Evidence on the association between intangible investments and entrenchment strategies: lessons from an emergent context

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Abstract- *The aim of this research is to study the link between managerial entrenchment and intangible investment in an emergent context. The methodology adopted is based on a theoretical review and an empirical survey on a number of Tunisian managers through a questionnaire. Results show that managers adopt two different types of strategies according to their perceptions. The seniority and age are key factors for choosing intangible investment as a managerial entrenchment strategy, while internal relational network appears as a control mechanism. This research contributes to a further understanding of investment behaviors through studying the link between managerial entrenchment intention and the importance of intangible investment.*

Keywords- *Managerial entrenchment; intangible investment; emergent context.*
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1. Introduction

The emergence of information and communication technologies (ICT) has created a revolution at all levels, what induced a radical transformation in the requirements of the environment, consumption patterns, constraints and ways of business development. The sustainability of the company has become a major challenge, it was no longer a question of adaptation to the environment only. Outstripping competitors, excelling in being innovative and acquiring distinctive competencies in order to create an inimitable and sustainable competitive advantage are the central concern nowadays.

Moreover, the financial value of the company keeps its weight, but other factors that are neither financial nor physical begin to have influence, such as intangible assets. For example, dealing with competition under a proactive behavior, companies had to figure out new ways to maintain their development and sustainability.

> *"The physical assets have become less important to value creation when compared with human assets and intangible assets. The maximization of shareholders value no longer leads to the maximization of the value of the firm in knowledge-based economy that is not strictly based on market prices"* (Chassagnon 2011, p.26)[8].

Human capital, intellectual capital, technology and innovation become the core of future development tracks. As Barnes and McClure (2009) state, intangibles while not new have come to prominence because of intensified competition due to globalization.

> *"The development of intangible assets needs important resources that should be provided by shareholders. However, such investments are risky, which is due to their irreversibility"* (Chassagnon 2011, p.42)[8].

A lot of factors interfere within the decision of investing in the intangible capital, such as technological progress, raise of productivity level and gain a larger market share. Leaving apart the fact that the more companies invest in intangibles, the more their value become higher and attracts new investors, and the fact that intangible investments are the new trend and the most valued, there are determinants arising from the internal environment of the firm. In fact, managerial determinants of investment appear to have important influence on investment in general, and intangible investment in particular.

Matter of fact, Shleifer and Vishny (1989)[28] and Charreaux (1996)[7] clearly explained that investments aren't always aimed at developing the financial state of the firm or profit maximization, but can also be made for managerial reasons, such as gaining greater managerial latitude, discretionary incomes or a solid internal and external network. This two evoked latitudes allow managers to counter control mechanisms, have greater influence within the firm, but allow them also to gain in incomes and insures their maintain within the firm for longer time.

This is the subject we're interested in, in this research. In fact, managerial entrenchment, which is a strategy pursued by managers to make their presence within the firm irreplaceable and provide themselves with direct and discrete advantages.

The link between intangible investment and managerial entrenchment hasn't been well studied considering that few researches focused on this subject in particular and especially in an emergent context. This research tends to provide an answer to the following question: Does managerial entrenchment determine intangible investment decision making?

This paper will be structured as follows: The first section will be dedicated to the theoretical framework of the research; in the second section, we will present the conceptual framework of the research as well as the hypotheses illustrating the links between the set of variables. The last section will consist in the methodological approaches, the description of variables and the interpretation of the research results.

2. Theoretical framework

2.1 Intangible investment

The literature contains different definitions of intangibles; even if most of them seem as divergent, they generally gather at the nonphysical criteria. According to the Financial Accounting Standards Board, intangibles are assets with probable future economic benefits generated and accumulated by past transactions or events.

For Smith and Russell (1994)[29], intangible assets are all the elements of a business enterprise that exist in addition to working capital and tangible assets. They are the elements, after working capital and tangible assets that make the business wok and are often primary contributors to the earning power of the enterprise. Their existence is dependent on the presence of the expectation of earnings.

For about twenty years, empirical studies attempted to demonstrate that intangible investments (often reduced to R & D and advertising costs) lead to a significant increase of future performance and are positively correlated with the market value of the firm (Casta and Ramond 2005)[6].

