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THESIS

THE IMPACT OF CORE SELF EVALUATION ON ENTREPRENEURIAL TRANSITION AND FINANCING

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CONTENTS

The Impact of Core Self Evaluation on Entrepreneurial Transition and Financing.

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The creation of new organizations is among the most important forces of social and economic development (Shumpeter, 1934). It stimulates economic growth, innovation and job creation (Carroll and Hannan, 2000). Entrepreneurship is related to the establishment of a new organization and is based on the discovery and exploitation of profitable opportunities (Shane and Venkataraman, 2000).

The relevance of this phenomenon is strictly related to the evolution of the economic and labor systems which require high flexibility and dynamism to catch opportunities in a world whose set of resources modifies dramatically.

According to the Global Entrepreneurship Monitor's Report for 2009, the degree of the entrepreneurship activity, measured by the number of people engaged in new and early stage ventures, progress worldwide. The analysis of entrepreneurship is a mirror of an economic context since the Global Entrepreneurship Monitor results confirm that institutional characteristics, demography, entrepreneurial culture and the degree of economic welfare shape a country's entrepreneurial landscape (Global Entrepreneurship Monitor – 2009).

Interest in the study of entrepreneurship has increased among scholars in the recent years. Many scholars seem to have recognized the importance of the research in this topic from both a theoretical and empirical perspective (Strom, 2011). Empirically speaking, many progresses have been made: for example scholars have underlined the importance of firm and industry dynamics, the influence of institutional forces (Pacheco and others, 2010; Tracey, Nelson and Owen, 2011), and the effect of demographic and personality trait (Sorensen, 2007). Much more however has to be done (Zachary and Mishra, 2011): How does entrepreneurship start, change and grow over time? seems to be the leading research question in this field.

In this study we aim at investigating how entrepreneurial intention spurs. From a recent study (see Martinez, Young & Aldrich, 2011), about the 37% of the reviewed articles did not study any type of transition. Scholar have shown an increasing interest in topics regarding entrepreneurial cognition, perception and behavior (Lee and others, 2011 and Journal of Economic Phycology Special Issue). The effects of emotional and perceptional terrain have been already integrated in the organizational and strategic management studies but not yet in the entrepreneurial field (Zachary and Mishra, 2011).

In particular due to an evidence that have been overlooked in the literature, the Research Problem we want to address deals with the analysis of *dispositional factors affecting likelihood to become an entrepreneur* and the initial question that it seems useful to investigate is *What affect individual's entrepreneurial entry decision?* And it is around this key question that we seek to investigate in a deeper way this issue. The contributions of this proposal are clustered around questions regarding the linkage between personality factors and managers entrepreneurial choice and development.

The phenomenon of career mobility and in particular the presence of prior employment people that decide to become entrepreneur is increasing and it has been demonstrated that “pure” entrepreneur are less than “not pure” entrepreneur (Burlke and others, 2008; Folta, Delmar andWennberg, 2010; Campbell and De Nardi, 2009) Following this path, some authors recognize the birth of a spin-out generation (Agarwal and others, 2004), other how career history could impact on new venture foundation (Burton, Sorensen and Beckman, 2002) and how some characteristics of prior employment experience (i.e workplace effect) affect the entrepreneurial entry (Sorensen 2007). Our proposal starts from the consideration that the phenomenon of professionals starting their own businesses is increasing (Groysberg, Nanda and Prats, NBER Working Paper Series).

Nevertheless, literature seems not to be gone much beyond the dynamics of prior employment experience to entrepreneurship. According to personal factors affecting entrepreneurial entry decision, prior literature has found that academic education (Eisenhardt & Schoonhoven, 1990; Shane & Stuart, 2002) and managerial experience matter quite a bit in the creation of new ventures. Karroll & Mosakowki (1987, ASQ) take into consideration the years of work experience. Dobrev & Bartnet (2005, AMJ) have pointed out that a Top Management position has a significant and positive impact on Entrepreneurial Transition and Gimeno and others (1997 ASQ) and Delmar and Davidsson (2010-E&RD) have found the same positive impact considering managerial experience as an independent variable.

On one side, studies about academic education have been quite robust (Bercovitz and Feldman, 2008); on the other side scholars seem to have not gone much deeper in the analysis of the personal factors affecting decision to shift to entrepreneurship.

One key issue faced by scholars in entrepreneurship field is the multiplicity of dispositional factors that could explain the phenomenon of transition: locus of control, narcissism, overconfidence, achievement, self-efficacy just to give some examples. Accordingly, in literature there was the need for a rigorous and parsimonious conceptual construct that had to explain individual choices better than the set of the cited variables, and in that sense scholars have recognized Core Self Evaluation as a considerable step in advance.

As far as self-assessment is concerned, the construct of Core Self Evaluation describes "how individuals evaluate themselves, their abilities, and their relationship to the environment in which they operate". It deals with self-perception on personal abilities, beliefs and knowledge (for the validity of the construct see: Judge and others, 2002; Hiller and Hambrick, 2005).

In details, CSE is the personal trait which affects a set of four qualitative characteristics: self confidence, self-worth, self-potency and freedom from anxiety. Judge and others (2002) have demonstrated, through a meta-analysis, that each of these components depends on CSE. The basic intuition behind is that an individual with an higher level of CSE, feels himself more secure and, thus, is more able to see and seize opportunities for himself, also from an entrepreneurial point of view. In literature different studies that have linked empirically CSE with different outcomes exist: job satisfaction (Judge and Bono 2001), performance (Erez and Judge, 2001), motivation (Chen, Gully and Eden, 2004).

Core self evaluation may help to disentangle entry decision better than other behavioral variables (Judge et al., 2002) because it represents a unique latent psychological variable which causally influences a set of superficial qualitative traits:

self confidence, self-worth, self-potency and emotional stability (see Judge et al. 2002). Therefore, according to a consolidated literature (Bollen & Lennox, 1991), it seems parsimonious and statistically correct to directly analyze core self evaluation instead of the above mentioned traits whose joint analysis is statistically redundant, since they are all superficial indicators of a latent and deeper construct - i.e. core self evaluation (Judge, 2003).

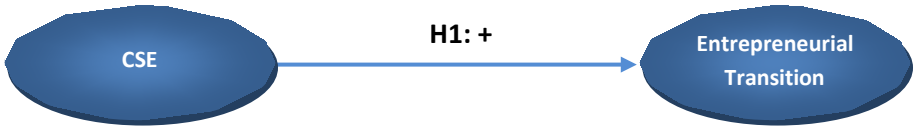
Motivated by the objective of a deep understanding of the relationship between dispositional trait and entrepreneurial choices, the first paper aims at investing the following broad research questions:

- Does Core Self Evaluation affect the likelihood of entrepreneurial tarnsition?
- Does TMT membership influence the likelihood of entrepreneurial transition?
- Does TMT membership moderate the impact of CSE on entrepreneurial transition?

1.a - The impact of Core Self Evaluation on entrepreneurial transition.

Does Core Self Evaluation affect entrepreneurial transition? In this paper we aim at investigating individual traits affecting entrepreneurial transition. Following existing

literature on entrepreneurship and entrepreneurial decision process, we expect to find out that the involvement in creating new ventures is driven by the level of Core Self Evaluation, a widely studied construct in the strategic management literature as well as in behavioral psychology.

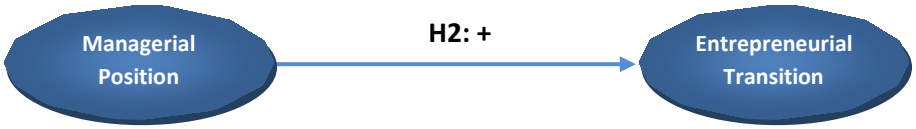


1.b - The impact of Managerial position on entrepreneurial transition.

