control. There are several cases which the minority shareholders obtain control of the JCEs due to specific managerial and/or superior capabilities.

Based upon the degree of management influence, we can distinguish the JCEs in dominant and shared. In the first case a partner assumes a “dominant” role in making strategic and managerial decisions, in the second one, all partners contribute equally to the formation of these policies.

Finally, on the basis of the nationality of the venturers, we can distinguish the JCEs in domestic and international, depending on whether or not the partners belong to the same country.

The definition of this type of agreement and its various facets, allow us to understand how, through it, is possible a combination of resources and capabilities that make the total value generate by the agreement greater than the sum of the individual firms benefits. This allow to achieve mutual benefits and synergies, which are the main factors leading to establishment of a JCEs.

3. Theories on JCEs

The JCEs are important alternative to contracting, acquisition and international development, but the literature has not in-depth and analyzed, hence the study of the JCEs has attracted a relevant interest in the main press and academic literature (Friedman 1961; Hladik 1985).

This section provides a review of the principal studies on JCEs in order to identify the principal theoretical and empirical directions.

In the theory the JCEs are perceived as an instrument of organizational learning,

and are used for the transfer of organizationally embedded knowledge which cannot be planned easily or imply high market transactions (Kogut, 1988).

The JCEs occur when two or more companies share a portion of their resources within a common legal structure. Such definition views the JCEs as a selection among alternative ways by which two or more companies can transact. It is important to find a theory that can explain why this agreement is chosen over such alternatives as acquisition, supply contract, licensing or market purchases (Berg & Friedman, 1980).

In the literature three theoretical approaches are used to explain the motivation and the choice of JCEs:

- 1) The theory of transaction costs (Williamson, 1975, 1985);
- 2) Strategic behavior;
- 3) Organizational Knowledge and learning.

Transaction costs

The transaction costs referred to JCEs involves the question of how firms should organize its activities with other companies.

According to Williamson, the firms choose to how they transact to minimize the sum of production and transaction costs. Production costs differ between companies in relation to the scale of operations, to learning, or the ownership knowledge. The principal aspects of high transaction costs between arms-length parties is small numbers bargaining in a bilateral governance (Williamson, 1975).

There are a small numbers bargaining when a switching costs are due to asset specificity, like the degree to which assets are specialized to support trade between

only a few parties (Kogut, 1988). The evidence of the Williamson's analysis is that a company can choose to produce a component although its production costs are higher than what outside suppliers incur. A decision may be optimal if the transaction costs outweigh the production saving.

A necessary condition to prefer the JCEs to internal development or acquisition, is that the production costs achieved through this structures are very higher than external sourcing for at least one of the partners.

The transaction cost theory must explain what discriminates the JCEs from a contract. Two elements are distinctive: a) joint ownership control and rights, b) the mutual commitments of resources. The JCEs are the best organizational structure when occurs a high uncertainty over specifying and monitoring performance, and in relation to the degree of asset specificity. The uncertain plays a significant role in encouraging the JCEs over a contract. The JCEs mitigate the uncertain when represent a vertical investment for one party and a horizontal for the other, since replace a supply agreement. The hazards represents the problem of how an agreement is used to divide excess profits, defined as "appropriability" problem. The JCEs resolve this issue since represent a superior monitoring mechanism and alignment of incentives to reveal information, share technologies and guarantee performance. Is possible to alignment the incentives sharing costs and/or profits and the mutual investments in dedicated assets. In this way, both venturer gain or lose the performance of the venture (Kogut, 1988 pag. 321).

According to Alchian (1950), the competition among different forms of institutions leads to the survival of those most cost-productive forms. These forms can occur via the marketplace or by the inclusion of activities within a firm, depending on which arrangement is more cost effective (Coase 1937; Alchian & Demsetz, 1972).

Firms that organize themselves to minimize transaction costs are more likely to survive (Fama & Jensen 1983).

Scholars argue that when the market acquisition costs or the post- acquisition costs are significant, the JCEs can represent the most efficient form of organizational agreement, since the mutual task is pursued inside the venturers' firms (Hennart, 1991; Balakrishnan & Koza, 1993; Hennart & Reddy 1997; Chen & Hennart, 2004).

The Hennart study(1988) is considered the first contribute that uses the Transaction costs theory to explain organizational structures as the JCEs. The author identifies two type of JCEs, scale and link. According: "Scale JCEs are created when two or more firms enter together a contiguous stage of production or distribution or a new market". The main feature of these venturers is that they result from similar moves by all the parents: forward or backward vertical integration, horizontal expansion, or diversification, "in the Link JCEs the position of the partners is not symmetrical, the JCEs may constitute a vertical investments for one of the parties and a diversification for the other". Scale JCEs allow firms to reconcile the need to bridge a failing market with the presence of a large differences efficient scales across successive stages; link JCEs are created to remedy the simultaneous failure of at least two market.

Considering above the JCEs are used as a strategic tool helping companies to achieve specific goals, reducing transaction costs (Williamson, 1991).

Strategic behavior

Other explanation for the creation of JCEs derives from theory on how strategic

behavior affects the competitive positioning of the company. The main difference between the Transaction costs theory and Strategic behavior Theory is in the objectives attributed to firms. The first, argues that companies transact to maximize the sum of production and transaction costs, the second, argues that companies transact to maximize profits through improving a firm's competitive position facing the rivals. In particular, the strategic behavior, explains how competitive positioning influences the asset value of the firms while the transaction costs defines the costs specific to a particular exchange (Kogut, 1989) Under this perspective the creation of the JCEs avoid the costly duplication among companies but preserve the competition generating a welfare- improving. In many case a JCEs are used as an instrument to deter entry or erode competitors' positions. Vickers (1985) describes the JCEs as a defensive investment by which companies hedge against strategic uncertainty, especially in sectors of moderate concentration. The strategic behavior suggests that the venturer will be chosen to improve the competitive positioning of the parties.

We can conclude that respect to transaction costs theory, the identification of the motives to cooperate and the venturer's selection, are more relevant under the strategic approach.

Organizational Knowledge and learning

Both transaction and strategic behavior theory provide an satisfactory economic reason to explain the creation of JCEs. The JCEs are a means by which companies learn or retain their knowledge, under this perspective, are a vehicles by which tacit knowledge is transferred (Polanyi, 1967). Unlike the transaction costs theory,

other forms of transfer, (such as licensing), are not considered, because the very knowledge being transferred is organizationally embedded.

In the transaction costs theory a JCEs are proposed if neither venturer owns each other's technology, conversely following Winter (1982) a firm may decide to JCEs in order to retain the capabilities ("remember by doing") of organizing a particular activity while benefitting from the superior production techniques of a partner. The company can choose a more costly JCEs to exploit the capability in the future. The JCEs are driven, in this context, by the difference in the value of options to explore future opportunities. In summary a JCEs is preferred if one or both companies intend to acquire the others organizational know-how, or one firm intend to maintain an organizational capability while benefitting from another firm's current knowledge or costs advantage.

The three perspective analyzed provide different explanation to encourages a JCEs. The transaction costs theory views the JCEs as an efficient solution to the hazards of economics transactions.

Strategic behavior views the JCEs as an enhance market power in a context of a competitive rivalry.

The organizational knowledge and learning views the JCEs as an instrument by which organizational knowledge is exchanged and imitated.

4. Strategic aspects of JCEs

Few studies have analyzed how the dimensions of the JCEs strategies should vary under different competitive circumstances. The diverse industry conditions make JCEs more or less appropriate as a competitive strategy alternative, in particular the

JCEs can exacerbate the competition, stabilize profit levels or motivate structural changes in vertical integration; hence the managers must examine how they might best use JCEs, especially if other cooperative strategies are being used with increasing frequency (Harrigan, 1988).

Harrigan (1985), identified four key dimensions of JCEs strategies in a framework of alternative strategies:

- 1) The form of business units' cooperative ventures (shared- equity, non-equity arrangements);
- 2) The focus of cooperative strategies pursued by ventures' sponsoring firms to industry features in the venture's competitive conditions;
- 3) The venture's need for operating autonomy from its sponsoring companies' activities is also related to these industry traits;
- 4) Venture's duration is related to competitive behavior within the venture's industry.

The elements to consider when formulating cooperative strategies are: i) demand uncertainty, ii) customer features, iii) infrastructure development, iv) production technology, v) the volatility of competitive behavior, vi) the nature and the extent of linkages between the venture and its owners.

These six key traits can be classified in two effects: *demand traits* (that suggest the need for cooperative strategy, and *competitive traits* (that suggest how firms will respond to the need for cooperation in a particular industry environment).

The effective JCEs strategies must consider the forces of these key traits which affects the four dimensions above (Beamish, 1984)

The studies on demand traits indicate how long a market opportunity may be expected to remain attractive, the firms can use the JCEs if the opportunities in

some markets are short-lived, since using a JCEs is possible to entry in these growing markets to exploit them before their possible decline. Demand must be attractive to justify firms' investments, whether through a JCEs or by going it alone. The key demand traits include demand uncertainty, customer features, production technology.

The studies on competitive traits suggest how firms respond to the need for cooperation that exist in various type of markets. The key competitive traits include the volatility of competitive behavior, infrastructure development the nature and the extent of linkages between the venture and its owners.

Competitor aspects reflect the actions that companies undertake to satisfy customer demands. These actions affect their decisions about:

- ❖ Competitive behavior;
- ❖ Capital intensive;
- ❖ Strategic posture;
- ❖ Relationship that compose industry infrastructure;
- ❖ Technological scale, in terms of frequency of changes in technology.

5. Accounting convergence process in Italy

In the context of a globalized economy, the corporate disclosure have to be adequate, considering the active rule of the investors in the international capital market.

Taking into account of the actual developments of the markets, the European Union legislation states that the financial statements, both individual and consolidated, must to provide a "true" and "fair" view of the financial statement

position and of the net income of the group.

Hence, an economic entity, which can be a group of companies, is forced to become transparent with respect to a range of stakeholders belonging to different countries, in order to guarantee the quality of the investors' decision making process.

In this context appears clear the importance and sensitivity of an international comparability process (Ferrari & Montanari, 2012). Comparability is a characteristic of the accounting disclosure which allows financial statement users to be able to recognize the differences among companies, without taking into consideration that these differences could come from the specificities of the accounting rules.

In the intention of the European Legislator, the harmonization process should have led to comparability of annual reports in countries belonging to the European Union. Although European countries with heterogeneous accounting traditions have been invited to use the same set of principles when drawing up financial statements, still is possible to observe institutional, social, cultural and environmental differences in various geographic areas. The mandatory application of the same set of accounting rules, the "Jure" harmonization, does not necessarily lead to harmonization in the accounting practices, because, as stated above, companies could still choose divergent accounting behaviors, especially in the case of standards that offer multiple options for the valuation of the same items, each of which is compliant with the standard (Land & Lang, 2002). Consequently, the pursuing of harmonization, and hence comparability, is entrusted to the standard setting process, as well as to the practical application of the standards themselves (Rahman et al., 2002; Thorsten & Gornik-Tomaszewski, 2006; Jagannath &

Nanjegowda, 2008; Paananen & Henghsiu, 2009). However, the standard setting process aims to increase the compliance between regulations and accounting practices by means of de jure harmonization, the de facto harmonization takes place when the accounting behaviors converge, even if the accounting regulation allows multiple evaluation options. While standard setters are mainly concerned with de jure harmonization, users of financial statements benefit most from de facto harmonization.

The accounting harmonization produces several benefits (Montrone, 2009), for example in those countries where an adequate level of codification of accounting standards is not achieved, the reference to existing and accepted standard eliminates the cost and time of finding of new principles; makes the international transactions easier, which, in the current context, are extremely frequent; makes the capital market more efficient, finally the firms can obtain more easily internationally funds, being the information reliable and comparable even for foreign investors.

Consolidation of interests in JCE

Contrary to the other countries, where the preparation of consolidated financial statements has been taken place since a long time, in Italy, this topic has always received limited attention. The lack of focusing on this issue has lasted until the adoption of the Legislative Decree n. 127/1991 art. 33 (Montrone, 2009). The Legislative Decree has established that the limited companies, partnership limited by shares and limited liability companies that exercising a control over an entity must to prepare the consolidated financial statement in accordance to the rules

laid down by the Decree. As consequence, for the first time, in 1991, with the introduction of the Decree, the proportionate consolidation method was explicitly prescribed for JCEs. Until the middle of the last century, this method was adopted extensively for all subsidiaries included in the consolidation (not just those under joint control), consistently with the provisions of the Theory of Property (Andrei et al. 2011).¹

Fifteen years later, according to the communication n. 508/95/CEE, “Accounting harmonization: a new strategy towards the international harmonization”, the European Commission finally chose the International Accounting Standards principles as accounting base for the continental companies. The International Accounting Standard are issued by a group of accounting professionals, the International Accounting Standards Committee (IASC), since 1973. The IASC has acted, until 2001, as an internal committee of the world organization of the professional accountants, to become, then, a private foundation of US law (IASC Foundation). Within this foundation, there a structure with the responsibility for issuing accounting standards, namely the International Accounting Standards Board (IASB).

The principles, issued by this organism, are now called International Financial Reporting Standards (IFRS) and replace the previous International Accounting Standard; anyway the general framework refers to the international accounting that is labeled IAS/IFRS.

Among the principles endorsed, we analyze, for the purpose of this thesis the IAS 31, “Financial Reporting of Interests in Joint Ventures”. Under IAS 31 the control

¹ This theory, originated in Anglo-Saxon countries, identifies the group as a mere offshoot of the parent company, created through investments in other companies. The consolidated financial statements, therefore, is considered as an extension of the parent company.

is defined as the power to govern the financial and operating policies of an entity in order to obtain benefits. The joint venture is defined as a “contractual arrangement whereby two or more parties undertake an economic activity subject to joint control”, where the “joint control” is the contractually agreed sharing of control over an economic activity and exists only when financial decisions, management and strategic, on the business, require the unanimous consent of the participants.

Concerning to the fields of application of the principle, it should be applied for the accounting of investments in joint ventures and for the reporting of assets, liabilities, income and expenses of the joint ventures in the financial statements of the participants and investors, regardless of structures or the manner in which the operations of the joint venture activities take place.

In summary, regardless of the exclusions, IAS 31 distinguishes three different types of joint ventures:

- 1) Jointly controlled operations;
- 2) Jointly controlled assets;
- 3) Jointly controlled entities.

All types have a common basis, the venturers are bound by a contractual agreement and this agreement establishes joint control. The contractual arrangement is the distinctive feature of the joint venture, because, without it, the participation would be classified as an investment subject to significant influence (IAS 28). Thus, the presence of the contractual agreement is critical for the application of IAS 31.

The “jointly controlled operations”, are set up to allow the use of assets and other resources of the participants, rather than the establishment of a new entity. Each venturer uses its own property, plant, equipment and manages its inventories,

costs and liabilities, can capture new funding, where will be solely responsible. The contractual arrangement defines the allocation of revenue from sale of the joint product and any expenses incurred.

The venturer should recognize in its financial statements the assets subject to control, the liabilities and expenses that he incurs and, finally, the share of income earned.

For this type of joint venture is not expected to draw up a specific financial statement, but only an internal reporting is required in order to establish the economic performance of the venture.

The second type of joint venture, the “jointly controlled assets”, are defined as an agreement of control or of joint ownership, by the venturers of one or more assets invested to the venture.

These assets are used to obtain economic benefits. Each participant has, therefore, control over its share of future economic benefits through the ownership share of the jointly controlled assets.