Intangible investment is defined as a set of expenditures that the firm spends on professional staff training, R&D or advertising campaigns. In fact, those expenditures increase sales, and allow the raise of the production level. In fact, developing the core competencies and the "know-how" of employees allows enhancing the productive capacity of the firm.

The main intangible investment forms are:

- Education and staff professional training: Trainings are considered as a human capital investment, and so, an intangible investment. According to Becker (1975)[3], human capital investment is a current expenditure which lowers receipts but is able to generate future receipts and lower expenditures. It is indeed, an expenditure which is for the purchase of new skills. The main goal is to insure adequacy between firm's internal competencies, competitors and the market requirements. According to Ogunade (2011)[21], there's a strong link between economic development and human capital investment. Due to the mutual technological progress, companies are obliged to update knowledge bases and improve acquired expertise. In other terms, training is a method to enhance, refine or maintain newly acquired skills. In fact, investing in human capital is developing employees' competencies and skills, it is considered as an initial cost which the individual or firm hopes to gain a return on in the future (Blundell et al, 1999)[4]. So, training is an "activity, financed wholly or partly by enterprises (directly or indirectly), in order to improve, acquire or maintain their job-related skills, knowledge or qualifications" (Vosselman 1998)[33];
- Advertising/ Marketing: Investing in advertising is an expenditure providing the firm with a better reputation. In fact, improving the company's reputation has a direct impact on its value. The aim of this expenditure is to enhance the brand value which is considered as an important intangible asset. In the same context, Baldwin, Gu et al., (2009) explained that the transmission of information on the latest products, prices or projects via advertising has a short-run impact and those expenditures serve to instill long-run loyalties and enhance the value of the firm through items like advertising in print media, on radio and television, promotions and contests, business flyers and signs, advertising signs and displays, advertising services, advertising and promotions. Moreover, advertising is a powerful tool which creates market awareness of firm's products and services and allows differentiating them from competition and strengthening the perception of the quality, reliability and durability of their brands among existing and potential customers (Diresta 2014)[11];
- Purchase of patents and exploitation licenses: "The patent can be defined as a document issued by the state, giving its owner during a specific period and in a specific territory, exclusive rights to the protected invention" (Muller 2002)[18];
- Software acquisition: All companies are required to use the software. There are generally three types of programs, according to Cooper & Fisher (2002)[9]:
  - autonomous software;
  - software which is part of a development project;
  - software which is joined and inseparable from an equipment;

- Research and development investments: R&D expenditures are made to develop new knowledge and to conduct the firm's activity towards innovation, insertion, and improvement of new products and processes. Besides, R&D expenditures are an essential part of the process by which new products, services and processes are developed and commercialized. As such those expenditures have long-lasting value and are generally considered to be intangible investments (Baldwin, Gu, et al., 2009). According to Vosselman (1998)[33], R&D is based on three activities:
    - Basic research;
    - Applied research;
    - Experimental development.

2.2 Managerial entrenchment

In the late 80s, the entrenchment thesis was first developed by Shleifer, Vishny and Morck (1988)[28]. It questions all the fundamental principles of the contractual theories in general and the agency theory in particular. The agency theory was first developed in 1976 by Jensen and Meckling through the article "theory of the firm, behavior, agency costs and ownership structure" which explains the basis on which the principal-agent relationship is established. In fact, the agent existence is created from a need. He's hired to execute tasks on behalf of the principal who delegates decision making authority for a lack of time or competencies. For the same reasons, monitoring and control of the agent's activities are limited and can't be done mutually what creates enough managerial latitude to develop an opportunist behavior.

This situation leads to two essential agency problems

(1) interest conflicts: agent and principal goals are in conflict and the verification is costly and difficult,
(2) the principal and the agent haven't the same risk tolerance, it can be explained by different attitudes towards risk, different manners of acting. Those specific problems cause inefficiencies and incomplete information.