Does Managerial position affect the phenomenon of entrepreneurial transition?

In this paper we aim at investigating how different levels of managerial position impact the phenomenon of entrepreneurial transition. For the purpose of the analysis we distinguish between Top Management Team and Middle management. Since transition appears positively influenced by the characteristics of the activity in which an individual is involved, working in a top management position - versus a middle management one - increases the possibilities to interact with the external environment and increases the relationships with innovative contexts, thus boosting the entrepreneurial temptation (Blau, 1977). Top Managers are thought to be able to create and seize opportunities and to motivate their organizations in ways that others cannot (Barnard, 1948). This

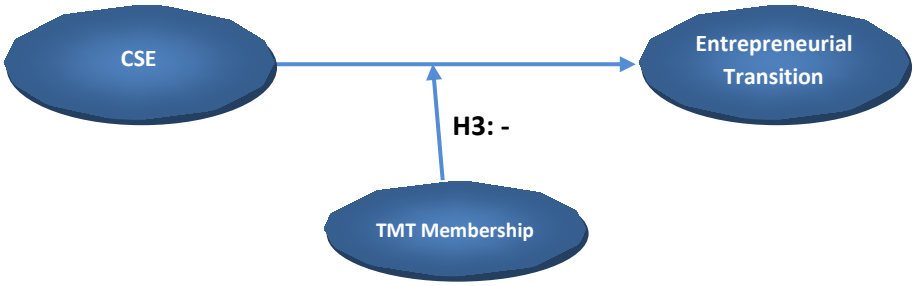
entrepreneurial behavior within the organization positively influences the tendency of a TMT member to transit to entrepreneurship, designing to the following relation:



1.c - The moderating role of Managerial position in the influence of CSE on entrepreneurial transition.

Does TMT membership moderate the impact of CSE on entrepreneurial transition?

Since entrepreneurial organizations have been conceptualized as possessing three main characteristics: innovation, risk-taking, and proactiveness (Covin and Slevin 1991; Miller and Friesen 1982), the TMT status negatively moderates the impact of CSE on entrepreneurial transition. This may happen because it applies a sort of *substitutive effect* between CSE and TMT status in influencing the phenomenon of transition. Higher is the managerial position in the organization, higher is the relying of top managers on their role, expertise and networks regarding the decision to transit. Lower is the managerial status, lower are the above mentioned resources to disposal of the employee; in this case, a substitutive effect acts since not the working method or expertise but individuals' dispositional attributes – such as core self evaluation - will have a room in affecting entrepreneurial transition phenomenon.



Keep on trying to comprehend the relationship between dispositional trait and entrepreneurial choices, the second paper goes deeper into the investigation of financial choices influenced by the nascent entrepreneur dispositions.

The research questions of the second paper are the following:

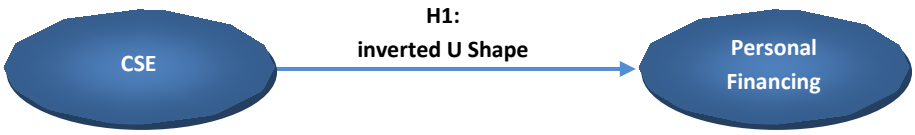
- Does Core Self Evaluation affect the amount of personal financing raised by the nascent entrepreneur?
- Does CSE affect the amount of external financing raised by the nascent entrepreneur?

2.a - The impact of CSE on personal financing raised by the nascent entrepreneur.

Does CSE influence the amount of personal financing destined to the new venture?

Individuals with an higher level of CSE will tend to believe in their own capacity and to get higher profits. It is like to say they expect higher entrepreneurial return to

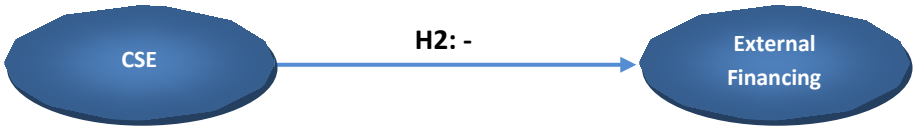
their company than other individuals. This circumstance will lead them to invest more of their personal capital, for a given level of risk. High CSE people rely more on their internal beliefs than on external information and noises (Bernardo and Welch, 2001), that is to say that they are confident to see and seize better opportunity than external financial market. This is why, for higher levels of CSE they accept to destine higher amounts of personal financing. Moreover, the increase of CSE is more than the increase in personal financing raised because, higher is the CSE higher is the tendency to underestimating the right required financial capital for the new venture. An hyper level of CSE leads to a series of cognitive biases which may lead the nascent entrepreneur to reduce the amount of personal financial capital raised. hyper levels of CSE lead the nascent entrepreneur to underestimate the amount of personal investments required for running the new venture because of his over optimistic projections on his abilities (Cassar, 2009) to overcome risks and obtain returns. This leads to the inverted U shape effect of CSE on nascent entrepreneur personal financing, because, under a certain level, CSE positively impacts on personal amount of resources deployed, while over a certain point (which corresponds to the switch of CSE to Hubris) additional levels of CSE negatively impact the amount of resources invested.



2.b - The impact of CSE on external financing raised by the nascent entrepreneur.

Does CSE influence the amount of external financing raised by the nascent entrepreneur?

We will find a difference in risk perception between entrepreneur's valuation and external investors will lead to a cognitive gap; external investors will perceive the exaggerated level of risk compared with the expected returns and tend to diminish their amount of funds invested in the new venture, generated a different assessment of the entrepreneurial project. This mismatching generates a negative impact of CSE on external fund raising. Another explanation is linked to the nature of the funds, since external funds require a constant paying back over the years, so that the borrower is more focused on cash flow budgets than on value creation expectations. This means that the above mentioned misperception about risks and paybacks, referred to the amounts and times, confirm a negative impact on external capital raised as CSE increases.



Theoretical Contribution

This study may contribute entrepreneurship literature by advancing research in better understanding the phenomenon of entrepreneurial transition (significant both at an empirical and academic level, but overlooked). Since so far the debate on factors affecting self-employment is not fully developed and since the embedded literature on

factors affecting manager's entrepreneurial entry is still limited, we believe that our research linking dispositional factors with managerial position could contribute literature in that sense.

Nevertheless, this study could be an attempt to enrich entrepreneurship and strategic management research. It could advance research in better understanding the phenomenon of managerial experienced people transition to entrepreneurship and to validate the application of core self evaluation in this setting. Thus it may contribute the literature on individual's disposition and economic choices (Simon and others, 2003). Moreover, it may contribute the organizational stream of resource trying to assess the organizational behavior of personnel, and linking the managerial status to the consequent cognitive and motivational setting. it may contribute to the core self evaluation literature, quite developed in the strategic management and organizational behavior field, validating the role of self assessment, highly important in entrepreneurship. Finally, some practical implications could be recognized for companies which may be interested in measuring core self evaluation in order to check the phenomenon of potential transitions of their employees and to avoid this circumstance to occur. In this sense, one future direction for research may be to studying possible strategies for companies to reduce employee transition, above all for their best resources.

Title

The Impact of Core Self Evaluation on entrepreneurial transition.

Abstract

In this paper we aim at investigating individual and organizational traits affecting entrepreneurial transition. Following existing literature on entrepreneurship and entrepreneurial decision process, we expect to find out that individuals' involvement in creating new ventures is driven by the level of Core Self Evaluation and TMT membership. We also recognize, with impostant results for both the dispositional and contextual approach, TMT membership as a potential moderators of this relationship.