Each participant shall recognize in its financial statements:

- ❖ The share of the jointly controlled assets;
- ❖ Any liability incurred;
- ❖ The share of liabilities incurred, tackled jointly with partners;
- ❖ The share of revenue from the sale or use of the products of the venture;
- ❖ Any cost incurred in respect of its interest in the jointly controlled assets.

The accounting treatment of jointly controlled assets reflects the substance and economic reality.

Also in this case for the jointly controlled assets, it is not required the preparation of the financial statements, although management accounts may be predisposed.

The joint controlled entities are the most widespread form of jointly agreement. These consist in the creation of an entity, a partnership or other entity, subject to joint control. These are independent in making operational decisions, but their choices are based upon the contractual agreement that is the basis.

This entities control the assets covered by the agreement, support liabilities, expenses and earns income. Also, can access funding of which will be solely responsible. Each venture entitled to a share of the results of the entity.

This structure is required to prepare financial statements in accordance with IAS 31.

The participants, can recognize the participation through one of two alternative methods, equity or proportionate method.

According to the proportionate consolidation, the value of the investments is offset only with the portion of equity attributable to the group, not disclosing, so, the items "Minority interests" in the balance sheet and "Minority interests" in the income statement, as there is no direct representation of minority interests.

Additionally, all other consolidation adjustments, including gains and losses within the group, are eliminated proportionately.

In the case of elimination of receivables and payables between consolidated subsidiaries with different methods of consolidation, it is necessary, for the purposes of proportionate consolidation, the reclassification of the portion of the credit or debit due to/from third parties.

The equity method, however, has completely different effects on the financial statements of the venturer. This method of consolidation is explained in IAS 28.

According to the equity method, participation in a JCEs is initially recognized at cost and, subsequently, the carrying amount is increased or decreased to reflect the

share of the associate's profits or losses of the investee, after the date of acquisition.

The application of this method is characterized by the systematic review of the value of the investment following on the performance of the subsidiary" (Aglia et al., 2013).

With the application of IAS 31, we have moved from the obligation of using the proportionate consolidation (Legislative Decree no. 127/1991) to the choice of the equity method or the proportionate method.

In recent years, however, the debate on appropriate accounting methods provided by the IAS and the convergence process versus US accounting standards, namely the Generally Accepted Accounting Principles (US GAAP), issued by the Financial Accounting Standards Board (FASB) has increased. Following on this debate the IASB has assumed, then, a new decision, with significant repercussions on JCEs.

Versus the US GAAP

With the aim to achieve the compatibility between IAS and US GAAP, the IASB and the US FASB concluded, in May 2011, the project for the issue of three new standards, concerned the financial and disclosure requirements for investments in subsidiaries, joint ventures agreements, in associates and non-consolidated companies. The start date of the preparation of financial statements, according to these principles, would be January 1, 2014.

The new standards are designed to provide better financial information to a wider range of stakeholders. In fact, the better is the quality of information provided by financial statements, better will be the decisions of stakeholders, with lower

information asymmetries.

In this regard, the accounting treatment for JCEs has been object of fervent debate. The revision of IAS 31 has led to the issue of IFRS 11, as a result of convergence process between US GAAP and IAS, to provide a better and more transparent financial information.

The IFRS 11 address two aspects of IAS 31: first, that the structure of the arrangement is the only determinant of the accounting and, second, that an entity cannot chose the proportionate accounting treatment for interests in JCEs. This IFRS shall be applied by all entities that that have an interest in arrangements that are controlled jointly (ie joint arrangements) and defines a joint arrangements as an arrangements which two or more parties have a joint controls.

With the terms joint arrangement the standards intends either a joint operation or a JCEs, the main features is the joint control, defined as “the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control”(IFRS, a:7).

The classification of a joint arrangement as a joint operation or a JCEs depends upon the rights and obligations of the parties to the arrangement.

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. Those parties are called joint operators.

A JCEs is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement. The accounting is different if we consider the joint operation or a JCEs.

In particular for the joint operation the “operator” shall recognizes in relation to its

interest in a joint operation:

- ❖ its assets, including its share of any assets held jointly;
- ❖ its liabilities, including its share of any liabilities incurred jointly;
- ❖ its revenue from the sale of its share of the output arising from the joint operation;
- ❖ its share of the revenue from the sale of the output by the joint operation;
- ❖ its expenses, including its share of any expenses incurred jointly.

For the JCEs, the venturer shall recognize its interest in a JCEs as an investment and shall account for that investment using the Equity method in accordance with IAS 28 (Investments in Associates) and JCEs unless the entity is exempted from applying the Equity method as specified in that standard.

Is not easy to distinguish if there is an interest in a joint operation or in a joint venture, but the IFRS guidance will assist entities to assess their rights and obligations by setting out those indicators that an entity should consider: the structure and legal form of the arrangement, the terms agreed by the parties in the contractual arrangement and, when relevant, other facts and circumstances.

The main difference between IAS 31 and IFRS 11 are in the accounting requirements, in the IAS 31, were driven only by whether the arrangements were structured through an entity. For example, 'jointly controlled operations' and 'jointly controlled assets' were arrangements in IAS 31 that did not require the existence of an entity. Firms were simply required to recognize assets, liabilities, revenues and expenses arising from the arrangements. However, when the same arrangements were structured through an entity, IAS 31 classified them as 'jointly controlled entities' and offered venturer an accounting choice between Equity method and Proportionate consolidation. Under the new requirement the

accounting for joint arrangements will be driven by a principle, namely that parties should recognize their rights and obligations arising from the arrangements. The parties' rights and obligations will result in either the recognition of assets and liabilities and corresponding revenues and expenses or in the recognition of an investment. IFRS 11 provides application guidance to assist entities in determining precisely whether they have rights to assets and obligations for liabilities (in which case, the parties have an interest in a joint operation) or whether they have rights to the net (in which case, the parties have an interest in a JCEs). An entity will be required to apply judgement when assessing its rights and obligations arising from the arrangements, because this will determine the classification of the arrangements.

Concerning the exclusive application of the Equity method required by the new standards is important to underline that the IAS 31 did not suggested the use of the Equity method, since it does not reflected the substance and reality of an entity's interest in a joint controlled entities. The IASB' change of course is associate with the meaning of "economic substance" of the arrangement. It is defined by the rights and obligations assumed by the parties when carrying out the activities of the arrangement. As a result, the accounting for joint arrangements should faithfully reflect the rights and obligations that the parties have in respect of the assets and liabilities relating to the arrangement. This is the key of the principle.

In that respect, the IASB observes that many respondents relate economic substance to situations where the activities undertaken through joint arrangements are closely related to the activities undertaken by the parties on their own, or to situations where the parties are closely involved in the operations of the

arrangements. For these respondents, the method that better reflects this proximity between the entity's own activities or close involvement and the activities carried out through joint arrangements is Proportionate consolidation. The IASB thinks that this interpretation of "economic substance" is unsatisfactory because in some instances the activities carried out by the parties to joint arrangements can be operationally very similar, but the contractual terms agreed by the parties to these joint arrangements can confer on the parties very different rights to the assets and obligations for the liabilities relating to such activities. As a result the IASB believes that, by requiring an entity to recognize its rights and obligations arising from its joint arrangements, the core principle of IFRS 11 more faithfully represents the economic substance of those arrangements. arrangements, the core principle of IFRS 11 more faithfully represents the economic substance of those arrangements (IFRS 11, Joint arrangement).

6. The main studies on JCEs and accounting choices

One of the most important contribution in the accounting literature concerning the accounting choices is provided by Fields et al. (2001).

The paper makes a research review from 1990 to 2001 examining the determinants and consequences of accounting choice addresses the fundamental question of whether accounting matters.

The authors structured the analysis considering three different market imperfections that affect the management choice:

- 1) *Agency costs*: related to the contractual issue, manager compensation and debt covenants. In this perspective the accounting choice is determined to

influence firms's contractual arrangements, including executive compensation agreements and debt covenants. It possible that ex-post the choice may be made increase compensation or avoid the covenant violation. The objective could include: contractual motivation, internal agency conflict- executive compensation, managerial opportunism, external agency conflict- bond covenants,

- 2) *Asymmetries*: In this case the accounting choice has as objective modify the asset price. The objective could include: asset pricing motivation, disclosure policies, earnings managements, market efficiency.
- 3) *Externalities*: affecting non contracting parties (third party contractual) the accounting choice attempts to modify the decision of third parties. The objective could include: taxes, regulation.

To analyze the role of accounting, they provide a definition of accounting choice:

“An accounting choice is any decision whose primary purpose is to influence (either in form or substance) the output of the accounting system in a particular way, including not only financial statements published in accordance with GAAP, but also tax returns and regulatory filings”

This definition is broad enough to include the choice of Equity vs. Proportionate for the consolidation of interest in JCEs , choice affecting the level of disclosure, the value relevance and the consolidated financial statement ratio.

The main studies on the accounting treatment for JCEs are divided into two broad categories: Effects and Determinant of the use of Equity or Proportionate.

A brief review of the most important paper concerning the effects and the determinants of using Equity or Proportionate is conducted.

Effects

The papers on the effects of accounting treatments for JCEs, concern the value relevance to alternative reporting method. Since the Equity or Proportionate do not affect venturer's net income and shareholder Equity, but have a relevant impact on the main key performance indicators and on the disclosure provided, is possible to observe the market effects deriving from alternative reporting.

In 2003, Kothavala investigates the relative information provides by Equity or Proportionate method for the accounting treatment of JCEs, for explaining the market risk. The author uses a Canadian sample of 117, for the period 1995 to 2000. The research is conducted in the Canadian context since the accounting regulation requires the application of the Proportionate consolidation, in contrast to the US regulation that requires the only application of the Equity method.

In particular the research testes the risk relevance captured by the ability of financial statement amount to explain variation in the market risk benchmarks.

As market benchmark proxy is considered:

- 1) the share price volatility, (measured as standard deviation of share price calculated over 250 trading days prior fiscal year- end);
- 2) the bond rating range.

The study analyzes the relation of the market risks with the accounting ratios under the application of the Equity and under the Proportionate, through a pro-quota calculation.

The accounting ratios used are size, debt to Equity, return on assets, variability of return on asset, profit margin, revenues volatility. The author considers this ratios, since are affected by the method used and are linked to market risk.

The price based measures reflect a wide spectrum of market participant and

financial user. The bond rating measures reflect a small group of users that used a specialized information and attest to the credit-worthiness of firms and the probability of firms defaulting on its principal payment.

The assumption of the author is that the bond raters consider JCEs liabilities along with investor liabilities (Bailey 2003) hence if the market participants and the bond raters consider the liabilities of JCEs like investor liabilities the Proportionate accounting ratios will reflect the price volatility, because include more participant, and the Equity method will reflect the bond rating, because the raters have other specific information and for them is not important the Proportionate.

He considers the following assumptions on the accounting ratios:

- 1) the larger firms have less risks than smaller firms ;
- 2) leverage is a good predictor of financial failure and bond ratings;
- 3) return on asset is a proxy of asset risks;
- 4) there is an association between earnings volatility and systematic risks;
- 5) profit margin is a good predictor of bond rating, low profit margin increases firm risk;
- 6) revenues volatility is a measure of asset risk.

The results show that the Proportionate has higher risk relevance than Equity to explain the price volatility, but the Equity has higher risk relevance than Proportionate to explain the bond rating, it depend on the type of user that are interesting to the balance sheet.

Graham et al., in 2003, analyze the information provides by the Equity and the Proportionate consolidation for the accounting of JCEs in predicting accounting return on common shareholders equity. They use a sample of Canadian firms

reporting JCEs under Proportionate consolidation. The sample is composed by 78 companies for the period 1995-2001. Also in this case a pro- forma simulation of Equity method is conducted.

The main assumption in the study is that the ROCSE (the rate of return on common shareholders' equity) under the Equity method is the same that under the Proportionate method, but the authors examine the predictive ability of the component of ROCSE under the alternative methods.

The ROCSE components are: leverage, total asset turnover, profit margin.

They apply four different regressions model to consider separately:

- the effect of each financial statements measures under the Equity and under the Proportionate on ROCSE;
- the effect combined of all financial statements measures on ROCSE.

The results reveal that the Proportionate consolidation better predicts the future return on common shareholder's Equity.

Stoltzfus and Epps (2005) conduct an analysis on bond risk premiums, to determine if creditors of companies with investments in JCEs reflect "legal" or "implicit" measures of the debts of JCEs.

In particular the "legal" prospective considers the loss from an investment in a JCEs limited to the investment, the "implicit" prospective considers interdependent the activities of the JCEs and venturer. The legal view reflects the Equity as accounting method, and implicit the Proportionate.

The aim of the study is analyzes if the bond risk premiums are more highly associated with accounting number of Equity method than Proportionate, it clearly depends on how the creditors view the debts.

This study compares the accounting information generated using Equity method

and using Proportionate with a US sample for the period 1996 to 1999.

Bond risk premiums are defined as the difference between the yield on a risky security (corporate bond) and the yield on a risk-free. The independent variables are the return on asset, debt to market, interest coverage, ratio, variance of net income.

The hypothesis carried is the following: if creditors view la JCEs using the legal interpretation, bond risks measures should ignore the off balance sheet JCEs debts (that not involved directly the investor) because the company's loss is limited to the original investments, on the other hand if is used the implicit bond risks measures adjust for the off balance sheet debts. In the implicit perspective the risk premium model improves with the use of Proportionate consolidation.

In addition considering that the creditors of a companies with investments in JCEs guarantee the debt of JCEs, should assess a greater risk of default due to the presence of guarantee, for this reason the sample is split in two: with guarantee and without guarantee liabilities, to understand if there is an influence on the power of bond risk model. In this second case the risk premium model improves with the use of Proportionate consolidation when limiting the sample to companies that guarantee the debt.

The results show that there is no improvement in the association between bond premium and accounting information due to the converting from Equity to Proportionate. On average, creditors do not get better information with accounting data based on Proportionate consolidation. The result change when consider the guarantee of the JCEs debts, there is a stronger association to risk premium when is used the Proportionate consolidation.

Bauman (2007) tests if the financial statement measures under the Proportionate

consolidation for the accounting of JCEs are more relevant for the bond rating than financial statement measures under the Equity consolidation. The researcher uses a sample of manufacturing companies under US GAAP. The principle prescribes the only application of the Equity method in opposition to the Canadian sample where is prescribed only the Proportionate consolidation.

The study makes a reviewing to the Kothavala (2003) analysis, and provides additional evidence regarding this topic, since the results are completely in contrast with the previous study: the Proportionate consolidation is more relevant for explaining bond ratings. In addition the analysis is conducted considering the guarantee of the JCEs debt, in particular according to Stoltzfus and Epps (2005) the research questioning how different may be the result if the firms guarantee the debt of JCEs.

In the first step the author employed the same model applied by Kothavala, with the same variables. Also in this study a simulation of pro forma consolidation of Proportionate method is done, considering that the companies have to use only the Equity.

In the second step the author modifies the Kothaval's model. In particular replaces the market value of Equity for the book value of Equity, for the revenue volatility and replaces book value of Equity in the leverage term.

In the third step the author includes the guarantee of investee obligation made by investors. The sample is composed by 39 firms and 173 observation for the period 1999-2001. The results indicate that the Proportionate consolidation provides greater relevance for explaining bond rating. The differences in the results could be traced back to the sample used, that in this analysis is more homogeneous, because considers only manufacturing firms. In addition in opposition to Stoltzfus and

Epps analysis this result are not affected by the guarantee on debt.