Moreover, agency theory has contributed to reinforce the long held view that agency problems are at the core of conflicts that appear within organizations. The literature distinguishes between two main agency problems: the conflict between large and small shareholders, which generates minority expropriation issues (Shleifer & Vishny, 1989)[28], and the conflict between managers and shareholders that drives managers to pursue their own private benefits at the expense of shareholder interests (Jensen & Meckling, 1976)[16]. The latter problem is more important when managers focus on entrenching themselves: they attempt to neutralize the disciplinary mechanism of the capital market so as to maintain corporate control (Ruback and Jensen, 1983)[25].

The entrenchment theory, which has been developed by (Shleifer & Vishny 1989)[28], seems to offer an appropriate study framework to analyze manager's opportunist strategies and their impact on control systems and on the company's performance.

Nevertheless, managerial entrenchment is considered as a deviant behavior. As Freeman and Reed (1983)[13] explained, it is a set of actions that aren't necessarily generating value to the shareholders but are made by the manager to maintain their current place and raise their own compensation.

The Manager adopts a circumventing strategy in a way that he can avoid the totality or a portion of the control mechanisms in order to obtain a privileged place from where he can't be moved and makes his oust or replace him difficult and costly.

As Charreaux (1996)[7] clearly explained, the opportunist behavior of the manager can be released only if he already disposes of a discretionary authority (Murphy & Gordon 2010)[19] which is in mutual expansion through different activities. In the same context, he presented the "board of directors", supposed to be the center of control mechanisms, as an entrenchment facilitator and a tool serving the interests of the manager giving him the ability to control some resources.

In fact, as Garvey and Swan (1994)[14] explained manager's activism leads to increasing the managerial latitude, meanwhile efficiency can be guaranteed in a certain way through entrenchment mechanisms such as investments. However, managerial entrenchment tends to be really harmful to the firm, stakeholders and, most of all, to the shareholders.

As a matter of fact, the excessive opportunism of the manager through the redistribution of annuities on the expense of efficiency and the expropriation of shareholders saves his own interests or the interests of his disciples and sympathizers (Charreaux 1996)[7].

3 Research conceptual framework

3.1 Intangible investment components:

According to the literature, the most valued intangible investment is engaged in three main components:

- Staff training ;
- Advertising;
- R&D

These components are chosen according to the literature, the study field and the exploratory study.

The aim of engaging in an exploratory study was the debate that exists in the literature about the definition and components of intangible investment that we've already mentioned earlier. In fact, we conducted telephone interviews with different managers to have an overview and more details about the Tunisian context when it comes to investing in intangible capital. The several interviews last between 30 and 50 minutes with CEOs working for Tunisian firms. We gathered the interview answers and conducted a content analysis according to the subject we are studying which is intangible investment.

For the sake of objectivity, we respected the interviewed speech and answers. We also maintained the sentences related to the analyzed subject and excluded terms that aren't directly related or that may bias interpretation and results.

3.2 Managerial entrenchment

a) ***Accumulation of CEO terms:*** According to Pichard Stamford (2000)[23], CEO's accumulation of terms facilitates his maintain on the top of the firm. CEO builds strong interdependence relationships. The fact that he gets a certain number of mandates inform about the redundancy of his maintain decision by the board of directors. Besides, having a certain number of office terms, informs about his legitimacy within the firm. The mechanism of accumulation of terms suggests a possible reciprocal game between executives, board of directors and CEO which facilitates his entrenchment.

Through entrenchment, CEO expands his relational network and develops his reputation on the market. The strength of relational network, where the capital flows, is largely based on implicit rules of reciprocity between actors in a way he can benefit of grants (Stamford 2000)[23]. Moreover, CEO being maintained many times, has surely gained advantages such as board of directors and shareholders support and upholding, which allows him to engage in investments that we can consider as manager-specific, based on his own skills and knowledge.

Those types of investments don't necessarily involve firm's performance.

In the same context, the choice of investments is always based on information opacity, which leads to intangible investments decision making, due to their uncertainty in time and in return on investment.

H1: the accumulation of CEO terms affects positively his decision in engaging in intangible investments

b) ***Seniority as a CEO:*** CEO's seniority is assessed on the basis of the number of years he spent fulfilling his functions.

Many authors, such as Paquerot (1996)[22] emphasize the fact that the more the CEO has spent years in his functions, the more he's likely to entrench himself. As cited in Mezghanni (2011), a CEO with an important seniority is more likely to create a certain relational network within the firm, but also to develop and consolidate his authority and domination.