Keywords

Core self evaluation, entrepreneurial transition, Top Management Team,

Introduction

Entrepreneurship is among the most important forces of social and economic development (Shumpeter, 1934). Entrepreneurship is related to the establishment of a new organization and is based on the discovery and exploitation of profitable opportunities (Shane and Venkataraman, 2000). It stimulates economic growth, innovation and job creation (Carroll and Hannan, 2000). *"The creation of new economic entities is central to the evolution of organizations and economies"* (Aldrich, 1999) because it influences the *"social and economic stratification in an economy"* (Haltiwanger and Krizan,1999). Other studies have confirmed this conviction by highlighting that the dynamics of economic organizations explains much of the determinants of individual socio-economic destiny and social mobility (Haveman and Cohen, 1994). Entrepreneurial transition (or likelihood or propensity or mobility) (Dobrev and Barnett, 2005) is defined as the transition made by an individual from leaving one organization to found or to lead his own (Carroll and Mosakowski, 1987, Nanda and others, 2010). Interest in the study of entrepreneurial transition has increased among scholars in the recent years (Strom, 2011), both from a theoretical and an empirical perspective (Baumol, 2010; Parker, 2009; Sorensen, 2007). The phenomenon of start-up companies and new business formation has stimulated a strong interest by economists and sociologists because it is strictly connected to social mobility since entrepreneurship and self-employment permit people to accumulate wealth and improve their social and economic standing (Nee and Sanders, 1985; Keister, 2000). The children of self-employed, for instance, are more likely to become self-employed (Dunn and Holtz-Eakin, 2000). Other researchers confirm that this circumstance depends on the exposure of children to a specific entrepreneurial environment (Aldrich, Renzulli and Langton, 1998).

From an academic perspective, it has been demonstrated that "pure" entrepreneur are less than "not pure" entrepreneur (Burke and others, 2008; Campbell and De Nardi, 2009). From an

empirical perspective, according to the Entrepreneurship Activity Index (Kauffman Centre, 2010), the number of prior employed people that start a new venture is at least around 80% and the higher percentages are related to higher tenures (with an higher proximity to managerial status): on 652 American born bosses of technology companies set up in 1995-2005 the average age was 39 with a significant professional experience.

In this paper we propose to investigate the micro-foundations of entrepreneurial transition. Prior literature has found initial evidence that two-individual level-factors matter quite a bit for the phenomenon of entrepreneurial transition: academic education (Eisenhardt and Schoonhoven, 1990; Shane and Stuart 2002) and managerial experience (Carroll & Mosakowki, 1987; Sorensen, 2007; Folta and others 2010; Dobrev & Barnett, 2005; Gimeno & Others, 1997; Delmar and Davidsson, 2000). While personal and contextual factors fostering academic start up are quite developed and robust (Lockett and Wright 2005; Bercovitz and Feldmann; 2008); literature seems not to be gone much beyond the dispositional factors related to the dynamics of manager's entrepreneurial transition, since previous studies have basically concentrated on firm level factors (Elfeinbein et al., 2010; Chatterjee, 2009; Nanda and Sorensen, 2010), not withstand a reborn interest in the personality-related sources of entrepreneurship (see inter alia Rauch & Frese, 2007; Zhao & others, 2005). According to individual level analysis, our study aims at pointing out the potential impact of a dispositional factor - core self evaluation - on entrepreneurial transition. Since in the strategic management field, factors regarding managers personality (self-esteem, locus of control, core self evaluation) have been used to explain entrepreneurial orientation at a firm level (Simsek 2007; Chatterjee and Hambrick, 2007), we want to apply core self evaluation at an individual level, in order to disentangle factors influencing entrepreneurial transition. In particular, this research is based on a construct – core self evaluation – which

has been strongly investigated in the strategic management field as well as in behavioral organization, that we attempt at applying in the entrepreneurial stream of research.

In literature, one of the most lasting debates on entrepreneurship is concentrated on the motivations beyond entrepreneurial transition. Entrepreneurial transition (or likelihood or propensity or mobility) (Dobrev and Barnett, 2005) is defined as the transition made by an individual from leaving one organization to found or to lead his own (Carroll and Mosakowski, 1987, Nanda and others, 2010). It could be recognized as an employment choice. The most number of entrepreneurs are those with previous employment experience (Cooper and others, 1988). Literature considers entrepreneurs as "organizational products" (Freeman, 1986), in the sense that they come from established firm. All this premised, what are the factors affecting entrepreneurial transition?

We can recognize two different perspectives that have tried to give an answer to the above mentioned issue: on one hand, the contextual approach argues that the social position of the individual in the environment influences his propensity for entrepreneurial activity (Sorensen, 2007, Dobrev and Barnett, 2005); on the other hand, the dispositional approach underlines that the causes for starting an entrepreneurial activity deal with motivational and personal reasons: entrepreneurship is considered a transitory characteristic, a tendency of certain people with different personal characteristics (Kirzner, 1973) and an aim which leads to different forms, in terms of different recognitions of opportunity and different ways of exploiting them (Venkataraman, 1997). The basic intuition of the contextual approach is that the position in society is the main driver of an entrepreneurial decision; in this approach, personal features are not considered or, better, are considered as negligible. In details, the most important sociological features investigated in literature have been: cultural environment

(Sorenson and Audia, 2000), family origins (Sorensen 2007), social network (Giannetti and Simonov, 2009), workplace interaction (Nanda and Sorensen, 2010). Some authors have identified social and environmental factors (Stinchcombe 1965; Baumol, 1996) affecting entrepreneurial entry: for examples transition is more likely in period of economic growth (Reynolds and White, 1997), in small size institutional context (Aidis, Estrin and Mickiewicz, 2010) or in less welfare supported environment (Parker 2007; Parker, 2004).

One approach states that an existing organization negatively affects the likelihood of an individual to become entrepreneur, since an organization lives for its survival and continuity (Thompson 1977) and pretend commitment and focus of employees at the prescribed objectives (Pearson, 1951). Moreover bureaucracy in the organizations negatively affects the mental dispositions of their employees by reducing their likelihood to transit to entrepreneurship and by hindering the development of the skills necessary for an entrepreneurial experience; finally an organizational pre-determined career increases the opportunity cost to quit and move to an uncertain working path. This circumstance appears critical in big companies where career path is less dependent on personal and informal relations and more relied on objective performances and fixed rules. Transition appears influenced by the characteristics of the organization in which an individual works, since working in a big company, for instance, reduces the possibilities to interact with the external environment and increases the relationships within the organizations, thus reducing the entrepreneurial temptation (Blau, 1977). Moreover, older companies rely more on routines and procedures than on informal behaviors, so that reducing the practice of innovation and change for employees and this negatively affects people transition to entrepreneurship. Finally older companies are less prompt to innovate and this negatively impacts the attitude of workers to deviate from prescribed routines and their attitude to change (Kim and Carroll 2003). On the other side, other studies have demonstrated that the children of entrepreneurs

give more value to jobs that offer variety and less value to jobs that offer routine despite this means long-term security in the form of pensions (Sorensen, 2007). On the other hand, higher is the position in the organization, higher are the possibility to acquire an entrepreneurial orientation mindset and a proactive strategic approach, since the possibilities to interact with the eternal context and to work in a not structured way, without following routines and procedures, are higher (Lumpkin and Dess, 2001).

The opposite perspective, the dispositional one, states that personal characteristics are the only ones which, apart from the social aspects, influence (i.e accelerate or retard) the entrepreneurial decision. Arguably, these characteristics and traits are considered key component in entrepreneurial transition. Some personal features recognized by scholars are: risk perception (Simon, Houghton, and Aquino, 2000), entrepreneurial ability, personality variables (Zhao and Seibert, 2006) and perceptual variables (Arenius and Minniti, 2005). In this perspective, a concrete contribution has been given by studies underlining the role of personality on entrepreneurial status: entrepreneurial cognition (Kizner, 1979), career intentions (Zhao, Seibert and Hills, 2005), motivation (Miner, 1993) until the five factor model theorization (Costa and Mc Crae, 1992): neuroticism, extraversion, openness to experience, conscientiousness and agreeableness. This model has been recently used to underline the differences between entrepreneurial status and managerial one (Zhao and Seibert, 2006). Even if biased and disappointing in some results (Thorton, 1999), psychological factors explaining entrepreneurship are still quite used (Delmar and Davidsson, 2000).