Determinants

The studies on the determinants of the management' accounting choice for the consolidation of interest in JCEs using Equity or Proportionate are really few, and consider which could be the appropriate reporting method. The lack of evidence on this topic in the accounting literature, especially in Italy, make the present study appealing.

The following the main contributions.

Reklau, (1977) investigates if the accounting method for the consolidation of interests in JCEs is appropriate in the American context where is required the application of the Equity method for the JCEs when the investor is able to exercise significant influence over the entity. The variables analyzed are:

- ❖ the form of organization: is important to distinguish between corporate or no- corporate form, in the first case the investor is limited liability with respect to the JCEs 's obligations, a creditor's recourse for a JCEs liabilities is limited to the asset of JCEs. The author argues that limited liabilities may be related only to the current liabilities (trade payables or accrued expense) because many institutional lenders would require that least one of the investor guarantee directly or not all or a substantial portion of the institutional loans of JCEs. In this case the author considers better the Proportionate consolidation;

- ❖ The nature of JCEs: some arrangements are essentially financial agreements, and the investor have a passive rule. In this case for the author is more appropriate the Equity method;
- ❖ The JCEs liabilities: the liabilities of a corporate JCEs are not directly enforceable against its owners from the creditors; but the guarantee of all JCEs loans by at least one of co-venturers is often required by the lenders because is the sole basis of a JCEs' ability to borrow. There are many indirect guarantees (coverage of debt service, working capital maintenance agreements, price supports agreements). In other case, many corporation prefer to guarantee the JCEs debt in order to protect their business reputation, so in many case, we have the same risk or rewards of a non-corporate forms. The Proportionate is considered more appropriate.
- ❖ The financial condition of co-venturers: is an important issue to evaluate the risks associated with investments in JCEs, in the case of a non-corporate JCEs but also for a corporate JCEs when are guarantee the debt of JCEs if one of the co-venturers is in a weak financial condition, it involved the other co-venturers and the substance of a JCEs. In this case the author finds the Proportionate consolidation more appropriate.

In summary the researcher concludes that the Equity method is not appropriate and not usefulness to reflect the information about the JCEs.

Lourenço and Curto 2010 provide the first contribute on the determinants of accounting choice for the consolidation of interest in JCEs.

The paper investigates if the type of JCEs influences the management's choice to consolidated with Equity or Proportionate method.

The analysis is conducted in the UK contexts, where starting from 2005, all firms

had to change their reporting method from gross Equity (under UK GAAP) method to Equity or Proportionate method (under IAS 31). The authors hypothesize that the company are more incentive to choose Proportionate consolidation if have the majority of JCEs “Link” instead of “Scale”. In addition the authors assume that the debt covenant and monitoring costs have an impact on the choice between alternative reporting methods.

The authors classify the JCEs in two different categories in accordance with Hennart (1998): scale and link.

Under Hennart definition scale JCEs are create when the venturers belong to the same industry and they enter in a contiguous stage of production or distribution or a new market together (Homogeneous cooperation). This type of JCEs arises when venturers seek to internalize a failing market. In this case, the venturers create the JCEs instead to buying some component from an independent party (Third party). Is a simply way to avoiding the failing transaction costs, they are not directly involved in the agreements they do not bring their specifically skills. The JCEs are closely to a subsidiary. The authors view the Equity method more appropriate.

Link JCEs are create when the venturers come from different business and intend to entry in a new business together and each contributes in a different way to develop the new business, they bring their specifically skills, and have a significant involvement in a day by day management of the business activities. In this case is not present a third party. The JCEs are closely to joint controlled assets or operation (JCAOs) (because is like a control over the venturer’s share of the JCEs’s assets and liabilities). In this case, they suppose Proportionate method more appropriate.

To developed their hypothesis the authors consider, first of all, that the UK firms

prefer to change to Proportionate consolidation when this method better reflect the economic reality of JCEs. The research is conducted using a sample of 159 companies. The dependent variable is the reporting method used following the adoption of IAS 31, The independent variable are:

- 1) the type of JCEs, link or scale;
- 2) leverage position (as debt covenant proxy)
- 3) return on asset position
- 4) assets position;
- 5) return on asset versus cost of debt (as debt covenant proxy);
- 6) importance of change (as monitoring costs proxy),
- 7) guarantee.

Also in the study a pro forma Proportionate consolidation amount are computed.

The results reveal that link venturers are more likely to apply Proportionate, unless when their leverage is lower than but approximate to the industry median; their return on asset is lower than the cost of debt; the change have a significant impact on venturer's total assets or liabilities.

Curto and Fernandes (2011) investigates if the market considers the assets and the liabilities of the JCEs as assets and liabilities of venturer.

The topic is very relevant, and intends to provide an answer about the appropriate accounting consolidation.

The researchers examine how the JCEs liabilities are usefulness to explaining stock price over traditional summary measures, such as book value and earnings (in terms of share price); in particular the authors analyze the value relevance of JCEs' assets and liabilities compared to those of the venturer, and the incremental information content in the Proportionate consolidation financial statement

amounts as compared to the Equity method amounts in explaining future return on Equity, from capital market perspective.

The sample is composed by 147 French firm- years for the period 2005- 2008. The French companies before IAS 31 applied only the Proportionate method and still applying this method according to IAS 31, so the authors consider only the companies that applied the Proportionate consolidation because the analysis resulting not affected by few case of Equity consolidation. The model used is the accounting based valuation model developed by Ohlson (1995).

The dependent variable is the share price; independent variables are total asset and total liabilities computed by Proportionate consolidation and net income. After they consider other independents variable in order to assess how the market views the venturer's share of JCEs assets and liabilities, (total assets and liabilities excluding the venturer's share of JCEs assets and liabilities)

The results reveal that the sector has an important impact, in particular in the industrial sector there is a higher correlation between the assets and the liabilities of the JCEs with assets and liabilities of venturer. The results suggest that the investors view the assets and liabilities of the JCEs similarly to the assets and liabilities of the venturer.

Moreover the results suggest that the investor knows the involvement of the venturers in the JCEs activities, and interprets the JCEs' assets and liabilities as if they belong to the venturers.

In conclusion the paper doesn't support the IASB decision to eliminate the Proportionate;

7.Conclusion

In conclusion, we analyzed the legislative steps that have characterized the accounting treatment for JCE in time.

The choice of the Equity method allowed by IAS 31, became with IFRS 11 the only options.

The theoretical debate on the appropriate accounting method is not completed, especially after the mandatory introduction of IFRS 11. The lack of an academic consensus does not provide a convincing evidence on the superiority of one method over another.

The alternatives reporting methods have had a different diffusion, due to specific country regulation and considering the accounting method preferred in the practice in each countries (for example the Equity method is preferred in the Anglo-Saxon context while the Proportionate is more used in the other European countries).

The transition to Equity method has produces a considerable impact on the consolidated financial statement under the Proportionate.

The present Thesis, focus on the determinants underlying the manager's accounting choice for the consolidation of interests in JCEs when the multiple accounting choice was allowed in accordance to IAS 31.

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Chapter 2

Joint Controlled Entities: comparability in a multiple accounting choices.

Evidences from Italian setting

1.Introduction

The objective of this research is to observe the accounting convergence for the reporting of interests in JCEs using the Equity method or the Proportionate consolidation and to explore the determinants that could affect the management's accounting choice.

The study has its roots in a previous research on the consolidation of investments in subsidiaries, associates, JCEs and other Equity interests in Italy and Spain (Catuogno & Allini, 2011). This study reveals a decrease in the level of comparability among Italian and Spanish financial statements when the single financial accounting principles provide multiple evaluation options.

In particular, for the consolidation of the interests in JCEs the alternative between the Equity method and the Proportionate undermines the convergence of the accounting practices.

Consistently with what we claimed, on May 2011 the IASB issued IFRS 11, Joint Arrangements, with the main purpose to increase comparability within IFRS by removing the choice for JCEs to use Proportionate consolidation. Instead, JCEs

that meet the definition of a JCEs must be accounted for using the Equity method. This also converges with US GAAP, which generally requires the Equity method for JCEs .

Starting from this findings, we intend to develop our research by focusing on the interest in JCEs held by Italian listed groups, analyzing consolidated financial statements date for the period which goes from 31/12/2006 to 31/12/2010. We focus on JCEs, since there was little literature on this topic and Standards Setters recently focus on identifying the appropriate accounting method (Soonawalla, 2006).

Even though both method do not affect venturer's net income and shareholder Equity, they have a relevant impact on the main key performance indicators, (Return on assets, Leverage, and Profit Margin), (Graham et al, 2003; Bauman, 2007). In particular total assets and total liabilities are lower under the Equity method and the magnitude of the debt of JCEs is hidden, this produces higher profitability in terms of Profit Margin.

Hence after measuring convergence, the research intends to observe if the market is indirectly affects by the lack of accounting convergence practice and rewards firms applying Equity method with better key performance indicators. The market could explains the discretionary behavior of the manager for the accounting treatment of JCEs.

Vice versa our research question is addressed on the existence of others latent variables that undermine the comparability.

To measure the convergence for the consolidation of the interests in JCEs we use the van der Tas Herfindahl *H index*, since it is particularly suitable for the measurement of the comparability within one Country (van der Tas, 1988).

Subsequently we observe the Price Earning distribution - as a measure of firm's investors reputation - associated with the application of each accounting method required by IAS 31 (Darryl et al.,1987).

Finally we adopt an exploratory research design, the Principal Component Analysis (PCA), (Ghauri et al., 1995) based on two parameters, Price/Earnings (as a measure of firm's investors reputation) (Little, 1999) and method of consolidation for JCEs (Equity or Proportionate) with the aim to investigate the existence of latent variables that could explain the accounting choices for the consolidation of JCEs.

Using a sample of 215 Italian groups, first findings show that the market does not influence the managers' choice since does not reward firms adopting the Equity method in the consolidation of their interests in JCEs, which present, as a result, better key performance indicators. Our findings suggest that the firm's creditworthiness, as measured by the firm's rating could represents one of possible latent variable.

The paper is structured as follows. Section 2 presents summary of the accounting for JCEs, section 3 the accounting convergence, section 4 describes the accounting debate on JCEs, section 5 the assumptions and the methodology, section 6 describes sample and data collection, section 7 shows results and section 8 concludes.

2. The accounting for JCEs

The consolidation of interests in JCEs raises a relevant problem of harmonization and comparability, with both conceptual and operational implications.

Since Italian regulation does not provide a specific definition of JCEs, neither specifically addresses the different types of agreement which characterize the JCEs, we consider the International regulation as a benchmark also for the national perspective in the accounting for the interests in JCEs.

Starting from 2005, with the mandatory introduction of the IAS/IFRS, all the companies adopting such principles have been applying IAS 31 for the accounting of interests in JCEs.

IAS 31 classifies joint arrangements into three broad categories: jointly controlled operations (JCOs), jointly controlled assets (JCAs) and jointly controlled entities (JCEs), prescribing different accounting method for each type of JCEs.

According to IAS 31, it is possible to identify a JCOs (par. 13) “when the operation of some JCEs involves the use of the assets and other resources of the venturers rather than the establishment of a corporation, partnership or other entity, or a financial structure that is separate from the venturers themselves”; JCAs (par. 18) “when the operation of some JCEs involves the joint control, and often the joint ownership, by the venturers of one or more assets contributed to, or acquired for the purpose of, the JCEs and dedicated to the purposes of the JCEs” and finally a JCEs (par. 24) “when the JCEs involve the establishment of a corporation, partnership or other entity in which each venturer has an interest”.

Regarding the accounting for the interests in JCEs, the International Standards allows the recognition of investments held in JCEs, in the venturer financial

statement, through one of the two methods between the Equity method or the Proportionate consolidation.

On the other hand, the Italian regulation (Legislative Decree n. 127/1991 art. 33) establish the application of the Equity method if the company decides not to consolidate the JCEs, and the Proportionate method for the consolidation of JCEs.

The impact on venturer financial statement will be different according to the accounting method chosen. In particular, under the Proportionate method a venturer's share of each of the assets, liabilities, revenues and expenses of a JCEs is combined line by line with similar items in the venturer's financial statements or reported as separate line items in the venturer's financial statements. Otherwise, under the Equity method an interest in a JCEs is initially recorded at cost and thereafter adjusted for the post-acquisition change in the venturer's share of net assets of the JCEs.

Since that, the Board considers the multiple evaluation options allowed by IAS 31 as an impediment to high quality reporting of joint arrangements and in order to reduce differences between IFRS and US GAAP, it was necessary a project to replace IAS 31, with the aims to provide more transparent and relevant financial information for the investors and creditors.

As a result, the IFRS 11 Joint Arrangements was published in 2011 by the IASB as part of its new suite of consolidation and related standards, also replacing existing requirements for subsidiaries.

The standard is applied starting from 2014.

The remainder of IAS 31 JCEs, now called JCEs, does not allow the free choice between the Equity method or Proportionate consolidation, all entities must now always use the Equity method.

In the Basis for Conclusions of IFRS 11 the main argument supporting the elimination of Proportionate method refers to the principles-based approach, to a better convergence with US GAAP and to a better verifiability, comparability and understandability of the financial statement.

3. The accounting convergence

The consolidation of interests in JCEs raises a relevant problem of harmonization and convergence, with both conceptual and operational implications. With the mandatory introduction of the International Accounting Standards/International Financial Reporting Standards (hereafter IAS/IFRS), a fundamental step has been taken towards convergence among countries with different accounting traditions in the preparation of consolidated financial statements.

In the accounting literature, the harmonization has been researched in terms of the standards that have been adopted, or in terms of the accounting behaviors (Tay & Parker, 1990; D'Arcy, 2001; Ding et al., 2007; Jaafar & Mc Leay, 2007). In the first case, we deal with a process which leads to the harmonization of the accounting standards. This interpretation has been called *de jure* harmonization (van der Tas, 1998). In the second case, instead, the harmonization of accounting choices does not depend on the existence of a same set of accounting principles. The *de jure* harmonization is usually expected to lead to the *de facto* harmonization, however this is not always true. Scholars revealed the existence of factors, other than

regulations, that affect the accounting practices (Alexander & Nobes, 1997; Cairns, 2011; Nobes, 2011). As a matter of fact, the *de jure* harmonization can be accompanied by disharmony in the accounting practices when specific accounting standards allow multiple accounting evaluation choices. On the other side, the *de facto* harmonization can exist without determining an increase in the level of *de jure* harmonization. This phenomenon is known as “*spontaneous harmonization*” (Canibano & Mora, 2000: 4). Moreover the degree of harmonization can be acknowledged through the divergence among practices in various countries, but also by investigating the behavior in the same geographical context.

Previous studies confirmed the existence of factors, other than regulations, that can affect both the accounting practices and the value relevance of the accounting information (Alexander & Nobes, 2007; Nobes et al., 2008; Cairns et al., 2011).

The existing literature investigated accounting harmonization (*rectius* accounting comparability) by assuming different perspectives. Raham et al. (2002) classified this contributes in six main categories.

The first group examines accounting practices and regulations as well as the environmental factors that influence them in different countries (Nobes, 2006; Radebaugh & Gray, 1993).

The second group focuses mainly on different aspects of regulation (Adhikari & Tondkar, 1992).

The third group analyses accounting practice harmony at a point in time and accounting practice harmonization, through measurement of movements in harmony over a period of time (Nair & Frank, 1981; Evans & Taylor, 1982).