For Eastwood and Raheja (2006), a more experienced CEO has more power over his directors and their behavior within the board of directors and creates an informational advantage. In the same perspective, Dhaoui and Jouini (2011), CEOs with important seniority tend to decrease the effectiveness of control mechanisms by decentralizing their specific investments, in a way that "They increase the difficulty to access to private information serving to a good control because the external environment constitutes a major resource of uncertainty".

Thus, for intangible investments, it helps emphasizing informational opacity and asymmetry, but also "constitue an essential factor encouraging the emergence of the favorable conditions for the management entrenchment" (Dhaoui & Jouini, 2011)[10].

In this study, the CEO seniority will be measured through the CEO terms of office in number of years; this measure has been used in different studies such as (Pigé 1998[24], Gharbi 2006 and Sellami, 2010[26]).

H2: CEO's seniority in his functions positively affects his decision in engaging in intangible investments

c) ***Relational network:*** Relational network has been defined as a principal determinant of managerial entrenchment by Pigé (1998). In fact, Shleifer & Vishny (1997)[28] have identified two key mechanisms that allow funds' owners, companies' financial providers to ensure a return on investment. These mechanisms are defined in two types:

(1) Internal mechanisms such as the board of directors' control, internal control and audit,

(2) External mechanisms such as regulatory and legal system, competition, and CEO's reputation on the market.

Entrenchment theory is based on the fact that the manager counters control mechanisms and brings them to his side. That's perfectly the case for relational network, CEO avoids control mechanisms through strong relationships with the board of directors, but also gains shareholders trust through working on the embellishment of his reputation on the market. Yet, he has brought it into two components, external and internal relational network.

* External relational network (extr-net), it can be measured via educational background.

In fact, educational background informs about what kind of relationships the manager may have according to the type of schools or universities he attended. If he has been in prestigious schools and universities, this means that he has a developed external relational network, if he didn't attend school at all, being self-educated, he'll focus more on internal relational network as compensation. (Pigé 1998)[24];

* Internal relational network (int-net) is measured by the years the CEO spent as an employee in the firm. In fact, and according to Pigé (1998)[24], a

CEO with more years spent as an employee before being promoted has more legitimacy within the firm and had enough time to build a strong internal relational network granting him with certain latitude leading to managerial entrenchment. We advance the following hypothesis:

H3: Relational network positively affects CEO's decision in engaging in intangible investments.

d) ***Age of the CEO:*** CEO's age is a key variable to describe managerial entrenchment. In fact, of all the variables, it is the most important because it inquires about CEO's experience and of course his entrenchment level. According to Barker and Mueller (2002), CEO's "age is the much stronger direct predictor" of investment, but they also concluded that same predictor has a negative association with R&D investments. In the same context, we can recall the risk aversion concept. According to Elsaid and Ursel (2012)[12], age affects "personal risk taking in general and more specifically corporate risk taking". Shleifer & Vishny (1989)[28] explained that, entrenched CEOs tend to invest less and avoid risky investments preferring a stable firm life. Moreover, entrenched older CEOs have more influence on the board of directors in a way that they could enjoy "a quiet life resulting in lower investment levels relative to younger CEOs" (Serfling 2012)[27]. This variable (AGE-C) is measured in number of years according to Barker and Mueller (2002).

H4: CEO's age negatively affects his decision in engaging in intangible investments.