CSE

One key issue faced by scholars in entrepreneurship field is the multiplicity of dispositional factors that could explain the phenomenon of transition: locus of control, narcissism, overconfidence, achievement, self-efficacy just to give some examples. Accordingly, in

literature there was the need for a rigorous and parsimonious conceptual construct that had to explain individual choices better than the set of the cited variables, and in that sense scholars have recognized core self evaluation as a considerable step in advance.

According to personal factors affecting entrepreneurial transition, prior literature has found that academic education (Shane and Stuart, 2002) and work experience matter quite a bit in the creation of new ventures. Karroll and Mosakowki (1987) take into consideration the years of work experience.

On one side, studies about academic education have been quite robust (Bercovitz and Feldman, 2008); on the other side scholars seem to have not gone much deeper in the analysis of the personal reasons affecting decision to shift to entrepreneurship. Our aim is to investigate a personal factor - core self evaluation - affecting entrepreneurial transition. Moreover we recognize some dimensions that could moderate the phenomenon.

As far as self-assessment is concerned, the construct of Core Self Evaluation describes "how individuals evaluate themselves, their abilities, and their relationship to the environment in which they operate". It deals with self-perception on personal abilities, beliefs and knowledge (for the validity of the construct see: Judge and others, 2002; Hiller and Hambrick, 2005). From an empirical point of view is possible to define 4 different level of core self evaluation: low, medium, high and hyper. The hyper level of core self evaluation - which is an exaggerated one - has been detected by literature as hubris (Hayward & Hambrick, 1997; Hiller & Hambrick, 2005). Analyzing the main construct in details, core self evaluation is the personal trait which affects a set of four qualitative characteristics: self confidence, self-worth, self-potency and freedom from anxiety. Judge and others (2002) have demonstrated, through a meta-analysis, that each of these components depends on core self evaluation. The basic intuition behind is that an individual with an higher level of core self evaluation, feels himself more secure and, thus, is more able to see and seize opportunities for himself, also

from an entrepreneurial point of view. In literature different studies that have empirically linked core self evaluation with different outcomes exist: job satisfaction (Judge and Bono 2001), performance (Erez and Judge, 2001), motivation (Chen, Gully and Eden, 2004). Core self evaluation may help to disentangle managers' transition better than other behavioral and dispositional variables studied in literature (Judge et al., 2002) because it represents the source, the antecedents of four qualitative traits (self confidence, self-worth, self-potency and emotional stability; see Judge et al. 2002) that a person can and can not show during his life and career. Therefore, core self evaluation is parsimonious; it is a unique latent psychological variable that cause these individuals traits. It is statistically correct to directly analyze core self evaluation instead of the above mentioned traits, whose joint analysis is statistically redundant, since they are all superficial indicators of a latent and deeper construct (Bono and Judge, 2003). Core self evaluation is also a dynamic scaled variable; finally Core self evaluation may transit to Hubris (hyper level of core self evaluation), determining a series of consequences over many social and managerial phenomena. Strategic management scholars have broadly applied core self evaluation construct in the managerial competitive arena, underlining the link between manager's core self evaluation and firm decisions and outcomes (Hambrick, 2007), but haven't tried to analyze core self evaluation role in entrepreneurial entry decision. In particular, previous researchers have focused on the application of core self evaluation on CEO's strategic action referred to the firm (Finkelstein and Hambrick, 1996; Carpenter and Fredrickson, 2001) or to the entrepreneurial orientation of the organization (Veiga and Simsek, 2010). The main intuition has been that a greater level of core self evaluation means a greater confidence and ability to cope with entrepreneurial strategic choices (Erez and Judge, 2001; Judge and Bono, 2001) and to catch good performances. This issue is consistent with an entrepreneurial cognitive perspective. Many studies, in fact, argue that personal attributions give significant support in explaining how entrepreneurs act (Simon,

Houghton and Aquino, 2000). People who have highly positive self-assessments are thought to be able to create and seize opportunities and to motivate their organizations in ways that others cannot (Barnard, 1948). This attitude is also relevant for entrepreneurial transition and it is interesting to study how this personal trait may operate and shapes at different positions occupied by the individual in the organization. Since entrepreneurial transition is a typical uncertain and risky decision, it requires adequate personal abilities to successfully cope with that. The rationale behind this statement deals with either cognitive or motivational factors. At a cognitive level, many researchers have given higher importance to endogenous factors than to exogenous ones in determining entrepreneurial success (Freedman 2007). So we can state that there is a strict nexus between high levels of core self evaluation and manager's entrepreneurial transition. In particular managers that become entrepreneurs probably expect that the entrepreneurial profit will be enough to overcome a threshold. This thresholds depends on their uncertainty premium plus the opportunity costs of a managerial status (Gimeno and others, 1997). Schumpeter (1934) suggests that entrepreneurs must perceive the values of resources differently from others. Furthermore core self evaluation impacts on the cognitive map of the individual due to a different risk perception cognition: higher expected value creation - that is, higher expected revenues versus lower opportunity costs. Thus higher is a manager's core self evaluation, lower are the perceived switching costs related to entrepreneurial transition. At a motivational level, an higher core self evaluation manager will perceive himself as able to extract grater values from entrepreneurial opportunity than the others. It is likely to say that they have a more entrepreneurial mindset. Furthermore core self evaluation impacts on the cognitive map of the individual due to a different risk perception cognition: higher expected value creation - that is, higher expected revenues versus lower opportunity costs. People with an higher level of core self evaluation are more prompt to take risky decision and to seize the available opportunities and are more prompt to wider the time

horizon to appraise the validity of transition (Miner, 1993). This perspective is consistent with both the managerial and entrepreneurial one. The former states that an higher level of core self evaluation is correlated with riskier and more deviating choices (Haleblian, Markoczy and McNamara, 2007). Moreover, the transition from the wage employment status to the entrepreneurial one is not only a risky action but also a deviating one from the planned managerial career path. The latter describes the entrepreneur personality as highly self-confident (Chen, Greene, & Cricke, 1998) with a strong belief in his ability to foresee and control outcomes (Simon, Houghton, & Aquino,2000). Moreover previous scholars have pointed out the evidence that individuals with an higher level of core self evaluation are more confident with their capabilities and more consistent with their goals and aspirations (Judge and others, 2005) and also more innovative (Simon and Hougton, 2003). Applying these both evidences to wage employed people it means that those with an higher level of core self evaluation - because of an higher confidence on their abilities and on their understanding of the environment - should be more prompt to become entrepreneurs, to perceive better and faster opportunities (Chatterjee and Hambrick, 2007), to perceive less risk and less level of uncertainty. Another important intuition is that an higher level of core self evaluation means an higher confidence on controlling the success of their own career and, according to this conclusion entrepreneurship could be seen as a challenging choice strengthening their self potency and reputation. Other studies have demonstrated that higher levels of core self evaluation allow employees to better seizing opportunities for their companies and to taking decision that can reveal positive for company's growth and development (Keegan, 1987). Moreover, high core self evaluation people rely more on their internal beliefs than on external information and noises (Bernardo and Welch, 2001), that is to say that they are confident to see and seize better opportunity than external financial market. Nevertheless core self evaluation operates at two different levels: motivational and cognitive. From a motivational

perspective, the higher is the core self evaluation the higher is the motivation and believe to obtain the expected return. The individual is more patient and he seems to be aware of the long duration of his entrepreneurial project. He strongly believe to the goodness of the venture and he seems not to be worried about the lack of the positive results during the initial stages. From a cognitive perspective, entrepreneurs strongly believe in their capability to assess risk and returns of future projects (Simsek 2010).