The fourth group examines the relation between accounting practice harmonization and key financial ratios (Weetman & Gray, 1990; Hellman, 1993).

The fifth group considers the concerns about accounting practice harmony measurement techniques raised in the literature and tried to improve the methodology in that respect (Tay & Parker, 1992; van der Tas, 1992).

Finally, the last group analyzes the association of practice harmonization and market reaction.

In particular, some papers captured share prices as market reaction (Alford et al., 1993; Amir et al., 1993; Barth & Clinch, 1996; Harris et al., 1994), while Ball et. al (2000) observed the market relevance of accounting earnings in common-law and code-law countries and found different institutional factors that can influence the value relevance of earnings in the two types of countries. The research introduced a means of testing the influence of environmental variables on at least one outcome of accounting, market reactions to accounting information.

Our paper fills in this last group of studies. We intend to contribute to this debate by analysing the relation between accounting comparability and market reaction to the differing accounting choices related to interests in JCEs.

4. The accounting debate on the Joint Controlled Entities treatment

Empirical findings confirm and reveal that when the International Accounting Standards offers multiple options for the valuation of the same items decrease the convergence among financial statements (Mechelli, 2009; Morais & Curto, 2009). This is also the case for the consolidation of interests in JCEs as IAS 31 provided two accounting treatments, the Proportionate consolidation and the Equity method. Thus, the recent issue of IFRS 11 eliminates the problem of this multiple option, confirming only the Equity method to account for JCEs.

However literature does not provide convincing evidence on the superiority of one method over another.

The first contributes supporting the Equity method focuses on the lack of a theoretical basis for recording the Proportionate share of JCEs accounts because resources subject to joint control do not fit with the traditional definitions of assets and liabilities. In a past study, Milburn and Chant (Milburn & Chant, 1999) conclude that the Equity method is the more appropriate, primarily because jointly controlled assets and liabilities do not comply with the control criterion required for full consolidation with the venturer. It complies with a so called legal model (Stoltzfus & Epps, 2005). Supporters of the Equity method also point out that if the venturer does not guarantee the liabilities of the JCEs and does not otherwise have an obligation for them, the debt should not be recognized in the venturer's financial statement (Milburn & Chant, 1999). As the venturer is not ultimately responsible for debts, the venturer should not disclose the debt, as if it was their obligation.

Moreover, proponents of the Equity method argue also that Proportionate consolidation determines financial statements that might be not easy to analyze and interpret for a potential investor and comparability would be affected. Bierman (1992) noticed that the primary disadvantage of Proportionate method is that accounting complexities are introduced compared to just showing an investment in common stock.

On the other hand, the primary arguments for Proportionate consolidation reflect the assumption that it provides more useful information compared to the Equity method's single line presentation. It complies with a so called implicit model. In

this direction, Graham et al. (2003) compare the two methods revealing that Proportionate consolidated financial statements are more useful in predicting future returns on shareholders' Equity than the Equity method. He found a stronger relation between current and prior-year components of return on Equity and current year stock returns as well a stronger relation between return on common shareholders' Equity and prior-year disaggregated components (profit margin, asset turnover, and the leverage ratio). An empirical investigation in the Australian real estate industry sector suggests that, in practice, venturers chose the Proportionate method when the JCEs debt was recourse and the Equity method when the JCEs debt was non-recourse (Whittred & Zimmer, 1994).

Then, among studies on accounting for JCEs, there are few contributes exploring the relation between the adopted method and the market reaction. In particular, prior research documents an association between JCEs investments and share prices (Park & Kim, 1997), without monitoring whether JCEs accounting amounts are associated with share prices. Maines et al. (2000) investigated whether analysts give different Equity values depending on whether a firm adopts the Equity or Proportionate method to account for JCEs interests. They find that analysts with low familiarity in JCEs accounting rules assigned higher Equity values to firms with Equity method financial statements than to firms with Proportionate consolidated financial statements. Their study supported the idea that aggregating JCEs accounting amounts leads to loss of value relevant information. Kothavala (2003) tests the risk relevance of JCEs accounting amounts and ratios for a sample of Canadian firms and finds that disaggregated information on JCEs accounting amounts helps explain variation in market risk. Other scholars (Lim et al, 2003) highlight that the Equity method supports relevant information for users. Stoltzfus

and Epps (2005) analyze if the bond risk premiums are more highly associated with accounting number of Proportionate than Equity method and reveal that, on average, creditors do not get better information with accounting data based on Proportionate consolidation.

As noticed, literature provides mixed results on the supremacy of one method to another for the case of JCEs and it make appealing the study on the appropriate accounting method.

5. The assumptions and the methodology

In a previous research on the consolidation of investments in subsidiaries, associates, JCEs and other Equity interests in Italy and Spain, we observed a decrease in the level of comparability – as measured through the use of C index – among financial statements, when the single financial accounting principles provide multiple evaluation options (Catuogno & Allini, 2011). Starting from these findings, we intent to provide first evidence on accounting convergence for the reporting of interests in JCEs in Italy.

Our research relies on firms listed in the Italian Stock Exchange. We hand collected data from the firms' website and from the Mediobanca database.

The sample selection starts with the universe of Italian listed firms. We exclude financial service firms for their different accounting regulation, then we selected only those firms that report interests in JCEs in their financial statement for fiscal year-ends ranging from 2006, to 2010. Further, we exclude non-operating companies as they were not representative, companies resulting from extraordinary transactions, such as mergers or acquisitions, companies with

consolidated financial statements not available or not legible, in order to keep the sample homogeneous.

The Table 1 shows the sample distribution of venturers by fiscal years. The final sample consists of 215 firms year observations.

Table 1
Full sample composition

Firms	Year 2006	Year 2007	Year 2008	Year2009	Year 2010
Total listed Italian firms	290	307	300	296	296
Finance, Insurance, Real Estate	(83)	(81)	(80)	(75)	(76)
Industrial firms	207	226	220	221	220
Firms holding interests in JCEs	55	50	44	51	63
Firms excluded	(9)	(4)	(3)	(9)	(23)
<i>Total sample</i>	<i>46</i>	<i>46</i>	<i>41</i>	<i>42</i>	<i>40</i>

Graham et al. (2001) in a study conducted for the Canadian firms compared Proportionate consolidation financial statement ratios to Equity method financial statement ratios. They underline that the Equity method would present an investment at its net book value (venturer share of JCEs assets – venturer share of JCEs liabilities) and calculated pro-forma Equity method balance sheets from Proportionate consolidation balance sheets by subtracting JCEs liabilities from the venturers' JCEs assets and from the venturers' total liabilities. Similarly, the Equity method would presents the income from the JCEs at its net value (venturer share of JCEs revenues – venturer share of JCEs expenses) on the venturers' income statement. Therefore, they calculate Equity method income statements from

As showed in the figures above, the differences between the Equity consolidation and the Proportionate method on the financial statement of the venturer mainly refer to the total assets, total liabilities, total revenues and total expenses, and in accordance with some scholars (Bauman, 2007) we formulate some starting assumptions:

Assumption 1. The ROA (Return on Assets), measured by Earnings Before Interests Expense on Debt divided by the previous year's total Assets, (Lourenço & Curto, 2010) is higher under the application of the Equity method than under the application of the Proportionate consolidation;

Assumption 2. The Leverage, measured by of Long Terms Financial Liabilities to Equity (Astami & Tower, 2006), is lower under the application of the Equity method than under the application of the Proportionate consolidation;

Assumption 3. The Profit Margin, measured by Operating Profit to Operating Revenues, (Astami & Tower, 2006), is higher under the application of the Equity method than under the application of the Proportionate consolidation.

H index

Accordingly, first of all, we conduct an empirical investigation to measure the convergence for the consolidation of the interests in JCEs, through the use of the van der Tas Herfindahl H index. van der Tas introduced the Herfindahl index (*H index*) in 1988 (than adjusted by Hirschman) as a measure of the comparability of financial statements (van der Tas, 1988).

The *H index* is simply and is particularly indicated for the measure of the harmonization within a single Country. It is calculated by weighting the relative

frequencies of the alternative opinions against each other, the relative frequency is the number of parties choosing a particular method divided by the total number of parties. The formula of *H Index* is:

$$H = \sum_{i=1}^n pi^2$$

where:

H = Herfindahl index;

n = the number of alternative accounting methods;

pi = the relative frequency of accounting method *i*.

The *H index* can varies between 0 – there is no harmony - and 1 – all companies use the same accounting method.

Price Earnings and Accounting method

After measuring the accounting convergence, considering the assumptions above, the research intends to observe if the market is indirectly affects by the lack of accounting convergence practice and rewards firms applying Equity method with better key performance indicators. In particular we explore the distribution of the Italian selected groups, from 2006 to 2010, based on two parameters:

- 1) Price /Earnings, as a measure for firm's investors reputation;
- 2) Method of consolidation for JCE's.

The Price Earnings ratio has long been used as an analyst's tool to assess earnings growth potential and investment risks by considering mainly the investor

perspective (Beaver & Morse, 1978; Zarowin, 1999). Literature reveals that a positive P/E ratio is a proxy of the good firm reputation (Little, 1999). Moreover, scholars posit that P/E ratio are useful in selecting over and under-valued companies (Basu, 1977).

Since stock prices reflect the future expected earnings, companies with potentially growth earnings will show higher prices, hence higher P/E.

Being P/E ratios useful in stock selections, some scholars provide evidence that accounting methods are associated with P/E ratios (Darryl et al., 1987).

For the JCEs, Proportionate consolidation adds significant debt to venturer's balance sheet, and it influence negatively the Earnings per Share ratio and its Share Price on the Capital Market. Thus, if accounting methods influence the P/E ratio, then P/E ratio should make allowances for differences in accounting and rewards (overvalued) firms with better Key Performance Indicators. We can suppose that firms using the Equity method will improve their key performance indicators, hence their market reputation is captured by higher P/E ratio.

We calculate the P/E ratio as a proxy for firm's investors reputation. The numerator of the ratio was defined as the market value of common stock (market prices times number of shares outstanding) as of December 31 and the denominator as reported annual earnings (before extraordinary items), (Basu, 1977).

Several contributions focus on the value intervals that P/E ratio can assume, since it depends by many factors. Some scholars consider three intervals of P/E as follows, even though the sector can influence P/E levels (Shiller, 2005; F'Ons & Ward, 2012):

- 1) $P/E \leq 10$ includes the stocks which are undervalued by the market and are less expensive;
- 2) $15 < P/E \leq 25$ includes the stocks which are expressed at their “fair” value;
- 3) $P/E > 25$ includes the stocks which are overvalued and are more expensive.

Principal Component Analysis

Finally we adopt an exploratory research design, the Principal Component Analysis (PCA), (Ghauri et al., 1995) based on two parameters:

- 1) Price/Earnings (as a measure of firm’s investors reputation), (Little, 1999);
- 2) Method of consolidation for JCEs (Equity or Proportionate);

with the aim to investigate the existence of latent variables that could explain the accounting choices for the consolidation of JCEs.

In particular, we conduct a descriptive statistics analysis, namely the study of location, since dispersion and interdependencies among variables assumed in this study could be not so easy to interpret when the number of the variables increases. Indeed, if we have a data set with n individuals and k variables, such a study need the calculation and the interpretation of k averages, k variances and $k(k-1)/2$ sample covariance. The principal component analysis (PCA) addresses to the need to represent a k -dimensional phenomenon through a number less than (or equal to) k uncorrelated latent variables, obtained by transforming the observed variables (Mardia, 1979; Benzecri, 1992; Jobson, 1991). PCA belongs to the family of the set of techniques known with the name of factor analysis (Correspondence Analysis, Canonical Correlation Analysis, Multiple Correspondence Analysis, and so on). PCA

is central to the study of multivariate data and largely used in many disciplines because it is extremely versatile (Jolliffe, 2002). It is a technique working with a set of numerical variables and it consists in the estimation of linear combinations of the variables originally observed, with the constraint that they must be uncorrelated with each other and have maximum variance. The first principal component (or the first factor) is indeed the linear combination of the k starting variables having maximum variance, the second principal component is the linear combination of k variables with variance immediately below, subject to the constraint of being orthogonal to the previous component, and so on.

More formally, if X is a $n \times k$ data matrix, the determination of the first factor requires the identification of the k -dimensional vector u_1 of the coefficients of the following linear combination of the k variables: $C_1 = Xu_1$. These variables must be at least expressed in terms of deviations from their averages. The total variance of a linear transformation of X can be expressed as a function of the covariance matrix S : $\text{var}(Xu_1) = u_1' Su_1$.

As the u_1 vector has the constraint to have unit norm, namely it must be that $u_1' u_1 = 1$, by applying the Lagrange multipliers formula $L = u_1' Su_1 - \lambda_1 (u_1' u_1 - 1) = \max$ and by setting to zero the derivative respect to u_1 we obtain $(S - \lambda_1 I)u_1 = 0$. As λ_1 is the first eigenvalue of the $X'X$, we have that $u_1' Su_1 = u_1' \lambda_1 u_1 = \lambda_1$, namely the first eigenvalue is the variance of the first principal component. By continuing with the other factors, we have that $C_2 = Xu_2, u_2' u_2 = 1, u_1' u_2 = 0$, and so on. Of course one can evaluate as principal components as the number k of the variables. There are several ways to choose the

“optimal” number of factor to analyze, such as the eigenvalue-one criterion, the scree-test, criteria based on statistical inference, etc.

Once the principal components have been defined, it is possible to visualize on a plot, named bi-plot, the so called factor loadings (or loadings), which can be interpreted as the correlation coefficients between the variables and the factors. This visualization technique allows to interpret the latent variables that could affect the accounting choices for JCEs, by analyzing these correlations.

6. Descriptive statistics

The sample includes both venturers that reports interests in JCEs by the Equity method (98 over 215) and by Proportionate consolidation (117 over 215), as shown in the Table 2.

The number of observations per accounting period is equally distributed across Equity and Proportionate method except in 2009 and 2010, where the application of Proportionate method prevails (27 over 42 and 24 over 40, respectively). The smallest number of observations occurred for the fiscal year 2010.

Table 2
Firms applying Equity versus Proportionate method by Year

Year	Full Sample		Equity Method		Proportionate Method	
	Frequency	%	Frequency	%	Frequency	%
2006	46	21,4	23	23,5	23	19,7
2007	46	21,4	22	22,4	24	20,5
2008	41	19,1	22	22,4	19	16,2
2009	42	19,5	15	15,3	27	23,1
2010	40	18,6	16	16,3	24	20,5
<i>Total</i>	<i>215</i>		<i>98</i>		<i>117</i>	

The Table 3 reveals that companies are mainly concentrated in two sectors, Manufacturing (116 over 215) and Trasportation, Communication, Electric, Gas and Sanitary Service Industry, respectively (59 over 215), and the rest is spread among the other sectors. Moreover the Proportionate method subsample has a higher proportion of firms that belongs to Trasportation, Communication, Electric, Gas and Sanitary Service Industry (34 over 59).

Table 3
Industry composition

Classification	Full Sample		Equity		Proportionate	
	Frequency	%	Frequency	%	Frequency	%
01_09 Agriculture,Forestry, Fishing	0	0%	0	0%	0	0%
10_14 Mining	5	2%	2	2%	3	3%
15_17 Construction	19	9%	7	7%	12	10%
20_39 Manufacturing	116	54%	58	59%	58	50%
40_49 Trasportation,	59	27%	25	26%	34	29%

	Communication,						
	Electric, Gas, Sanitary						
	Service						
50_51	Wholesale Trade	1	0%	1	1%	0	0%
52_59	Retail Trade	4	2%	1	1%	3	3%
60_67	Finance, Insurance, Real Estate	0	0%	0	0%	0	0%
70_89	Services	11	5%	4	4%	7	6%
91_99	Public Administration	0	0%	0	0%	0	0%
	<i>Total</i>	<i>215</i>		<i>98</i>		<i>117</i>	

7. Results

Starting from our data collection, we applied the *H index* to the selected sample.