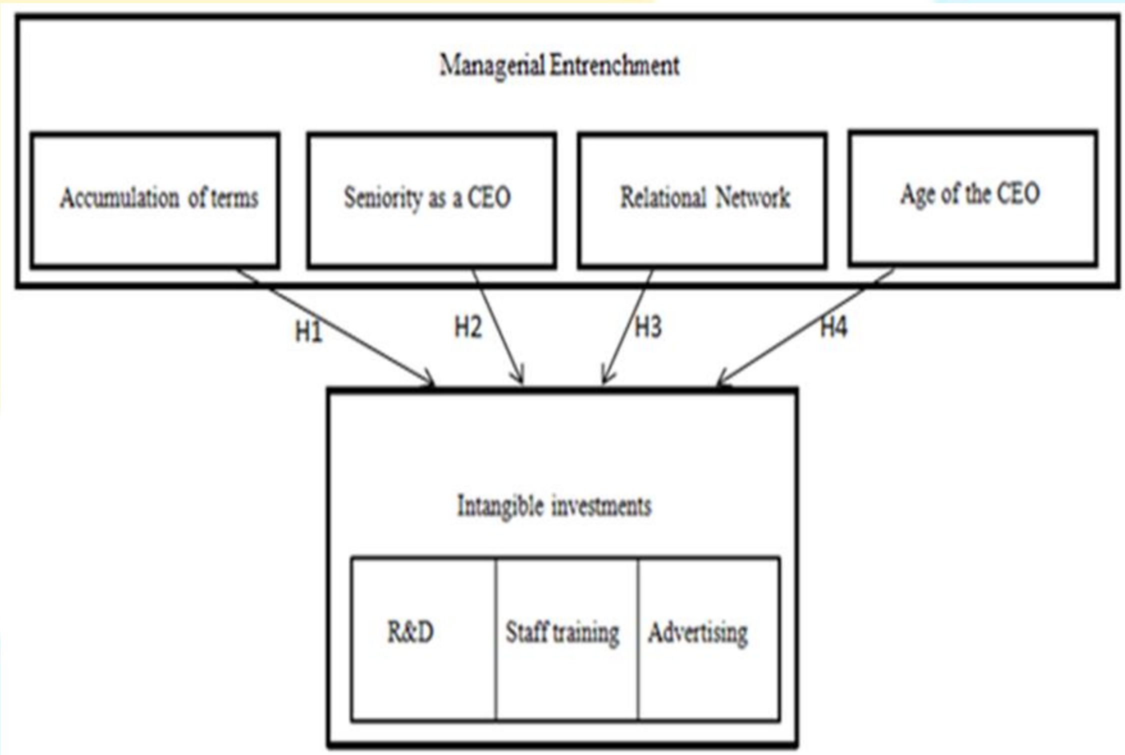

Figure 1: Conceptual model

4 Research methodology

We presented in the previous sections the theoretical and conceptual frameworks allowing us to test our model empirically through this section.

4.1 Methodological choice

To answer the central question, we adopted an adequate methodological approach to the study's objectives. In fact, we have chosen a mixed methods approach, which is a triangulation between qualitative and quantitative approaches trough an exploratory study and a questionnaire which has been distributed to 40 Tunisian managers.

This mixed methods approach allows us to reach a further understanding of the studied phenomenon.

a) ***Qualitative research:*** This approach is conducted while building the theoretical model. In fact, researches in the field of intangible investment focused on the budgeting and resources allocation.

This issue led us to conduct phone interviews to have further information about intangible investment components in the Tunisian context.

Telephone interviews allow us to exploring the investigation field and to have a more global idea on the most valued intangible investment components in the Tunisian context.

First, we prepared an interview guide consisting in open-ended questions allowing the interviewed participant to express their opinions freely and to provide us with their own perception of intangible investment importance and components. Secondly, we addressed the interview questions via telephone to managers, but we couldn't record the conversation due to confidentiality issues.

Thiétart (2003)[32] defined interview as "a technique to collect, from the perspective of their analysis, discursive data reflecting notably the conscious or unconscious mental universe of individuals". The main objective of this approach is to deeply understand the analyzed subject in order to have a clearer understanding of the influence existing between managerial entrenchment and intangible investment. The average duration of interviews is between 50 minutes and an hour and a half and the data collection is made through taking notes.

b) ***Quantitative research:*** The reason of choosing the questionnaire technique is the fact that the population is composed of a considerable number of persons (Tunisian managers) and various geographic zones.

4.2 The sampling process

In our study, our population is made of different Tunisian firms CEOs. Being subject of a number of circumstances such as time and access to firms, the sample is composed of 40 managers. In fact, the questionnaire was sent to 95 managers, but only 40 were kept due to badly filled responses. Thus, the number retained is sufficient to pursue the data analysis and hypotheses validation.

Survey information was collected through the distribution of a questionnaire via internet on different activity sectors of Tunisian managers.