All this premised, we can formulate the following Hypothesis:

Hypothesi 1: Core Self Evaluation positively affects entrepreneurial transition.

At this point we have tried to demonstrate that entrepreneurial transition should be common among people with an higher level of core self evaluation.

TMT membership

In literature, many definitions apply to the category of Top Management Team (TMT): those who lead one or more functional areas in the organizations or top managers involved in the strategic decision making process by the CEO (Amason and Sapienza, 1997), the CEO and his direct reports (Boeker, 1997). Consistently with previous studies, despite the level of core self evaluation, top managers are more likely to follow their internal aspiration and to face challenging tasks for several reason (Carpenter and Fredrickson, 2001). Firstly, because top managers are used take decisions on the basis of an higher level of uncertainty and a difficult availability of information, by applying a non exhaustive decision-process (Eisenhardt, 1989). Secondly this process of a new cognitive and motivational mapping leads decision makers to tend to decrease the opportunity costs associated to the decisions and to increase the expected gains of that (Schwenk, 1988).

Dobrev and Bartnet (2005) have pointed out that a Top Management position has a significant and positive impact on Entrepreneurial Transition and Gimeno and others, (1997) and Delmar and Davidsson (2000) have found the same positive impact considering managerial

experience as an independent variable. Transition appears positively influenced by the characteristics of the activity in which an individual is involved, since working in a top management position, increases the possibilities to interact with the external environment and increases the relationships with innovative contexts, thus boosting the entrepreneurial temptation (Blau, 1977). Top Managers are thought to be able to create and seize opportunities and to motivate their organizations in ways that others cannot (Barnard, 1948). Moreover, one's ability to pursue a creative idea within an organization is strictly influenced by the working context in which one's operates (Dobrev and Barnett 2006). This circumstance is also relevant for entrepreneurial transition: since entrepreneurial transition is a typical uncertain and risky decision, it requires adequate personal expertise to successfully cope with that, and it can be acquired by a top managerial position. This kind of context is typical of an entrepreneurial setting and helps people with an high position in an organization to switch in the entrepreneurial setting, thanks to the contextual similarities. The rationale behind this statement deals with either cognitive or motivational factors. At a cognitive level, many researchers have given higher importance to endogenous factors than to exogenous ones in determining entrepreneurial success (Freedman 2007). In particular managers that become entrepreneurs probably expect that the entrepreneurial profit will be enough to overcome all the costs associated with the switching. This turning point depends on the uncertainty premium plus the opportunity costs of a managerial status (Gimeno and others, 1997).

At a motivational level, high managerial position makes individuals very confident about their ability to accomplish new tasks and to cope with new projects.

All this premised, we can formulate the following Hypothesis:

Hypothesis 2: Top Management Team membership positively affects entrepreneurial entry.

The moderating role of TMT Membership

Since one's ability to pursue a creative idea within an organization is strictly influenced by the working context in which one's operates (Dobrev and Barnett 2006), this circumstance is also relevant for entrepreneurial transition: since entrepreneurial transition is a typical uncertain and risky decision, it requires adequate personal expertise to successfully cope with that, and it can be acquired by a top managerial position. Under this position, the activity of employees tend to be more relied on routines and procedures, so that reducing the practice of innovation and change for them and this negatively affects people transition to entrepreneurship, since they are less used to deviate from prescribed routines and to change (Kim and Carroll 2003). In this case, it is the level of core self evaluation which positively influences Middle Managers' tendency to take risky decision and to seize the available opportunities, acting as a substitutive independent variable to affect and explain entrepreneurial transition: CSE affects middle managers tendency to wider the time horizon to appraise the validity of transition (Miner, 1993). Thus higher is their core self evaluation, lower are the perceived switching costs related to entrepreneurial transition. At a motivational level, an higher core self evaluation manager will perceive himself as able to extract grater values from entrepreneurial opportunity than the others. It is likely to say that they have a more entrepreneurial mindset. This dispositional attribute may fulfill the gap of middle managers with top managers who have the advantage of their position to face the phenomenon of transition. Furthermore core self evaluation impacts the cognitive map of middle managers due to a different risk perception assessment: higher expected value creation - that is, higher expected revenues versus lower opportunity costs. This perspective is consistent with both the managerial and entrepreneurial literature. The former states that an higher level of core self evaluation is correlated with riskier and more deviating choices (Haleblian, Markoczy and McNamara, 2007). Moreover, the transition from the managerial

status to the entrepreneurial one is not only a risky action but also a deviating one from the planned managerial career path. Secondly, it has been demonstrated that, in ambiguous and uncertain situation, individuals take decisions on the basis of their dispositions. Schumpeter (1934) suggests that entrepreneurs - nascent or not - must perceive the values of resources differently from others. Hence, an higher level of self assessment deals with the perception of less uncertainty and risk, thus strengthening the relationship analyzed. In the entrepreneurship literature, many studies describe the entrepreneur personality as highly self-confident (Chen, Greene, & Cricke, 1998) with a strong belief in his ability to control outcomes (Simon, Houghton, & Aquino,2000).

Since entrepreneurial organizations have been conceptualized as possessing three main characteristics: innovation, risk-taking, and proactiveness (Covin and Slevin 1991; Miller and Friesen 1982), the managerial status negatively moderates the impact of CSE on entrepreneurial transition. This may happen because it applies a sort of *substitutive effect* between CSE and managerial status in influencing the phenomenon of transition. Higher is the managerial status, higher is the relying of top managers on their role, expertise and networks regarding the decision to transit. Lower is the managerial status, lower are the above mentioned resources to disposal of the employee; in this case, a substitutive effect acts since not the working method or expertise but individuals' dispositional attributes – such as core self evaluation - will have a room in affecting entrepreneurial transition phenomenon.

All this premised, we can formulate the following Hypothesis

Hypothesis 3: Top Management Team membership negatively moderates the impact of CSE on entrepreneurial transition.

Data and Methods

Dataset and Sample

The estimation of the model presented above, is particularly challenging because it requires data on individuals who are at the same risk of becoming nascent entrepreneurs even if at the end they do not transit. For the purpose of this study we use Panel Study of Entrepreneurial Dynamics, a longitudinal database already quite used in the entrepreneurship field (Cassar 2010; Reynolds 2008; Kim, Aldrich, Keister, 2003; Delmar and Daviddson, 2000). This database surveys adult population in the US using a random digital dialing methodology and identifies nascent entrepreneur since the very beginning of their entrepreneurial process, overcoming problems of potential survivorship and biased usually manifested when surveying entrepreneurs already in the field (Hawkins an Hastie,1990). A sample of nascent entrepreneurs selected from this process was subsequently interviewed by phone and by mail. Some of the major advantages of this database are the following: it contains high quality data on nascent entrepreneur's contextual and dispositional factors and, moreover, it allows comparison between nascent entrepreneurs and a control sample of people not involved in the phenomenon of the transition. This characteristics makes this database absolutely suitable for the purposes of our study. PSED comprises two separate longitudinal projects: PSED I and PSED II, enacted respectively in 1998-2000 and in 2005-9. For the purpose of our analysis, we aim to use PSED I. In particular we are going to consider the first wave of the database that consists in a first phone interview and in a questionnaire sent by mail.