By focusing on the accounting convergence, our results indicate that, during the observed period, almost 50% of the Italian groups chosen the Equity method, despite the IASB recommended the Proportionate consolidation in IAS 31, which better reflects the economic substance of the interests in JCEs. Consistent with literature (Zeff, 2007) our findings document that the convergence in Italy still remains at a medium level (Table 4).

Table 4
The accounting convergence for JCE over 2006-2010

Year	Equity Method			Proportionate Method			TOTAL		
	Data	Frequency	<i>H</i>	Data	Frequency	<i>H</i>	Data	Frequency	<i>H</i>
2006	23	0,50	0,25	23	0,50	0,25	46	1	0,500
2007	22	0,48	0,23	24	0,52	0,27	46	1	0,501
2008	22	0,54	0,29	19	0,46	0,21	41	1	0,503
2009	15	0,36	0,16	27	0,64	0,41	42	1	0,541
2010	16	0,40	0,16	24	0,60	0,36	40	1	0,520

Therefore, in order to explore the distribution of the Price/Earnings ratio related to the accounting methods for JCEs chosen by the 215 observed firms, we collected data, at the end of each years, from two database, Datastream and Mediobanca. To do this, we adopt an exploratory research design as it provides indications to understand the phenomena without explicit expectations or generalization of results (Ghauri, 1995; Philips, 1987). More specifically, the P/E ratio is observed in association with the two accounting methods for JCEs, the Equity and the Proportionate. The results are summarized in Table 5.

The Table 5, in fact, reveals that even though the convergence for JCEs is not achieved, the effects on the P/E ratios are not so different. In fact we can observe that the largest part of the companies has an “undervalued” P/E ratio (37% of the sample for the Equity, 39% of the sample for the Proportionate), covering the value range of 0-10, while no company applying the Equity method presents “a fair” level of P/E (15-25).

Table 5
Firms distribution between P/E ratios and accounting methods for JCEs over 2006-2010

P/E Range	Equity Method	Proportionate Method
P/E ≤ 0	14%	10%
0 < P/E ≤ 10	37%	39%
15 < P/E ≤ 25	-	0,4%
P/E > 25	-	-

Our results indicate that the P/E ratio, as a measure of the firm's investors reputation, is not able to capture the different accounting choices provided by IAS 31 and their related effects in terms of key performance indicators.

In fact, the P/E ratio does not seem to reward firms adopting the Equity method in the consolidation of their interests in JCEs and that, as a result, present higher values of the ROA and the PM, and lower values of Leverage.

Vice versa a possible explanation for the undervaluation of P/E ratios can be related to the financial crises occurred in the last years.

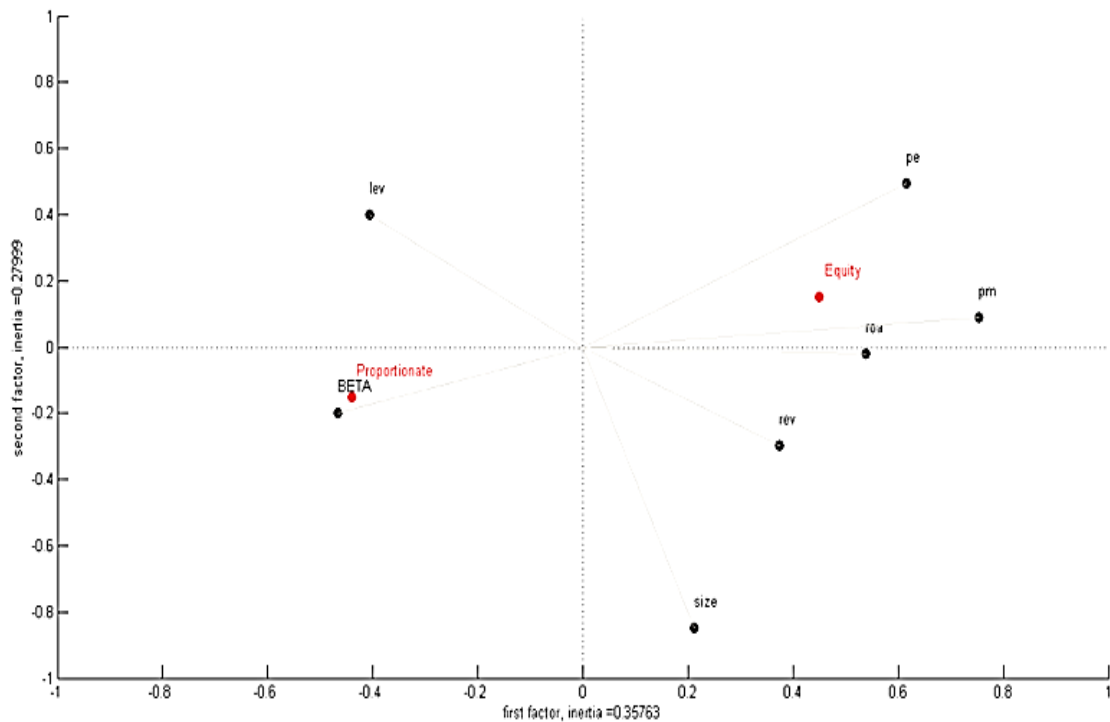
Finally, in order to conduct the PCA, the k variables include: PM, ROA, LEV (as *key performance indicators*), P/E as a measure of firm's investors reputation and we add Beta as a proxy for firms' risk (Little et al, 1999) Total Assets, as proxies for SIZE and total Revenues (REV) as control variables (Giner & Veron, 2012).

We chose to perform five PCAs as the data were collected for 5 years on a particular type of Italian companies (from 2006 to 2010). In this way, we can explore if and how the factors can change over the years.

As the configuration of loadings did not changed over the years, we performed the analysis also on the entire dataset even if there are several repeated companies in the dataset.

Figure 3 shows the bi-plot containing the factor loadings. First axis represents the first principal component, as well as second axis represents the second principal component.

Figure 3.
Principal component analysis (PCA) for JCEs 2006-2010



First and second principal components (axis) explain respectively about 35% and 28% of the total variance. About the loadings, PM, ROA, PE, REV, LEV and BETA are all correlated with the first principal component, with the difference that both BETA and LEV have a negative loading with that first component. On the other hand, LEV and SIZE characterize the second principal component.

Even if PCA is a multivariate technique that works with numerical variables, it is also possible to visualize categorical variables as *supplemental variables*.

A supplemental variable does not contribute to the construction of the factorial map however it is a powerful tool because it shows how the factors explain the categories of the supplemental variables into the geometrical space. Hence, we include the accounting methods for JCEs (the Equity and the Proportionate one) as supplemental variables.

Figure 3 emphasizes how companies characterized by high values of P/E, PM, ROA and REV lean towards the use of Equity method. On the other hand, companies with high leverage and BETA tend to use Proportionate consolidation.

Our findings suggest that the first principal component could be explained in terms of the firm's creditworthiness, namely the firm's ratings. Whereas the second principal component could represents the cost of debt capital.

If further investigations would confirm the correlation between the accounting choices for JCEs and the firm's creditworthiness, some important concluding remarks could be provided to the existing literature debate on the choices of the proper accounting method for the consolidation of interest in JCEs.

8. Discussion

Our paper analyzes the accounting convergence in the reporting for interests in joint controlled entities (JCEs) using the Equity method or the Proportionate consolidation and explores some of the determinants that could explain the application of the accounting consolidation method. Evidences provide that the

level of convergence is still medium, despite all firms comply with IAS 31. On the other hand, the lack of convergence does not affect the value of P/E ratio, since the market seems not to reward companies applying the Equity method.

As far as the principal component analysis is concerned, however, we can draw some original conclusions about the explanation of the main latent variables. Our findings suggest that the first principal component could be explained in terms of the firm's creditworthiness, as measured by the firm's rating, whereas the second principal component could represent the cost of debt capital

If the exploratory research design will be confirmed by further statistical investigations, it would provide two main implications.

First of all, consistently with both the characteristics of the Italian financial market – which is mainly credit oriented – and with the typical ownership structure – which is mostly concentrated or family owned -, we would assert that the market reputation, from the investor's perspective, does not play a relevant role in the accounting choices as instead the firm's creditworthiness does.

What is more, we could provide an evidence that the accounting choice of the Equity method for the consolidation of the JCEs, is supported by the firm's creditworthiness with the final purpose of improving the firm's rating.

Our research presents some limitations. The first limit is linked to the analysis of the convergence of financial statement on an item by item base. The extension of the test of convergence to other transactions and items would have concurred to enhance the actual obtained results. The second limit regards the P/E ratio; other performance ratios should be included in order to test if one particular accounting method is associated with performance outcomes. Finally, a correlation analysis is

required in order to capture and measure factors and variables that could support the accounting choices in the consolidation of the JCEs in Italy.

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Chapter 3

Behind the Equity Method for Interests in Jointly Controlled Entities in Italy

1. Introduction

The accounting for JCEs has always been a controversial issue among scholars, practitioners and regulators. The relevance and the timeliness of the topic are also witnessed by the recent issue of IFRS 11, *Joint Arrangements*, which removes the multiple accounting option. In prescribing merely the Equity method, the IASB aims to increase comparability within IFRS and convergence with US GAAP.

Under the Equity method, JCEs are reported as a single line item investment in the statement of financial position and in net income and changes in Equity in the statement of comprehensive income. By contrast, under Proportionate consolidation the venturer's Proportionate share of the JCEs's assets, liabilities, revenues, and expenses are added to the venturer's own items in the consolidated financial statements (Adhikari et al., 2014).

Although both methods do not affect venturer's net income, retained earnings and shareholders equity, they have a relevant impact in terms of components displayed in consolidated accounts.

The Equity method aggregation leaves out accounting information about the JCEs when compared to Proportionate consolidation. Total assets and total liabilities are always lower under the Equity method and the magnitude of the debt of the JCEs is hidden. Consequently, leverage for venturer – as reflected by liabilities to Equity – results in a lower percentage (Astami & Tower, 2006). The same situation occurs in the statement of comprehensive income, being revenues and expenses always lower under the Equity method. This produces a higher profitability for the venturer, measured in terms of profit margin – as reflected by net income to revenues (Davis & Largay III, 1999; Kothavala, 2003; Lourenço & Curto, 2010).

Therefore, the Equity method results in a performance-improving accounting technique while the Proportionate consolidation represents a performance-decreasing accounting technique for the venturer.

The reporting of JCEs has always been a controversial accounting issue.

Previous literature mainly focused on the market consequences deriving from the alternative reporting method, although providing mixed evidence. Few studies show that Equity method statements is associated with superior risk relevance in explaining bond ratings but not price volatility (Kothavala, 2003) and decline in information asymmetry (Lim et al., 2003). Differently a greater number of empirical results highlight that Proportionate consolidation presents a more comprehensive view of the venturer financial position and of its incumbent risks and rewards, appears more useful in predicting future returns on shareholders (Graham et al., 2003), provides creditors with better information, when the venturer guarantees the JCEs's debts (Stoltzfus & Epps, 2005) and avoids the lost of forecasting and relevant information

(Soonawalla, 2006; Bauman, 2007). More recently, Lourenço et al. (2012) show that the elimination of the Proportionate consolidation would deprive investors of a set of information on recognized assets and liabilities, which might be not comparable to the information presented in the notes.

Differently, relatively little attention has been dedicated to the determinants for the accounting treatments of JCEs. Lourenço and Curto (2010) provide evidence that an organizational determinant plays an important role in the management decision to report JCEs. They find out that, in the UK context, the type Link influences the management choice to use the Proportionate consolidation. Later, Giner and Veron (2012) report that the interdependence of the activities between the entities, the assets specificity and the firms' size are positively associated with the adoption of the Proportionate method in Spanish firms, while leverage is negatively associated. Therefore, we still notice a very poor literature on the determinants behind the managerial choice of the Equity method for the accounting of JCEs. In addition, these previous studies cannot be generalized to other countries with specific market and governance characteristics.

Some distinctive features of the Italian institutional setting make the investigation of the accounting choices for JCEs particularly appealing for a number of reasons. First, a previous study observed a medium level of comparability among Italian consolidated financial statements in the reporting of JCEs (Catuogno & Allini, 2011). Second, there is a need for more accounting choice studies, and specifically those on JCEs, for countries characterized by predominance of small and medium size listed companies, concentrated ownership and debt financing as the main source of capital (Di Pietra et al.,

2008; Jaggi et al., in press). Third, Italy may be considered as representative of a family business environment in which family members play a relevant role in ownership, management and board composition (Miller et al., 2013).

The paper is framed in the contracting-based theory, coherently with previous studies on the accounting choices determinants (Missonier-Piera, 2004; Astami & Tower, 2006; Quagli & Avallone, 2010; Waweru et al., 2011) and aims at investigating factors that influence managers' decision to use the Equity method for the accounting of JCEs.

The data source consists of 257 Italian firm-year observations having JCEs in their financial statements for the period 2008-2012.

Using a mixed-effects logistic model, we show that contractual efficiency and managerial opportunism drive the Equity method choice. After controlling for several variables, the empirical results highlight that while the growing family influence fosters the opportunistic selection of the Equity method, the monitoring role played by dominant shareholders, as well as by bondholders and related market authorities, may discourage the use of the performance-improving accounting technique. Conversely, neither leverage nor size seems to influence the choice, revealing the irrelevance of the usual relations in the Italian setting.

The research makes a contribution to the accounting choice literature and has both theoretical and practical implications. First, we answer to the general call for more researches on the accounting for JCEs in order to provide an accurate understanding supporting investors who must interpret financial statement numbers while making economic decisions (Alexander et al., 2012). Second, we add knowledge on the

accounting choice literature bringing evidence on the extent to which managers exercise discretion to improve their wealth or mitigate conflicts of interests among contracting parties. Third, we provide an original extension of the contracting-based theory by exploring accounting choice governance determinants.

Furthermore, we complement the few previous researches formulating hypotheses in terms the impact of managerial choices on profitability and leverage ratios (Whitted & Chan, 1992; Cotter, 1999; Missonier-Piera, 2004). Also, we address the international standard setting debate by providing results that witness the managerial opportunism in the accounting for JCEs by the Equity method. In this regard our study is timely since it casts doubts on the IASB decision to eliminate the Proportionate consolidation.

The remaining paper unfolds as follow. Section 2 provides an overview of the literature and formulates hypothesis, sections 3 and 4 present the research design and results, section 5 discusses evidence and section 6 concludes and suggest directions for future research.

2. Theoretical framework and hypotheses development

The contracting-based theory assumes that managers select particular accounting procedures either efficiently, to attain corporate objectives (namely maximize firm value or minimize political exposure and agency costs), or opportunistically, to manipulate earnings and reflect accounting numbers for their own benefit (Watts & Zimmerman 1978; 1986; Holthausen, 1990). The extent of efficiency and opportunism

depend on the monitoring devices over managerial accounting discretion.