The questionnaire was brought into two sections. The first one is about the company's information and the second is related to the set of model variables.

Measurement scales chosen for our study have been brought, tested and validated by the literature. For most of the variables, a five-point Likert scale was chosen (1= do not agree at all, 5= totally agree), the rest is made of multiple answers.

Our study falls within a positivist approach. In fact, "the positivist position is grounded in the theoretical belief that there is an objective reality that can be known to the researcher" (Nightingale 2012)[20]

4.3 The effect of managerial entrenchment on intangible investment

Reliability tests led us to delete 4 items due to their insignificance in our sample context.

Those items are:

- Period of return on advertising investment;
- years of a single term of office;
- Terms of office
- Academic and educational background

And so, the first hypothesis, which is the effect of office terms accumulation, is deleted. With reference to analysis made with the software SPSS19, the regression equation is written as below:

$$\text{Intangible investment} = f(\text{Sen}_{\text{CEO}}, \text{Rn}_{\text{CEO}}, \text{Age}_{\text{CEO}}) + \Sigma\text{it}$$

Sen_{CEO} = (SC: Seniority as a CEO, TYS: Total years of seniority)

Rn_{CEO}= Internal relational network

Int_{net}= Internal relational network

Consequently;

$Y = aX_1 + aX_2 + aX_3$ with

X_1: seniority as a CEO

X_2: internal relational network

X_3: Age of the CEO

And Y brought into two equations:

Y_1: intangible investment importance

Y_2: period of return on investment

a) ***The effect of managerial entrenchment components on the importance of intangible investment:*** Through the regression test, we could conclude the effect of each managerial entrenchment variables on intangible investment through the first factor which is the perceived importance of intangible investment.

We have obtained an R² equal to (0.194) what leads us to conclude that the predictive ability and significance of the model is medium because (19.4%) of the variation of the dimension of intangible investment. The intangible investment importance can be predicted by managerial entrenchment through its three components (seniority as a CEO, relational network and Age of the CEO). We can observe that seniority as a CEO has a significant positive effect on the first dimension which is the perceived importance of intangible investment with a coefficient equal to (0.325).

Total years of seniority of the CEO have an insignificant effect on the perceived importance of intangible investment with a coefficient equal to (0.193). However, internal relational network has a significant negative effect of the perceived importance of intangible investment with a coefficient equal to (-0.488). The age of the CEO has an insignificant effect on the perceived importance of intangible investment with a coefficient equal to (0.009).

b) ***The effect of the different components of managerial entrenchment on the dimension perceived period of return on intangible investment***

Through regression test, we could conclude the effect of each variable of managerial entrenchment on intangible investment through the second factor which is the perceived period of return on intangible investment. We have obtained an R^2 equal to (0.180) what leads us to conclude that the predictive ability and significance of the model is medium because (18%) of the variation of the dimension of intangible investment.

Hence, the perceived period of return on intangible investment can be predicted by managerial entrenchment through its three components (seniority as a CEO, relational network and Age of the CEO). We can observe that seniority as a CEO has a significant negative effect on the factor 2 which is the perceived period of return on intangible investment with a coefficient equal to (-0.302).

Total years of seniority of the CEO have a significant positive effect on the perceived period of return on intangible investment with a coefficient equal to (0.347). Internal relational network has a significant positive effect on the perceived period of return on intangible investment with a coefficient equal to (0.202). The age of the CEO has a significant negative effect on the perceived period of return on intangible investment with a coefficient equal to (-0.205).

5 Results interpretation and discussion

After finishing the different analysis, we have come to conclude two intangible investment strategies that managers pursue when the main goal is managerial entrenchment.

5.1 Strategy based on the perceived importance of intangible investment

This strategy is explained through the dimension: perceived importance of intangible investment.

Seniority as a CEO has a significant positive effect on the perceived importance of intangible investment. In fact, this characteristic in particular informs us clearly about the entrenchment level of the CEO.

The greater the CEO's seniority is, the less he has incentives for managerial entrenchment. The reason is that the longest the period he has spent fulfilling his functions of CEO, the more he gained in managerial latitude (Shleifer & Vishny 1989)[28], and also in discretionary latitude (Williamson 1964)[34].