Entrepreneurial transition

Entrepreneurial transition (or entry or mobility) has been defined as the likelihood of leaving a wage employment to build a new organization (Dobrev&Bartnett; 2005; Folta, Delmar and

Wennberg,2010), or as the mobility to an entrepreneurial activity (Groysberg, Nanda and Prats, 2007). Nascent entrepreneurs are individuals that have started this process, previous literature define them as people who are currently actively and independently trying to start a new firm and are active in the process (Autio and Wennberg, 2010; Delmar and Davidsson, 2000) . We built entrepreneurial transition (ET) as a dummy, with value of 1 if the event is occurred, 0 otherwise. In this study several requirements are used in order to detect this phenomenon. First, we consider only people with a previous wage employment, then to be identified as nascent entrepreneurs, respondents have to answer yes to the following question: " Are you alone or with others, trying to start a new business?" (Delmar & Daviddson, 2010; Reynolds 2008). Moreover since this study is related to the decision of entrepreneurial transition, we exclude the intrapreneur because involved in the start-up process from their employer. In addition, because the motivation behind the entrepreneurial decision is important for the purpose of this study, we do not consider nascent entrepreneurs all the individuals that decided to start a new venture or inherit it for family tradition. This would ensure to have in the sample only individuals that make their selves the final decision (Reynolds, 2008). Second, in order to detect commitment in the new activity they have to expect at least some ownership in the new firm and been active in the last 12 month in the startup-phase of the new venture, including fund raising. These criteria determine a sample size of nascent entrepreneurs of 427 individuals, with a control sample of 136 non nascent entrepreneurs. Finally, we tried to have no missing values for dependent independent and control variables. This reduced the number of observation because of the presence of missing values mostly on the dependent and control variables.

In order to check for potential selection bias between nascent entrepreneurs and not nascent entrepreneurs we run a Chi-square test also considering the criteria used in order to

define nascent entrepreneurs. It reveals no statistically significant differences at 0.10 level with regard to age, gender, education, marital status, race and household income. For example, nascent entrepreneurs' (not nascent entrepreneurs') average age and job tenure were 40 (36) and 21 (18). Regarding the educational attainment 5% (7,7%) have no high school degree and 16% (13%) have post college experience.

Moreover, an examination for potential response bias between respondents and not respondents, indicate that individuals who respond to the phone interview but not to the written questionnaire were likely to be younger ($p<0.01$) with less job tenure ($p<0.05$) and less educational attainment ($p<0.05$).

Table 1 summarizes the measurement for the dependent, independent and control variables.

INSERT TABLE 1 ABOUT HERE

Indipendent Variables

The independent variable "CSE" (Core Self Evaluation) has been operationalized following consistent method used by previous literature (Simsek and Veiga 2010; Hiller and Hambrick 2005; Judge 2003). The measure of CSE is obtained from self reported question, in the survey, derived from psychology. In particular, the CSE variable is measured using twelve items. All the items were taken from Judge et al (2003). Respondents were asked to indicate their agreement level using a five point Likert-scale: 1= strongly disagree, 2=disagree,

3=neutral, 4=agree, 5=strongly agree. Answers to the items were added together and the total divided by twelve. Example items include: “Overall I am satisfied with myself”, “I rarely have doubts on my competences” or “When I try I generally succeed”. Of the 1248 respondents (total population), 837 answer all the CSE questions. The mean (median) of CSE variable is 3.307 (3.33). In order to avoid multicollinearity, the independent variable was centered. A Cronbach’s alpha value of 0.76 indicates an acceptable level of internal consistency. We perform Confirmatory Factor Analysis (CFA) producing an acceptable fit indices: χ^2 (54)= 187.36 p<0.01; Comparative Fit Index (CIF)= 0.92; Tucker-Lewis Index (TLI)= 0.86 and Root Mean Square Approximation (RMSEA)= 0.048.

The independent variable Top Management Team Membership (TMT) has been built as dummy variable following the definition on the hierarchical managerial position given by literature. In particular TMT variable is equal to one if the individual in his previous job position was the CEO or a c-level manager (i.e one position from the CEO) of the company (Carpenter and others, 2004; Finkelstein and others 2009; Beckman and Burton, 2011).

Control Variables

Literature has given particular importance to different aspects when studying entrepreneurial entry: demographics, human and social capital (Delmar and Daviddson, 2000; Dobrev and Bartnett, 2005; Kim, Aldrich and Keister, 2003; Autio and Wennberg 2010; Folta and Wennberg, 2010). Our control variables, defined in table 2, are denoted in order to control for all the most important variables used by literature. With regard to human capital

we control for: education, previous working experience, previous start-up experience and previous start-up industry experience. We build a variable denoted as previous job industry in order to control for the industry of the previous employment that have been demonstrated to affect entrepreneurial opportunities (Steinmetz and Wright, 1989) With regard to demographics, we control for age, gender, marital status, race, parents born in the US, household size, parental self employment experience. With regard to the initial financial condition we control for household wealth and household income. Moreover we control for other variables specifically suitable for the purpose of this study. In order to control for the small firm effect we consider previous employer size (Chen 2011; Elfenbein et al, 2010). In order to control for non monetary benefits, we control for ex-job satisfaction. Moreover, to account for heterogeneity among different managerial position, we consider the variable span of control, calculating as the log number of people supervised plus a constant of one (Dobrev and Bartnett, 2005)

Data analysis

Table 2 shows descriptive statistics: means, standard deviations, and correlations for all the variables considered. The majority of the individuals in the sample were white (53%) with at least one on the parents born in the US (82%). The average age was 39 years and the average annual income was approximately 56.800 dollars. The working tenure for the last job position was 5.8 years. The most frequently occurring functional job position was linked to

administrative and professional roles (41%); and the most frequent industry context was private (30%). About one each ten people had a previous experience as top executive manager and the membership to the Middle Management Team was represented by approximately 23% of the population.

INSERT TABLE 2 ABOUT HERE

Looking at these results, it seems that our data are not affected by discriminant validity: all the interfactor correlations are under the recommended level of 0.7 (Tabachnick and Fidell,1996). Transition (NE) is correlated with the independent variables in the direction we hypothesized: it has a positive correlation with CSE (0.22; $p<0.001$) and Total Management Team position (0.03) but negative with Middle Management position (-0.07). As already demonstrated by literature, entry is also positively correlated with education (0.12; $p<0.001$) (Shane and Stuart, 2002); race (0.18; $p< 0.001$) and parental origins (0.09; $p<0.01$) (Sorensen, 2007; Sorenson and Audia 2000); managerial tenure (0.12; $p<0.001$) (Delmar and Daviddson, 2000); entrepreneurial self experience (0.33; $p<0.001$) and parental self employment experience (0.10; $p<0.01$) (Sorensen, 2007; Shane 1996); previous job satisfaction (0.46; $p<0.001$) and span of control (0.07; $p>0.05$) (Dobrev and Bartnett, 2005).

We estimated our models in term on entrepreneurial transition (i.e if the individual is nascent entrepreneur or not). Logistic regressions for binary dependent variable were used to test the hypotheses relating to this phenomenon. The analyses used to test our hypotheses are shown in Model 1 to 4 in Table 4 containing Pseudo R^2 and standardized coefficients.

INSERT TABLE 3 ABOUT HERE

The standard regression equation for our models took the following form:

$$\text{Log } (p/1-p)=a+bx+cv+e$$

Where p is the probability that our dependent variable Entrepreneurial Transition is equal to one; x are the independent variables, v the control variables and e the error term. All the models were tested using 2-tailed t-test.