The efficient contracting view predicts that accounting practices evolve to mitigate contracting costs by addressing potential conflicts of interests between types of parties. The opportunistic view suggests that managers choose accounting policies for their own benefit which depends on debt covenants, political costs and bonus plans (Watts & Zimmerman 1978; 1986; Holthausen, 1990).

Most of the empirical studies on the accounting choices mainly focus on the consequences on income and supports incentives to choose income-increasing accounting methods related to leverage and bonus plans (Abdel-Khalik, 1985) while incentives to choose income-decreasing accounting methods related to political visibility and taxes minimizing purposes (Beuselinck & Deloof, 2014; Karampinis & Hevas, 2013).

Our paper builds on the contracting-based theory as a focal point to support the discussion on the managerial choice of the Equity method. Furthermore, we provide an original extension of the accounting choice literature through the exploration of some governance variables in addition to those usually employed for the debt covenant and the political cost hypothesis. In this perspective, we predict that leverage, corporate bond, size, dominant shareholder and family influence are systematically related to the choice of the Equity method in the accounting for JCEs, as the opportunistic accounting technique that improves firm's leverage and profitability.

2.1. Leverage

Prior literature links financial debt and accounting policy choice because debt covenants are usually based on reported accounting numbers, and violations of debt covenants imposes costs (Dhaliwal et al. 1982; Holtausen & Leftwick, 1983).

Accounting decisions are influenced by creditors' use of accounting data in their loan agreements and lending decisions. Managers aiming at reducing debt covenant costs and improving firm financial position may adopt the accounting methods that display favorable financial statements in terms of creditworthiness. Furthermore, managers may try to improve the firm's financial flexibility in order to prevent the reporting of a position of financial distress. These considerations become more relevant as the firm financial debt increases (Watts & Zimmerman, 1986; 1990).

Empirical tests of economic consequences theories reveal recurrent associations between accounting choices and firm leverage, a proxy for the proximity to violation and for debt covenant costs (Fields et al., 2001). The assumption that the violation of debt covenants is positively associated with leverage leads to suppose that managers should have incentives to choose performance-improving accounting techniques to ensure that they comply with the covenants imposed by lenders and avoid renegotiation costs (Beatty & Weber, 2003).

The empirical evidence is mixed. Some results find that leverage is not a factor in explaining the choice of accounting methods (Markarian et al., 2008; Quagli & Avallone, 2010; Aitken & Loftus, 2009; Missonier-Piera, 2004; Waweru et al, 2011). By contrast, others reveal significant association with accounting choices (Othman & Zeghal, 2006; Cazavan-Jeny et al., 2011; Astami & Tower, 2006; Lourenco & Curto,

2010; Jaggi & Leung, 2003).

Since a venturer closer to violating debt covenants is more likely to choose an accounting policy that decreases leverage to reduce debt covenant costs, and bearing in mind that the Equity method carries a decrease in leverage, a positive relationship between leverage and the choice of Equity method is predicted.

Therefore, we hypothesize the following:

H1. The more the venturers rely on financial debts, the more likely their managers will choose the performance-improving technique for the accounting of JCEs.

2.2. Corporate bond

Despite the large extent of bank financing, further attention should be directed to the use of public debt by Italian firms, due to the peculiar characteristics of corporate bonds market, especially with regard to supervision and negotiation costs. This leads to offsetting arguments in terms of accounting policy choices.

On the one hand, many scholars hypothesize that the higher contracting costs, in the form of bond covenant limitations on leverage (a typical type of public debt restriction), provides additional incentive for managers to choose accounting techniques aimed at avoiding constraints (Beneish & Press, 1993; Labelle, 1990; Leftwich, 1981). In particular, since financial ratios are used in the definition of bond covenants, the selection of performance-improving accounting techniques can decrease the probability of lending agreements violation (Thornton & Bryant, 1986; Demerjian, 2011).

On the other hand, a political visibility argument, similar to that originally proposed by Watts and Zimmerman (1978), may also apply. In this perspective, Italian firms issuing corporate bonds undergo the monitoring of the National Commission for Listed Companies and the Stock Exchange (CONSOB), the authority whose aim is the supervision for the safeguard of investors and the transparency of financial market. Likewise, Borsa Italiana – the other market authority for listed companies - carries out a constant monitoring on bond exchanges, with the possibility to interrupt continuous trading, when particular market trends occur. In this perspective, regulatory agencies are likely to impose more stringent inspection on the managerial opportunism of firms using public debt. Addressing a gap in the empirical research on accounting choice and the use of public debt, we employ the issuance of corporate bond as a variable for political visibility and hypothesize that venturers issuing corporate bonds are more vulnerable to enhanced scrutiny by market monitors and regulators. In particular, the monitoring role played by bondholders and related market authorities may discourage the managerial opportunistic use of the Equity method that produces a cosmetic improvement in both profitability and leverage ratios. Hence, we predict a negative relationship between the use of corporate bonds and the choice of Equity method and assume that:

H2. In venturers issuing corporate bond, managers are less likely to choose the performance-improving technique for the accounting of JCEs.

2.3. Size

Holthausen and Leftwich (1983) find that firm size and leverage are the only two

significant variables explaining choices of accounting techniques in their review of studies on the economic consequences of accounting policies. They report systematic associations between accounting choices and firm size.

Watts and Zimmerman (1986) predict that the political visibility of a firm affects its potential contracting costs. The magnitude of such costs is highly related to firm size, being size a proxy variable for political attention. In fact, large companies are usually subject to intense scrutiny. The visibility of large companies, especially in terms of available wealth, tends more easily to attract the attention of numerous stakeholders, including, politicians regulatory bodies, customers, and competitors (Waweru et al., 2011).

Larger firms are more likely to face political exposure penalties than smaller firms. Consequently, managers of large politically sensitive firms are more inclined to make accounting choices so as to avoid or minimize political costs and political pressures (Missonier-Piera, 2004).

The empirical evidence, however, does not systematically report an association between the accounting policy choices and the political cost hypothesis. Some studies reveal the existence of a positive relation with size (Jaggi & Leung, 2003; Waweru et al., 2011). By contrast, other research shows no significant association (Labelle, 1990; Missonier-Piera, 2004; Astami & Tower, 2006; Lourenço & Curto, 2010).

Since Proportionate consolidation is likely to make the venturer's size higher, it may be that the expected costs of government scrutiny are also increased by this choice. Assuming that managers of larger venturers may have incentives to report interests in JCEs by the Equity method in order to avoid a significant change in the venturer's size,

we predict a positive relationship with the Equity method.

Therefore, we hypothesize that:

H3. The larger the venturers, the more likely their managers will choose the performance-improving technique for the accounting of JCEs.

2.4. Dominant shareholder

There is considerable evidence that large shareholders play an active role in the corporate governance process (Shleifer & Vishny, 1997). Managers of firms having a dominant shareholder may experience less discretionary power (La Porta et al., 1999; Dhaliwal et al., 1982; Ahmad-Zaluki et al., 2011). That is, ownership concentration is likely to reduce agency problems by increasing the level of monitoring. The ownership concentration over one or few individuals, leads to a more efficient and direct supervision on managerial behaviour and prevents opportunistic selection of accounting techniques for their personal benefit. According to this view, it is therefore highly expected that managers of blockholder-dominated firms are less likely to choose accounting techniques that improve the firm profitability, even when their compensation is linked to performance.

On the bases of these premises, several scholars have tested the relation between ownership concentration and managerial discretion. Findings, however, appear to be mixed. Whilst some authors find a negative correlation (Yeo et al., 2002; Missonier - Piera, 2004; Astami & Tower, 2006), other studies report a non-significant association (García-Meca & Sánchez-Ballesta, 2009; Davidson et al., 2005; Waweru et al., 2011).

We assume that the presence of a dominant shareholder can be seen as an efficient monitoring mechanism to constrain managerial discretionary use of the Equity method that opportunistically improves profitability and leverage ratios. Therefore, a negative relationship between dominant shareholder and the choice of Equity method is predicted and we assume that:

H4. The higher the presence of a dominant shareholder over the venturers, the less likely their managers will choose the performance-improving technique for the accounting of JCEs.

2.5. Family influence

A focus on family firms is timely because of their pervasiveness in the Italian Stock Exchange (Shleifer & Vishny 1997). Similarly to other countries with poor financial economies, in Italy the control over firms is delegated to wealthy and well-established families (Pagano et al., 1996). Controlling families are usually involved in the board of directors or even in the CEO positions (Markarian et al., 2008). Nevertheless, in spite of the growing attention for family firms (Chrisman et al., 2005; Poutziouris et al., 1997), we still notice very limited research on the influence exerted by the family on the accounting choices. Families are a unique class of shareholders since they typically hold undiversified portfolios, show concern over firm and family reputation, and have substantially long term investment horizons. Family influence can occur *via* the extent of its ownership, governance, and management involvement in the firm (Astrachan et al., 2002).

Two different sides of the optimal contracting view are often provided to predict managerial behavior in family firms.

According to the alignment perspective, the family involvement is beneficial as it mitigate the overall agency problems (Jensen & Meckling, 1976; Fama & Jensen, 1983; Chrisman et al 2004). This alignment reduces managerial incentives to report accounting information that deviate from the underlying firm's economic performance (Salvato & Moores, 2010).

By contrast, the entrenchment perspective (Morck et al., 1988; Morck & Yeung, 2003) predicts that family involvement has the potential to increase agency threats as dominant inside shareholders can expropriate the minorities' wealth. This is especially true when governance mechanisms do not work properly (Catuogno et al., in press). Because of these problems, family firms will gain performance benefits from the use of pay incentives and other cost control devices (Schulze et al. 2003).

The results are contradictory. Some authors document that financial reporting in family firms is less prone to managerial opportunism (Prencipe et al., 2011, Cascino et al., 2010). Similarly, other studies report that managerial opportunism decreases with managerial ownership – a proxy for family firms (Dhaliwal et al., 1982; Warfield et al., 1995) – as the insider ownership implies the alignment of interests between management and shareholders (Jensen & Meckling, 1976). Nevertheless, studies on various settings confirm the entrenchment effect of family ownership (Sánchez-Ballesta & García-Meca, 2007; Gabrielsen et al., 2002; Yang, 2010; Cornette et al., 2008; Gopalan & Sudarshan, 2012).

We believe that the growing family influence encourages the managerial opportunistic

selection of the Equity method that, improving profitability and leverage ratios, also improve their own compensation. Therefore we predict a positive relationship between family influence and the choice of Equity method and assume that:

H5. The higher the venturers' family influence, the more likely their managers will choose the performance-improving technique for the accounting of JCEs.

3. Research design

Our research relies on firms listed in the Italian Stock Exchange. We hand collected data from the firms' website and from the Mediobanca database.

The sample selection procedure starts with the universe of Italian listed firms. We exclude financial service firms for their different accounting regulation, then we selected only those firms that report interests in JCEs in their financial statement for fiscal year-ends ranging from 2008, the start of the crisis when market conditions deteriorated, to 2012, the last year before IFRS 11 adoption. Further, we exclude non-operating companies as they were not representative and companies resulting from extraordinary transactions in order to keep the sample homogeneous.

The Table 1 shows the sample distribution of venturers by fiscal years. The final sample consists of 257 firm-year observations.

Table 1
Full sample composition

Firms	Year 2008	Year 2009	Year 2010	Year 2011	Year 2012
Total listed Italian firms	300	296	296	292	285
Finance, Insurance, Real Estate	(80)	(75)	(76)	(79)	(78)
Industrial firms	220	221	220	213	207
Firms holding interests in JCEs	44	51	63	73	77
Firms excluded	(3)	(9)	(23)	(13)	(4)
<i>Total sample</i>	<i>41</i>	<i>42</i>	<i>40</i>	<i>60</i>	<i>74</i>

In order to test the hypothesis described in Section 2.2, some variables are identified and computed.

Dependent variable

The dependent variable is the reporting method for interests in JCEs used by venturers in their annual financial statement (*Reporting method*). This variable assumes two values: 1 if the venturer chooses to report interests in JCEs by the Equity method (the performance-improving accounting technique); 0 if the venturer chooses to report interests in JCEs by Proportionate consolidation (the performance-decreasing accounting technique)

Independent variables

Data used to compute independent variables are collected from the venturer's financial statement.

Leverage is a proxy for the indebtedness, measured by long-term financial liabilities to

Equity (Astami & Tower, 2006) (*Leverage*);

Corporate bond is a dummy variable that assumes value 1 if the venturer reports own corporate bonds in its financial statement; value 0 if no bonds are issued (*Bond*).

Size is measured by logarithm of total sales (Patelli & Prencipe, 2007) (*Size*);

Dominant shareholder is a dummy variable that assumes value 1 if the ultimate shareholder owns more than 50% of the total voting rights; value 0, otherwise (*Dominant*). The international accounting literature generally considers the threshold of 10% or more of the voting rights as controlling shareholder (Dhaliwal et al 1982; Chen&Jaggi, 2000; Park & Shin, 2004). Since scholars report a more concentrated ownership structure for the Italian listed firms, where the mean and the median concentration approximate to the 51% of total voting rights (Zattoni, 1999; Cascino et al., 2010), we propose an alternative and more stringent threshold to define the dominant shareholder. Moreover, our proxy complies with the definition of the *de jure* control. *Family influence* is captured by *F-Pec score* (*F-Pec*).

Consistently with Astrachan et al. (2002), we calculate the F-Pec as follows:

$$FI = (EQfam/EQtot) + (BoDfam/BoDtot) + (SBfam/SBtot)$$

The first addend of the FI formulation defines the Equity share owned by the family (EQfam) over total Equity (EQtot); the second defines the percentage of family members (or members interconnected with the family) on the board of directors (BoDfam) over the total (BoDtot); and the third addend represents the percentage of family members (or members interconnected with the family) (SBfam) over the whole

supervisory board (SBtot).

The primary advantage of the F-PEC score is its ability to group into a single index a series of dimensions suggested in the previous literature, namely family ownership and family involvement into board of director and top management.

Several studies applied, tested and validated this measure (Jaskiewicz *et al.*, 2005; Caselli & Gatti, 2006; Giovannini, 2010).

Control variables

We consider two control variables: type of JCE and sector.

Lourenço and Curto (2010) find that the type of JCEs, as classified by Hennart (1998), plays an important role in the managerial decision to report interests in JCEs in UK. In order to control if this organizational aspect affects the accounting choice, we include a dummy variable that assumes values 1 if the majority of JCEs is Link (Link venturers) and 0 if the majority of JCEs is Scale (Scale venturers) (*Type*).

Similarly to Lourenço and Curto (2010), we collect information on each JCE's business, as well as the venturers' business from their Notes to financial statement, or from their website. When the business of the venturer is complementary to that of other venturers, the JCE is a case of heterogeneous cooperation and is therefore classified as a Link JCE. When the venturers undertake a similar business, the JCE is a case of homogeneous cooperation and is classified as a Scale JCE.

For Sector we use the Standard Industrial Classification (SIC code). However, it has been re-categorized in three groups: Manufacturing (variable: *Sector 1*);

Transportation, Communications, Electric, Gas and Sanitary Services (variable: *Sector 2*); all remaining sectors (*Other*). This operation is a necessary data pre-processing step in order to obtain consistent estimate of parameters.

We proceed with a preliminary descriptive analysis and then we run a logistic mixed effects regression. Given the nature of the data set, it is not convenient to proceed to statistically formal uni-variate comparisons because the statistical units are not independent and any formal hypothesis testing procedure returns uninterpretable results.

For this reason, after a brief look at the data, we will directly proceed with the logistic mixed effects regression, which belongs to a category of models that take in account the presence of repeated measurement of the variables and the temporal component.