These two types of latitudes lead the manager to develop an opportunist behavior but also tend to invest in projects whose value depends on information he can easily manipulate and investment projects characterized by an important information asymmetry (Stiglitz 2001)[30]. Internal relational network has a significant negative effect on the perceived importance of intangible investment. In fact, a CEO with a greater internal relational network, built through an important seniority as an employee, has gained legitimacy within the firm.

According to Charreaux (1996), CEOs build explicit and implicit contracts by informal relationships with all the agents involved in the firm's life, making them likely to positively interfere in maintaining the CEO in place, consciously or unconsciously supporting his entrenchment and making his replacement a cast out alternative. This strategy is essentially based on manager's reputation capital and confidence relationships (Breton and Wintrobe, 1982)[5]. This explains, in fact the negative effect on the perceived importance of intangible investment.

The reason is that a manager with a strong internal relational network already possesses a powerful managerial entrenchment strategy and the need to build another one based on intangible investment is out of consideration. Besides, and according to the analysis we made, seniority as a CEO and internal relational network have a significant positive linear relationship but opposite effects on the perceived importance of intangible investment. We can conclude that a greater seniority as a CEO with a lack of internal relational network increases the perceived importance of intangible investment which leads to managerial entrenchment through intangible investments strategy.

On the other hand, a greater internal relational network with few years spent as a CEO leads to develop a managerial entrenchment strategy based on internal relational network. According to the results we obtained through the different analysis, the age of the CEO has no significant effect on the perceived importance of intangible investment. The reason is that in this particular dimension of intangible investment, the importance is based only on two components with greater effect: seniority as a CEO, internal relational network.

Authors such as (Shleifer and Vishny, 1989[28]; Barker and Mueller, 2002[18]; Elsaid and Ursel, 2012; Serfling, 2012) defined age as an important predictor of the investment decision making but also of investment's intensity through the age's effect on risk taking. Younger CEOs are more likely to engage in risky investments decisions of which intangible investment is the best example, while older CEOs prefer abstaining from risky decision making, preferring a calm firm life.

Already entrenched, they don't need to pursue new managerial entrenchment strategies that can threaten their stability and tend to prefer "a quiet life resulting in lower investment levels" (Serfling, 2012)[27]

5.2 Strategy based on the perceived period of return on intangible investment

The results obtained for the second dimension which is the perceived period of return on intangible investment inform us about the second intangible investment strategy based on the period of return.

Seniority as CEO has a significant negative effect on the perceived period of return on intangible investment. Investing in intangibles is considered as a risky investment in period of return but also in incomes and returns on investment. In fact, "the development of intangible assets needs important resources. However, such investments are risky which due to their irreversibility" (Ghassagnon, 2011)

These investments in particular are used in information manipulation strategy, known as a powerful and privileged managerial entrenchment strategy. The main reason is that intangible investment provides information opacity and asymmetry allowing managers to raise their incomes and discretionary latitude (Stiglitz, 1992)[28]. We can conclude that CEOs aren't focused on the period of return on intangible investment and the aim is to spread uncertainty to more discrete incomes, but also with the intention of increasing the level of uncertainty in a way to cast away the risk of being replaced.

Total years of seniority have a significant positive effect on the perceived period of return on intangible investment, because a CEO with greater seniority within the firm gained experience and expertise, but also managerial reflexes allowing him to be farseeing. Internal relational network has a positive but weak effect on the perceived period of return on intangible investment. Internal relational network consists in the board of directors and all the agents involved in the firm's life.

These components are considered as internal control mechanisms, applying pressures upon the CEO and controlling his strategies and performance. The board of directors is identified as an essential key mechanism allowing companies to ensure a return on investment (Shleifer and Vishny, 1997)[28].

Age has a negative but weak effect on the perceived period of return on intangible investment. Already defined in the previous section, age predicts the CEO risk taking willingness but also the intensity of his investments. The older the CEO is, the less he invests in general, and even less in risky investments and prefers short-term investments with certain incomes (Barker and Muelller, 2002[18]; Serfling, 2012[27]).