Model 1 relates to Entrepreneurial Transition and includes all the coefficient and the standardized errors for the control variables considered in the study with a pseudo Pseudo R^2 of 0.44 and is statistically significant at 0.001. We begin to consider the results of our analysis starting from Model 2. The model has a Pseudo R^2 of 0.52. The coefficient on CSE is positive ad significant (β= 2.67; $p<0.001$), consistent with hypothesis 1, that individuals with higher level of CSE are more likely to become nascent entrepreneurs. Moreover this model confirms also many relationship between CSE and other independent variables consistently with previous studies: for example college and post college experience (β= 2.94; $p<0.001$) and entrepreneurial self experience (β= 2.62; $p<0.001$) have a positive and significant effect on entry. With respect to Hypothesis 2, our prediction that being part of the Total Management Team in the previous job experience positively affect transition was also supported (β= 1.29;

$p<0.1$) with a Pseudo-R^2 of 0.44[1]. With respect to the moderating effect considered in Hypothesis 3, our prediction that TMT membership negatively moderates the relationship between CSE and entry was also supported ($\beta= -3.70$, $p<0.01$) with a Pseudo R^2 of 0.55[2]. Surprisingly, the control variable span of control seems to be not significant in explaining the entrepreneurial dynamics.

Discussion and implications

This study contributes to the literature by conducting a novel investigation on the role of core self evaluation on the phenomenon of entrepreneurial transition. Previous literature, indeed, has been focused on the effect of other dispositional factor in fostering entrepreneurial entry (Camerer and Lovallo, 1999; Zhao and Siebert, 2006), without considering CSE. Moreover previous studies, following the contextual approach, have been focused on the effect of organizational characteristics: employer's age, size, industry or employee organizational position (Dobrev and Bartnett 2005; Elfenbein and others, 2010; Aidis, Estrin and Mickiewicz, 2012, Sorensen and Fassiotto, 2011) without considering as independent variable the hierarchical position in the company considered as TMT membership. This study try to extend these two literatures introducing also a multilevel perspective in understanding factors contributing in entrepreneurial transition. Dispositional and organizational variables alone do not sufficiently explain the dynamics of transitions (Davidsson and Wiklund, 2001).

1 In order to support our second Hypothesis we have also considered a model with the independent variable of Middle Managemt membership. MM variable has been built equal to one if the individual in his previous job position was a member of the middle management,(i.e managers located below top managers and above first level supervision in the hierarchy, 5 positions from the CEO) (Dopson & Stewart, 1990). The results of this model confirm our theoretical framework, because individuals with a middle management position are less likely to transit ($\beta =-1.11$; $p<0.05$).

2 In support of this moderating effect, we have also considered a model with the moderating effect of MM membership on. This model confirm what we present in our theoretical framework. The phenomenon of ex MM team members relies more on CSE than on their hierarchical position when considered as interactive effect ($\beta =2.82$; $p<0.05$)

The nature of the relationship between this two factors, different in nature, and how they could explain the phenomenon of transition is still relatively unknown. Rather, the interaction between a dispositional factor and a contextual one can provide better insights into the phenomenon of transition (Lee and others, 2011), with a particular focus on ex-managers mobility.

From an empirical perspective, decomposing the phenomenon of transition we can state that both CSE and TMT membership are significant drivers for the decision to transit. These results confirms that an increasing level of core self evaluation increases the likelihood of being nascent entrepreneur because it may determine the conviction of being able to have success and good performance because of personal abilities (Hayward and others, 2006). Moreover being part of the TMT of an established company positively affects the likelihood of being nascent entrepreneur because the effect of role and job position make him used to an entrepreneurial setting and context (Sorensen, 2007).

The last finding has demonstrated that the managerial status negatively moderates the impact of CSE on entrepreneurial transition. This may happen because it is triggered by a sort of *substitutive effect* between CSE and managerial status in influencing the phenomenon of transition. Higher is the managerial status, higher is the role of expertise, activity and networks regarding the decision to transit to entrepreneurship. Lower is the managerial status, lower are the above mentioned resources to disposal of the employee. This circumstance determines a substitutive effect since is not the working context or expertise but individuals' dispositional attributes – such as core self evaluation - to have a room in affecting entrepreneurial transition phenomenon.

These findings could have important implications also for practitioners. Firstly, institutional authorities may try to propose actions (training programs, educational programs, etc.) to help

high CSE people to create new ventures in order to increase the level of entrepreneurship in the country, since entrepreneurship and start-up may help a community to better face the economic crisis.

These findings have also implications for organizational leaders in order to figure out actions and plans to avoid that high CSE personnel could decide to transit to entrepreneurship, thus weakening the human capital of a firm.

Finally organizations which want to enhance the entrepreneurial orientation of their personnel can put structures and incentives in order to cultivate an entrepreneurial climate and corporate entrepreneurship.

This study, of course, has some limitations. First, due to the fact that the initial entrepreneurial stage is more uncertain than an established and mature one, uncertainty on results could have an enhancing effect on CSE. In this study we consider the TMT position as a c-level managerial status without considering functional aspects and roles. For this reason, the possibility to generalize this relationship for all the functional managerial position is limited. This could be a starting point for future research: it could be interesting not only considering if functional roles can have different impact on entry (i.e. CFO, CEO, CRO, etc) but also how these roles could moderate the main relationship. To broaden the understanding of the interactional effect between CSE and entry it should be look beyond other variables as for example risk propensity, degree of authonomy and incentives.

Conclusion

This study explores the effect of Core Self Evaluation on entrepreneurial entry. In particular, using PSED database, we distinguish between the effect of a dispositional variable,

Core self Evaluation and a contextual one, Top Management Team memebership, on entry. Moreover we consider the moderating effect of TMT membership. These relationships are both statistically and economic significant. Our findings' contributions are clustered around the understanding of how psychological and organizational factors affect decisions in the entrepreneurial setting, providing important implication for both theory and practice. Findings of this study could contribute the need of multilevel variables as predictiors of entrepreneurial career choices.

Table 1-Variable definition. All the variables have been built following existent literature, some paper of major references have been:

Folta Delmar Wennberg (2010); Delmar and Daviddson (2000); Dobrev and Bartnett (2005): Sorensen (2007); Cassar (2010); Kim & al (2003); Shane(1996); Reynold & White 1997)

Variable name	Definition
ET	dummy variable==1 if a wage employment individual is a nascent entrepreneur activily and indipendentrly involved with ownership in the start-up phase of a new venture
CSE	Mean of 12 item. This variable has been centered
TMT	dummy variable=1 if individual is memeber of the TMT (c-level managers)
MM	dummy variable=1 if individual is memeber of the MM
age	Individual number of years
gender	Dummy variable =1 if individual is male
married	Dummy variable =1 if individual is married
lgHHincome	Log of total household income (last year)plus 1
lg HHW	Log of total houshold net worth (last year) plus 1
EDUC3	Educational atteinment rank (1-3) where 1= no high school 2= high school degree 3=college and post college experience
HHsize	number of children under 18 in the household
RACE	dummy variable =1 if individual is white
ParborninUS	dummy variable =1 if at least one of the parents is born in US
mngtenure	log of the number of years individual had a prevoius managerial experience
prevemplsize	log of the number of employees in thr firm in wich individual has worked
entrepreneurial selfexp.	Dummy variable =1 if the individual had a previous experience as self employed
parental SE exp.	Dummy variable=1 if at least a member of the family was previously self employed
Suindustryex	log of the year individual has worked in the same industry of the SU
exjobsat	categorical variabl for the level from 1 to 5 of prevoius job satisfaction
exjobindustry	categorical variable for the industry of the previous employer
span of ctrl	log of the people supervised in the prevoius job position

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TABLE 2- Sample descriptive statistics and correlation matrix (*(p < 0.05); **(p<0.01) ;***(p<0.001))