4. Results

4.1. Descriptive statistics

The sample includes both venturers that reports interests in JCEs by the Equity method (132 over 257) and by Proportionate consolidation (125 over 257), as shown in the Table 2.

Table 2
Firms applying Equity versus Proportionate method by Year

Year	Full Sample		Equity Method		Proportionate Method	
	Frequency	%	Frequency	%	Frequency	%
2008	41	16.0	22	16.7	19	15.2
2009	42	16.3	15	11.4	27	21.6
2010	40	15.6	16	12.1	24	19.2
2011	60	23.3	33	25.0	27	21.6
2012	74	28.8	46	34.8	28	22.4
<i>Total</i>	<i>257</i>		<i>132</i>		<i>125</i>	

The number of observations per accounting period is equally distributed across Proportionate and Equity method except in 2012, where the application of Equity method prevails (46 over 74). The smallest number of observations occurred for the fiscal year 2010.

In our sample, firms issuing bonds are at least 50% for the years 2008, 2009 and 2010. (Table 3):

Table 3
Industry composition

Classification	Full Sample		Equity		Proportionate	
	Frequency	%	Frequency	%	Frequency	%
01_09 Agriculture,Forestry, Fishing	0	0	0	0	0	0
10_14 Mining	5	1.9	4	3.0	1	0.8
15_17 Construction	18	7.0	1	0.8	17	13.6

20_39	Manufacturing	136	52.9	85	64.4	51	40.8
	Trasportation,						
40_49	Communication, Electric,	79	30.7	34	25.8	45	36.0
	Gas, Sanitary Service						
50_51	Wholesale Trade	4	1.6	4	3.0	0	0
52_59	Retail Trade	6	2.3	1	0.8	5	4.0
60_67	Finance, Insurance, Real Estate	0	0	0	0	0	0
70_89	Services	9	3.5	3	2.3	6	4.8
91_99	Public Administration	0	0	0	0	0	0
	<i>Total</i>	<i>257</i>		<i>132</i>		<i>125</i>	

The Table 4 reveals that companies are mainly concentrated in two sectors, Manufacturing (136 over 257) and Trasportation, Communication, Electric, Gas and Sanitary Service Industry, respectively (79 over 257), and the rest is spread among the other sectors. Moreover the Equity method subsample has a higher proportion of firms that belongs to Manufacturing industry (85 over 136), which by the way is the most relevant sector in Italy.

Table 4
Venturers reporting bonds in their financial statements

Sample	Year 2008		Year 2009		Year 2010		Year 2011		Year 2012	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Firms issuing bonds	21	51.2	25	59.5	28	70	25	41.7	28	37.8
bonds/ liabilities">20%	9	42.9	11	44	10	35.7	13	52	13	46.4
Total firms	41		42		40		60		74	

There are 5 categorical and 3 numerical variables.

The Table 5 provides a summary of the descriptive statistics for the numerical explanatory variables. "Size" is captured in logarithmic terms.

The Table 6 shows the correlation matrix among the numerical variables. Numerical variables are really poorly correlated. It means that there are no problems of collinearity in the specification of the model. "Leverage" and "F-Pec" are positively skewed, as well as "Size" present a negative skewness.

We performed also the Kolmogorov-Smirnov test (KS) to check the normality of this distributions. The Table 7 displays that none of this three variables is normally distributed.

Table 5
The descriptive statistics of the continuous variables

Variables	N. of firms	Mean	Min	Max	SD
Leverage	257	0.876	-6.24	14.811	1.487
Size	257	5.157	-4.001	8.489	1.274
F-Pec	257	0.408	0.000	1.329	0.423

N: sample size

Leverage: total book value of debt divided by book value of Equity, Size: log total sales; F PEC: $FI = (EQ_{fam}/EQ_{tot}) + (BoD_{fam}/BoD_{tot}) + (SB_{fam}/SB_{tot})$

Table 6
Correlation Matrix

	Leverage	Size	F-Pec
Leverage	1	0.159	0.109
Size		1	-0.261
F-Pec			1

Table 7
Kolmogorov-Smirnov test versus normal distribution

Variables	KS statistics	P-value
Leverage	4.333	0.000
Size	1.365	0.000
F-Pec	5.055	0.000

The Table 8 shows the descriptive statistics of the same variables within each year. Looking at the table, the quantities do not change over the years, except for the skewness of the “Size” variable that becomes negative starting by 2011.

Table 8
Descriptive statistics for numerical variables over 2008-2012

Year		Leverage	Size	F-Pec
2008	N	41	41	41
	Min	0.000	3.030	0.000
	Max	10.330	8.460	1.220
	Mean	1.048	5.463	0.417
	Dev. St	1.709	1.262	0.436
	Skewness	4.302	0.558	0.260
2009	N	42	42	42
	Min	0.000	2.760	0.000
	Max	3.550	8.450	1.190
	Mean	0.821	5.263	0.408
	Dev. St	0.785	1.094	0.435
	Skewness	1.691	0.583	0.288
2010	N	40	40	40
	Min	0.000	3.550	0.000
	Max	5.730	8.490	1.050
	Mean	0.817	5.464	.387
	Dev. st	0.943	1.219	0.403
	Skewness	3.835	0.531	0.277
2011	N	60	60	60
	Min	0.000	2.940	0.000
	Max	6.410	7.660	1.330
	Mean	0.859	5.143	0.387
	Dev. st	0.978	1.025	0.418
	Skewness	3.393	-0.154	0.364

2012	N	74	74	74
	Min	-6.240	-4.000	0.000
	Max	14.810	7.710	1.330
	Mean	0.859	4.773	0.432
	Dev. st	2.132	1.499	0.434
	Skewness	3.613	-2.864	0.260

The Table 9 below shows the descriptive statistics of the categorical variables.

The “Reporting method”, “Dominant” and “Type” variables are quite equally distributed.

Firms issuing bonds are approximately 25%. Companies operate prevalently in Sector 1. These proportions are quite constant over the years, with some differences due to the unbalanced composition of the data set. Indeed, within each year the number of companies varies.

Table 9
The descriptive statistics of the categorical variables

Variables	Categories	Proportion
Reporting method	Equity	0.514
	Proportionate	0.486
Bond	Absence	0.747
	Presence	0.253
Dominant	No	0.447
	Yes	0.553
Type	Link	0.455
	Scale	0.555
Sector	Sector 1	0.529
	Sector 2	0.308
	Other	0.163

Reporting Method: venturer's reporting method 1=Equity; 0=Proportionate; Bond: 1= if the venturer issues bonds and 0= otherwise; Dominat: 1= if the ultimate shareholder owns more than 50% of the voting rights; 0=otherwise; Type: the nature of JCEs, 1= if the majority of the venturer's JCE are Scale, 0= otherwise; Sector: 1= Manufacturing and Transportation, 2= Communications, Electric, Gas & Sanitary Services; 3= otherwise.

4.2. Regression model

The Logistic regression is the appropriate methodology when multiple accounting choices are investigated.

Logistic regression (or Logit regression) belongs to the category of the Generalized Linear Models (McCullagh & Nelder, 1989). It is assumed that the response variable follows a binomial distribution. The outcome of the logistic regression is an estimate of the conditional probability of success (Agresti, 2013).

Nevertheless, such a model generally assumes that all statistical units are independent of each other and for this reason they are also called fixed effects models. This assumption means that fixed effects models are not suitable for analysis of correlated data structures, as in the case of longitudinal data analysis in which there are repeated observations of the same variables over a period of time.

In our case we have repeated measures of firms over five years, with a binary outcome variable. Given the structure of the data, a standard logistic regression (or, equivalently, a GLM with a logit link function) is not appropriate. We chose a Generalized Linear Mixed Model (GLMM) with the logit function as link function (or mixed-effects logistic model) (Lee et al., 2006).

The GLMMs belong to the family of the mixed models, in the sense that they are able to take in account both the fixed and the random effects. Generally speaking fixed effects are constant across individuals (overall mean effects), and random effects can vary.

In our case, we chose to estimate a GLMM with random intercept (random components) relative to the companies and the year. The coefficients of the fixed effects are interpreted as in a standard logistic regression, namely as the logarithm of the odds ratios. The Equation model is:

$$\begin{aligned} \text{logit}(\pi_{\text{Dependent}}) = & \beta_0 + \beta_1 \text{Leverage} + \beta_2 \text{Bond} + \beta_3 \text{Size} + \beta_4 \text{Dominant} + \beta_5 \text{FPec} + \beta_6 \text{Type} + \\ & + \beta_7 \text{Sector}(1) + \beta_8 \text{Sector}(2) + \beta_9 \text{Year}2009 + \beta_{10} \text{Year}2010 + \beta_{11} \text{Year}2011 + \beta_{12} \text{Year}2012 + \mathbf{Z}\boldsymbol{\gamma}, \end{aligned} \quad (1)$$

where π indicates the probability of success, \mathbf{Z} is the design matrix for the random effects and $\boldsymbol{\gamma}$ is the vector of the random effects (the random complement to the fixed

β). Note that, given the nature of the data set, the variable *Year* is treated as a factor.

This mean that the conditional probability (Pr) is estimated in this way:

$$\Pr(\text{Dependent} = \text{Equity}) = \frac{\exp(\beta_0 + \beta_1 \text{Leverage} + \beta_2 \text{Bond} + \beta_3 \text{Size} + \beta_4 \text{Dominant} + \beta_5 \text{FPec} + \beta_6 \text{Type} + \beta_7 \text{Sector}(1) + \beta_8 \text{Sector}(2) + \beta_9 \text{Year}2009 + \beta_{10} \text{Year}2010 + \beta_{11} \text{Year}2011 + \beta_{12} \text{Year}2012 + \mathbf{Z}\gamma)}{1 + \exp(\beta_0 + \beta_1 \text{Leverage} + \beta_2 \text{Bond} + \beta_3 \text{Size} + \beta_4 \text{Dominant} + \beta_5 \text{FPec} + \beta_6 \text{Type} + \beta_7 \text{Sector}(1) + \beta_8 \text{Sector}(2) + \beta_9 \text{Year}2009 + \beta_{10} \text{Year}2010 + \beta_{11} \text{Year}2011 + \beta_{12} \text{Year}2012 + \mathbf{Z}\gamma)} \quad (2)$$

Table 10 shows the regression analysis using four different models (a, b, c, d).

Model a is the so-called baseline (or trivial) model. It is used to check the statistical significance of other models. Progressively, model b includes the predictors, model c adds the control variables and model d adds the years. Table 10 shows also the variance of the random intercept.

The first model (a) contains the intercept as fixed effect, and the factors Year and Firm as random effects. The variance for Year is equal to zero, hence there is no change over time in the intercept of the model. The variance for the factor “Firm” is always higher than zero which means that companies have different intercepts.

By looking at the model b, the regression coefficients are significant respectively for variables “Bond”, “Dominant” and “F-Pec”; in particular the bond issue is a highly significant factor for the management’s choice with a *p*- value of .000.

“Bond” and “Dominant” are binary variables and their sign is negative. This means that by moving from the baseline category of both variables – respectively “no bond issue” and “no dominant shareholder holding more than 50% of the voting rights” –

to the assumed category – respectively “bond issue” and “shareholder holding more than 50% of the voting rights” – the probability of using “Equity method” decreases.

The “F-Pec” variable is numerical and its coefficient is positive with a p -value of .094.

It means that the higher is its value, the higher is the probability of adopting “Equity”.

This interpretation is valid on average, namely without taking into account the random effects. Moreover the model b reveals that “Leverage” and “Size” do not help in explaining the managerial selection of Equity method.

In the model c we add the control variables. It can be noted that the variable “Type” is significant with a positive coefficient (p -value equal to .000).

The baseline category is “Link”. It means that by moving from “Link” to “Scale” the probability of using “Equity” increases. The type of JCE plays an important role in the management decision to report interests in JCEs (Mian & Smith, 1990; Lourenço & Curto, 2010). “Sector” is not a significant predictor.

The results of the model c (with all explanatory and control variables) show that the “Dominant” and “F-Pec” variables have highly significant coefficients if compared with the model b (respectively, p -value of .007, and of .041), with the same sign.

Lastly, model d includes also the temporal component, which is not significant as confirmed by the zero variance of the random component. The model can be interpreted as Model c.

Table 10
Multiple regression results

Pred	Sign	Model a		Model b		Model c		Model d	
		St.e	p	St.e	p	St.e	p	St.e	p
Intercept		1.601	0.039	5.286	0.057	-0.579	0.806	-1.019	0.685
		(0.778)		(2.778)		(2.361)		(2.514)	
Leverage	+			0.817	0.219	0.809	0.124	0.842	0.120
				(0.666)		(0.526)		(0.541)	
Bond	-			-5.921	0.000***	-3.640	0.000***	-3.429	0.001***
				(1.463)		(1.081)		(1.108)	
Size	+			-0.337	0.497	-0.041	0.916	0.013	0.972
				(0.497)		(0.391)		(0.399)	
Dominant	-			-3.563	0.026**	-3.001	0.007***	-2.908	0.009***
				(1.606)		(1.119)		(1.113)	
F-Pec	+			2.952	0.094**	2.088	0.041**	1.983	0.047**
				(1.764)		(1.025)		(1.007)	
Type	+					6.446	0.000***	6.386	0.000***
						(1.099)		(1.104)	
Sector (1)						0.694	0.641	0.813	0.579
						(1.489)		(1.499)	
Sector (2)						-1.363	0.363	-1.326	0.376
						(1.499)		(1.498)	
Year 2009								-1.266	0.292
								(1.203)	
Year 2010								-0.241	0.842
								(1.213)	
Year 2011								-0.172	0.867
								(1.033)	

Year 2012				0.4063 0.671 (0.958)
Log-likelihood	-121.119	-107.641	-79.076	-77.752
Deviance	242.238	215.280	158.153	155.506
Cox & Snell Pseudo R2	-	0.099	0.279	0.285
Nagelkerke Pseudo R2	-	0.163	0.457	0.469
Random effects variance (Firm)	40.748	34.254	8.866	8.661
Random effects variance (Year)	0.000	0.000	0.000	0.000

***, ** and * indicate significance at the 0.01, 0.05 and 0.10 levels respectively

As these models are nested models, we can perform an ANOVA test to check statistically the significance of the model. Once two models are compared, the null hypothesis is that they are equivalents. If we reject the null hypothesis, the model with a higher number of estimated coefficients can be considered as better than the other.

In the Table 11, we note that Model c and d are equivalent (the *p*-value associated with the comparison between Model c and d is equal about to 61%).

These results indicate that the reporting method selected by managers is influenced by some determinants. In particular, “Bond”, “Dominant”, “F-Pec” and “Type” variables are highly predictive.

Table 11
Anova tests

	Anova tests	Model a	Model b	Model c	Model d
Model a	χ^2 Statistic	-	26.958	84.085	86.732
	Degrees of freedom	-	5	8	12
	P-value	-	0.000	0.000	0.000
Model b	χ^2 Statistic	-	-	57.128	59.775
	Degrees of freedom	-	-	3	7
	P-value	-	-	0.000	0.000
Model c	χ^2 Statistic	-	-	-	2.646
	Degrees of freedom	-	-	-	4
	P-value	-	-	-	0.618

5. Discussion

Our empirical findings highlight that the monitoring role played by dominant shareholders, as well as by bondholders and related market authorities, limits the managerial opportunism in the adoption of the Equity method for the accounting of JCEs, whereas the growing family influence fosters the selection of the performance-improving accounting technique. Conversely, neither leverage nor size seems to influence the choice, revealing the irrelevance of the usual relations in the Italian context. These outcomes provide the following evidences and implications.