According to the results we obtained through the different analysis we made the final model which is represented as below:

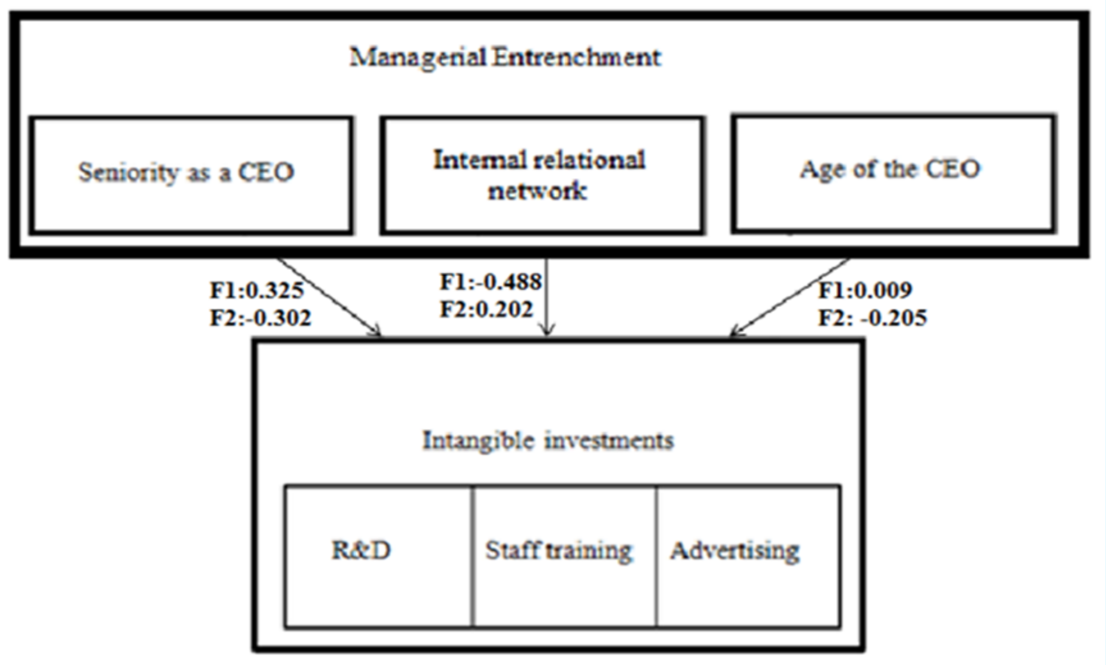

Figure 2: Final model

For the first strategy which is based on the perceived importance of intangible investment, the hypotheses related to CEO seniority and relational network are verified and the hypothesis related to CEO age is rejected. For the second strategy which is based on the perceived period of return on investment, the three hypotheses are verified.

6 Conclusion

Our research suggests that the link between managerial entrenchment and the decision to invest in intangible assets exists. Matter of fact, and as already said, authors such as (Barker and Mueller, 2002[18]; Elsaid and Ursel, 2012[12]) evoked positive effects of managerial entrenchment components on intangible investment ones but took each component aside without proving the link between the two concepts as a whole.

Through the different analysis, the results we obtained show that in terms of intangible investment two strategies are possible depending on the dimension over which the manager built his perception. If the manager's perception is based on the importance of intangible investment, internal relational network is a key determinant factor and its existence has a significant negative effect on choosing intangible investment as a managerial entrenchment strategy. On the other hand, if the manager's perception is based on the period of return of intangible investment, the CEO seniority and age are key factors and have a positive effect on choosing intangible investment as a managerial entrenchment strategy, while internal relational network appears as a key control mechanism.

The contribution of our research is essentially enriching the literature related to managerial entrenchment and intangible investment, which we found out to be poor when looking for studies treating the link between managerial entrenchment and intangible investment.

Furthermore, our study clarifies two entrenchment strategies related to intangible investment: The first one is based on the perceived importance of intangible investment and the second one is based on the perceived period of return on intangible investment.

The limitations of our research are essentially an outcome of the limited number of respondent which is due to deadlines and geographic dispersion of managers to whom the questionnaire has been addressed.

Future research should be based on greater sample size, other activity sector, but also a comparing study between different activity sector and different regions or states.

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