In terms of explanatory factors, consistent with previous studies on accounting choice (Markarian et al., 2008; Aitken & Loftus, 2009; Missonier-Piera 2004; Waweru et al,

2011) we find that *leverage* is an insignificant predictor of managerial decision to report JCEs by the Equity method, although the direction of the coefficient is positive, as hypothesized. Highly leveraged venturers are not significantly associated with the performance-improving accounting technique that would positively impact leverage ratio and accordingly firm's creditworthiness. Thereby, the hypothesis H1 is not supported and our finding differ from those of prior studies in dissimilar institutional environments (Othman & Zeghal, 2006; Cazavan-Jeny et al., 2011, Astami & Tower, 2006; Lourenço & Curto, 2010; Jaggi & Leung, 2003). Due to the close relationship that may exist between Italian managers and debt holders, especially banks, our result may reflect the presence of less restrictive debt covenant constraints compared to those of other countries. Or even the existence of constraints that are not related to financial statements numbers but to private information (for instance professional assessment) may contribute to the irrelevance of the accounting method choice.

With regard to the dummy variable *corporate bond*, the regression analysis shows that it significantly explains the managerial choice to account for JCEs by the Equity method. Thus, the hypothesis H2 is supported. Venturers that use corporate bonds as a source of financing are more vulnerable to political scrutiny. Our result provide evidence that the monitoring role played by bondholders and related regulatory market authorities discourages the managerial use of the Equity method that opportunistically produces an improvement in profitability and leverage ratio. To the best of our knowledge, we fill a gap in the empirical research on accounting choice, since it is one of the first papers that assumes a variable related to the use of public debt to explain the choice of accounting principles drawing from the political visibility rather than the

bond covenant hypothesis.

Notwithstanding this conclusion, when we use *size* as a proxy variable for political visibility, the hypothesis H3 is rejected, even if the “model d” exhibits the expected sign. This result is consistent with previous research (Labelle, 1990; Missonier, 2004; Astami&Tower, 2006; Lourenço & Curto, 2010). The finding of this study are inconsistent with the political cost hypothesis, to the extent that firm’s total sales do not explain the accounting policy choice for the Italian listed companies.

With respect to the *dominant* variable, the evidence shows a significant negative relationship between large block holdings and the choice of the Equity method. The hypothesis H4 is confirmed. This is consistent with the role of a large shareholder acting as monitor, which suggests less opportunity for accounting manipulation. Indeed, ultimate shareholders have the incentives to monitor management and enough voting rights to oust management through takeovers. Our findings also confirm previous studies (Yeo et al., 2002; Missonier, 2004; Astami & Tower, 2006; Giner &Veron, 2012).

Lastly, as far the F-Pec variable is concerned, the regression result exhibits a positive and strong relationship between family influence and the choice of Equity method. The hypothesis H5 is supported. With the growing family involvement in ownership and control, managers face less pressure from capital markets. This lack of market discipline leads insiders to make accounting choices that reflect personal motives, managing accounting numbers so as to increase their performance-based compensations.

Our findings confirm the entrenchment effect of family ownership, coherently with

the previous evidence (Sánchez-Ballesta & García-Meca, 2007; Gabrielsen et al., 2002; Yang, 2010; Cornette et al., 2008; Gopalan & Sudarshan, 2012).

With reference to the control variables, the regression analysis displays that the type of JCEs is highly and positively correlated to the Equity method. This result means that the venturer is more likely to employ the Equity method when the majority of its JCEs are cases of Scale cooperation, consistently with a recent study in the UK setting (Lourenço and Curto, 2010). Conversely we find no industry effect.

6. Conclusion and directions for future research

In the frame of the contracting-based theory, this article investigates the determinants behind the choice of Equity method for the accounting of JCEs in Italy, as the opportunistic accounting technique that improves firm's leverage and profitability.

We develop an explanatory model following the theoretical framework derived from the accounting choice theory where contractual efficiency and managerial opportunism reasons could explain the choice the Equity method. We run a mixed-effects logistic model which takes into account the Equity method as a baseline outcome category. We also control for the type of JCEs and the sector, whose effects are generally relevant.

Our empirical results highlight that the managerial opportunism explains the selection of the Equity method at the growing of the family influence, whereas the contractual efficiency rationale, that increases with the monitoring role played by concentrated shareholders, bondholders and related market authorities, discourages

the use of the performance-improving accounting technique. Conversely, the effects of leverage and size seem to be irrelevant for the Italian context.

Our paper provides several contributions to the accounting choice literature and has a number of theoretical implications. First of all, we answer to the general call for more research on the accounting for JCEs in order to provide an accurate understanding supporting investors who must interpret financial statement numbers while making economic decisions. This is an important research theme as various stakeholders rely, to some extent, on publicly available accounting information for their decision-making. Second, we add knowledge on the accounting choice literature bringing evidence on the extent to which managers exercise discretion to improve their wealth or mitigate conflicts of interests among contracting parties. Our result suggests that, in the Italian context, managers may select accounting methods to decrease political costs, as well as to increase profitability and their own compensation. Third, we provide an original extension of the contracting-based theory and enlarge the accounting choice literature by testing some governance variables, besides those usually employed for the debt covenant and the political cost hypothesis. Moreover, we complement the few previous research on determinants of accounting choices, formulating hypotheses in terms of profitability and leverage ratios. Thereby, we fill a gap in the empirical researches on the accounting choices, providing evidence that dominant shareholders, use of corporate bonds and family influence systematically affect the choice of the Equity method for the accounting of JCEs in the Italian setting. In addition, the current study is unique in that we are among the first testing a variable related to the use of public debt, as a proxy for political visibility, to explain the choice of accounting

principles.

With regard to the contributions for practitioners and policy makers, we address the international standard setting debate by providing results that witness the managerial opportunism in the accounting for JCEs by the Equity method.

Our research sheds light on the role played by the Equity method as an additional tools in the hands of powerful managers to opportunistically increase their wealth. These empirical findings are likely to be of general interest for continental Europe and other countries with family involvement and large block holders, since concentrated ownership is a norm rather than an exception around the world. Our findings have important policy implications for regulators since they support the opinion that the demonstrated dependence of the Equity method choice on firm's specific factors should raise doubts about the general application of an Anglo-Saxon accounting model to a continental European institutional setting. In this perspective, and in view of the recent introduction of IFRS 11, our paper provide evidence that might be useful for the assessment of the IASB decision to eliminate the Proportionate consolidation.

However, when drawing these conclusions, we acknowledge that our results come with certain limitations and potential caveats for future research. First, because our results are focused on Italy and on the period 2008–2012, both country and time period are limitations of this study. Second, we believe that a larger sample size could strengthen results even if such a sample is about the entire population examined. Further research might extend to other countries and periods, also in view of an enlargement of the sample size. Third, the paper lacks empirical evidence on the increase in managerial wealth. Thus, there would be further research potential in

empirically testing the managerial opportunism through the bonus plan hypothesis. Likely, further investigation carried out on inside and outside ownership would be helpful for generalizing our conclusions.

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Conclusions

This Thesis has concentrated on the critical topic of the accounting treatment for JCEs.

Starting from a detailed literature review on the accounting comparability and accounting choices, the elaborate has analyzed the accounting convergence for the consolidation of interests in JCEs using the Equity method or the Proportionate consolidation and has investigated the factors that influence managers' decision to reporting one of the two alternative methods under IAS 31. Despite each chapter has focused on the same subject, different research questions, methodologies, theoretical frameworks have been implemented.

The relevance of this topic is concerned with the relevance of the theoretical and empirical debate on the appropriate accounting method prescribed by IAS 31 (Kothavala, 2003; Lim et al., 2003; Graham et al., 2003; Stoltzfus & Epps, 2005; Soonawalla, 2006; Bauman, 2007, Lourenço & Curto, 2010; Giner & Veron, 2012) and with the impact on the financial consolidated statement deriving by the recent issue of IFRS (International Financial Reporting Standard) 11, Joint Arrangements, which removes the multiple accounting options, in prescribing merely the Equity method to increase comparability within IFRS and convergence with US GAAP.

To address these issues research studies which employed quantitative and qualitative methodologies are performed and focused on the Italian Market. The Italian setting is

used since some of its features make it the research specifically suitable. (Catuogno & Allini, 2011; Di Pietra et al., 2008; Miller et al., 2013).

In each chapter the arguments have provided a relevant contribution for academics and practitioners.

In the first chapter a review of the principal studies on JCEs has been conducted. In the literature three theoretical approaches are used to explain the motivation and the choice of JCEs: the Theory of Transaction Costs (Williamson, 1975,1985); Strategic Behavior Theory (Kogut, 1989); Organizational Knowledge and Learning Theory (Polanyi, 1967). According to Williamson, the firms choose to how the transact to minimize the sum of production and transaction costs. A necessary condition to prefer the JCEs to internal development or acquisition, is that the production costs achieved through this structures are much higher than external sourcing for at least one of the partners. Under the Strategic Behavior Theory, the companies transact to maximize profits, through improving a firm's competitive position facing the rivals. In particular, the strategic behavior, explains how competitive positioning influences the asset value of the firms. In this circumstances the creation of the JCEs avoids the costly duplication among companies but preserves the competition generating a welfare-improving. The Organizational Knowledge and Learning Theory view the JCEs as a means by which companies learn or retain their knowledge, in practice the JCEs are vehicles by which tacit knowledge is transferred (Polanyi, 1967), under the assumption that the very knowledge is organizationally embedded.

Secondly, is faced the JCEs accounting issue, in particular, the convergence process steps for their accounting treatment.

The chapter ends with a summary of previous empirical findings on JCEs, divided into two broad categories: Effects and Determinants of the use of Equity or Proportionate. Previous literature mainly focused on the market consequences deriving from the alternative reporting method, although providing mixed evidence. Few studies show that Equity method statements is associated with superior risk relevance in explaining bond ratings but not price volatility (Kothavala, 2003) and decline in information asymmetry (Lim et al., 2003). Differently a greater number of empirical results highlight that Proportionate consolidation presents a more comprehensive view of the venturer financial position and of its incumbent risks and rewards, appears more useful in predicting future returns on shareholders (Graham et al., 2003), provides creditors with better information, when the venturer guarantees the JCEs's debts (Stoltzfus & Epps, 2005) and avoids the lost of forecasting and relevant information (Soonawalla, 2006; Bauman, 2007). More recently, Lourenço et al. (2012) show that the elimination of the Proportionate consolidation would deprive investors of a set of information on recognized assets and liabilities, which might be not comparable to the information presented in the notes.

Differently, relatively little attention has been dedicated to the determinants for the accounting treatments of JCEs. Lourenço and Curto (2010) provide evidence that an organizational determinant plays an important role in the management decision to report JCEs. They find out that, in the UK context, the type Link influences the management choice to use the Proportionate consolidation. Later, Giner and Veron (2012) report that the interdependence of the activities between the entities, the assets specificity and the firms' size are positively associated with the adoption of the

Proportionate method in Spanish firms, while leverage is negatively associated.

It is possible to conclude that there is still very poor literature on the determinants behind the managerial choice.

The second chapter has analyzed the accounting convergence in the reporting for interests in JCEs using the Equity method or the Proportionate consolidation and has explored some of the determinants that could explain the application of the accounting consolidation method selected.

First of all the accounting convergence has been measured applying the van der Tas Herfindahl H index, (van der Tas, 1988). In order to understand which one of the two consolidation methods is preferred in practice, the degree of harmonization and comparability has been tested.

Evidences provide that, during the observed period, almost 50% of the Italian groups chose the Equity method, despite the IASB recommended the Proportionate consolidation in IAS 31, which better reflects the economic substance of the interests in JCEs. Consistent with literature (Zeff, 2007) the findings document that the convergence in Italy still remains at a medium level.

After measured the accounting convergence, assuming that the Equity method improves some Key Performance Indicators (Return on Assets, Leverage, Profit Margin) (Graham et al., 2001) the research has observed if the market is indirectly affected by the lack of accounting convergence practice and rewards firms applying Equity method with better key performance indicators. Has been observed the Price Earning distribution (P/E) - as a measure of firm's investors reputation - associated with the application of each accounting method required by IAS 31 (Darryl et

al.,1987). The results show that the lack of convergence does not affect the value of P/E ratio, since the market seems not to reward companies applying the Equity method.

Finally an exploratory research design has been adopted, the Principal Component Analysis (PCA), (Ghauri et al., 1995) based on two parameters:

- 1) Price/Earnings (as a measure of firm's investors reputation), (Little, 1999);
- 2) Method of consolidation for JCEs (Equity or Proportionate);

with the aim to investigate the existence of latent variables that could explain the accounting choices for the consolidation of JCEs.

The findings suggest a correlation between the accounting choices for JCEs and the firm's creditworthiness.

From the point of view of the thesis, this chapter has allowed to evidence that, consistently with both the characteristics of the Italian financial market – which is mainly credit oriented – and with the typical ownership structure – which is mostly concentrated or family owned -, the market reputation, from the investor's perspective, does not play a relevant role in the accounting choices as instead the firm's creditworthiness does.

The third chapter has been framed in the contracting-based theory, and has mainly focused determinants (leverage, corporate bond, size, dominant shareholder and family influence), behind the choice of Equity method for the accounting of JCEs in Italy, as the opportunistic accounting technique that improves firm's leverage and profitability.

An explanatory model has been developed following the theoretical framework

derived from the accounting choice theory, where contractual efficiency and managerial opportunism reasons could explain the choice of the Equity method. A mixed-effects logistic model has been used, which takes into account the Equity method as a baseline outcome category.

The empirical findings highlight that the monitoring role played by dominant shareholders, as well as by bondholders and related market authorities, limits the managerial opportunism in the adoption of the Equity method for the accounting of JCEs, whereas the growing family influence fosters the selection of the performance-improving accounting technique. Conversely, neither leverage nor size seems to influence the choice, revealing the irrelevance of the usual relations in the Italian context.

This study provides several contributions to the accounting choice literature and has a number of theoretical implications. The results add knowledge on the accounting choice literature bringing evidence on the extent to which managers exercise discretion to improve their wealth or mitigate conflicts of interests among contracting parties. The finding suggests that, in the Italian context, managers may select accounting methods to decrease political costs, as well as to increase profitability and their own compensation. In addition has been provided an original extension of the contracting-based theory and enlarge the accounting choice literature by testing some governance variables, besides those usually employed for the debt covenant and the political cost hypothesis.

With regard to the contributions for practitioners and policy makers, has been addressed the international standard setting debate by providing results that witness

the managerial opportunism in the accounting for JCEs by the Equity method.

The findings have important policy implications for regulators since they support the opinion that the demonstrated dependence of the Equity method choice on firm's specific factors should raise doubts about the general application of an Anglo-Saxon accounting model to a continental European institutional setting. In this perspective, and in view of the recent introduction of IFRS 11, the analysis provides evidence that might be useful for the assessment of the IASB decision to eliminate the Proportionate consolidation.

In conclusion the three chapters have been structured as a specific research design, in terms of research question, methodology and theoretical approach, and also their implications and contributions differently advance the research and the practice. The overall research design has been represented as a whole. The thesis advances the research on the accounting choices by providing new results that support previous evidences but within new context that are characterized by particular features. These aspects, combined with the limitations that each research presents, have provided new insights and implications for future research.

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