	Mean	SD	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. ET	0.64	0.48	0	1	1													
2. CSE	-4.07e-08	0.35	-1.14	1.36	0.22***	1												
3. TMT	0.09	0.29	0	1	0.03	-0.03	1											
4. MM	0.24	0.43	0	1	-0.07	-0.02	-0.18***	1										
5.GENDER	0.49	0.50	0	1	0.06	0.05	-0.11**	-0.03	1									
6. AGE	39.11	12.07	18	92	-0.03	-0.07*	0.07*	0.00	-0.06*	1								
7. MARRIED	0.55	0.50	0	1	0.04	-0.03	-0.03	0.00	-0.01	0.18***	1							
8. lgHHINC	10.66	0.76	6.90	14.40	0.11***	-0.01	-0.05	-0.04	0.07*	0.08**	0.30***	1						
9. lgHHw	10.90	1.67	0	14.77	0.03	-0.05	-0.00	0.02	0.09**	0.26***	0.24***	0.55***	1					
10. EDUC3	0.81	0.64	0	2	0.12***	-0.02	-0.08*	-0.00	-0.01	0.13***	0.06*	0.27***	0.24***	1				
11. HHsize	3.22	1.59	1	8	0.02	0.01	0.00	0.00	-0.05	-0.21***	0.34***	0.11***	0.00	0.12***	1			
12. RACE	0.53	0.50	0	1	0.18***	-0.06	-0.06	0.05	0.00	0.19***	0.18***	0.18***	0.22***	0.13***	-0.10***	1		
13.PARBORNUS	0.83	0.38	0	1	0.09**	-0.00	-0.00	0.09*	-0.04	0.09**	0.02	0.03	-0.13	0.02	-0.03	0.24***	1	
14. mngtenure	1.72	1.05	0	3.99	0.13***	0.09*	-0.00	-0.00	0.10***	0.44***	0.18***	0.22***	0.30***	0.22***	-0.09**	0.21***	0.09**	1
15.prevemplsize	4.61	2.16	0	9.11	-0.03	-0.00	-0.28***	0.05	0.14***	0.13***	0.04	0.21***	0.13**	0.13***	-0.14***	-0.03	-0.00	0.13***
16.entrselfexp	0.44	0.50	0	1	0.33***	0.15***	0.03	-0.05	0.08**	0.09**	0.04	0.05	0.11***	0.01	0.05	0.14***	0.05	0.17***
17.parententrep	0.48	0.50	0	1	0.09**	0.09*	0.02	-0.08*	-0.04	-0.01	0.01	0.10**	0.10**	0.11***	-0.03	0.15***	-0.00	0.95**
18. suindexp	2.12	1.06	0	4.11	-0.32*	0.01	0.05	-0.01	0.03	0.44***	0.10**	0.12**	0.18***	0.12***	-'-'5	0.02	0.05	0.25***
19.exjobsat	3.05	1.37	1	5	0.46***	0.08*	-0.00	-0.02	0.02	-0.02	0.06	-0.01	-0.07	-0.00	-0.00	0.08*	0.08*	0.04
20.exjobinbdustry	2.40	1.60	0	5	-0.01	0.03	0.07	0.01	-0.06	-0.04	-0.00	-0.03	0.03	0.09**	0.07*	0.05	-0.01	-0.02
21. span of ctrl	2.73	1.21	0	8.52	0.07*	0.09*	-0.02	0.00	0.20***	0.21***	0.04	0.16***	0.23***	0.12*	-0.04	0.02	-0.03	0.39***

TABLE 2 (cont) - Sample descriptive statistics and correlation matrix (*(p < 0.05); **(p<0.01) ;***(p<0.001)

	15	16	17	18	19	20	21
15.prevemplsize	1						
16.entrselfexp	-0.12***	1					
17.parententrep	-0.04	0.11***	1				
18. suindexp	0.11*	0.01	0.00	1			
19.exjobsat	-0.02	0.15***	0.00	-0.14***	1		
20.exjobinbdustry	-0.20***	0.05	0.06	-0.01	0.00	1	
21. span of ctrl	0.19***	0.08*	-0.00	0.13**	0.06	-0.08*	1

TABLE 4-Results of logit regression on Entrepreneurial Transition

Logit regression	Model 1	Model 2	Model 3	Model 4
	ET	ET	ET	ET
CSE		2.67 ***		3.49***
		(0.766)		(0.83)
TMT			1.29*	2.92 ***
			(0.69)	(0.91)
CSE_TMT				-3.70***
				(1.40)
Gender	-0.71 *	-0.85 *	-0.6	-0.72
	(0.40)	(0.46)	(0.41)	(0.52)
Age	0.034	0.088 ***	0.03	0.09
	(0.023)	(0.03)	(0.02)	(0.03)***
Married	-0.59	-0.58	-0.63	-0.67
	(0.45)	(0.52)	(0.44)	(0.53)
lgHHInc	0.26	0.39	0.30	0.39
	(0.28)	(0.32)	(0.27)	(0.31)
lgHHw	-0.22 *	-0.12	-0.20	-0.05
	(0.13)	(0.19)	(0.12)*	0.19
USeduc	Incl.[a]	Incl.[a]	Incl.[a]	Incl.[a]
HHsize	0.36 ***	0.39 **	0.39	0.43
	(0.16)	(0.19)	(0.16)**	(0.21)**
Race	0.10	0.65	0.40	1.40***
	(0.39)	(0.49)	(0.40)	(0.50)
Parbornus	-0.45	-0.46	-0.69	-1.12**
	(0.49)	(0.50)	(0.51)	(0.55)
mngtenure	0.51	0.15	0.42	0.07
	(0.33)	(0.37)	(0.33)	(0.40)
prevsize	0.068	0.10	(0.06)	0.15
	(0.099)	(0.14)	(0.11)	(0.14)
entrselfexp	2.28 ***	2.62 ***	2.38***	3.24***
	(0.42)	(0.53)	(0.44)	(0.62)
parententrexp	0.26	-0.21	0.23	-0.42
	(0.36)	(0.39)	(0.38)	(0.40)
Suindustryexp	-1.49 ***	-2.01	-1.51***	-2.29***
	(0.27)	(0.36)	(0.28)	(0.35)
Exjobsat	Incl.[a]	Incl.[a]	Incl.[a]	Incl.[a]
Exjobindustry	Incl.[a]	Incl.[a]	Incl.[a]	Incl.[a]
span of ctrll	-0.05	0.048	-0.03	0.11
	(0.15)	(0.19)	0.16	(0.22)
Const.	-2.30	-6.01	-2.91	-6.65**
	(2.86)	(3.9)	(2.84)	(3.55)
Log Likelihood	-105.09	-84.01	-100.89	-75.62
Pseudo R-squared	0.44	0.51	0.44	0.55
Model Wald Chi-square	82.18***	73.22***	79.95***	71.69***
N	268	250	261	243

(*p < 0.10, **p < 0.05, ***p < 0.01, standard errors in parentheses. [a] Dummy variables for each categorical variable are included in the analysis but not shown to preserve space)

The effect of Core Self Evaluation on entrepreneurial financial capital.

ABSTRACT

In this paper we aim at investigating how different levels of CSE impact the level of entrepreneurial financial capital. For the purpose of our analysis we distinguish between internal and external capital. We believe that studying a personal trait - such as CSE - is consistent with the framework of the research, since entrepreneur's perceptions are strongly reflected in venture's actions, decisions and also in the amount of capital, invested or sought, he wants to expose at risk.

Keywords: financial capital, sources of financing, Core Self Evaluation, entrepreneurial self assessment

Introduction.

Numerous studies in the management and economics literature address important issues about entrepreneurial process: entry, size, development and exit (Sorensen, Shane and Venkataraman, 2000; Sorensen 2007; Autio and Wennberg, 2010; Baumol, 2010; Campbell and others, 2010). This literature explores the essential elements - contextual or dispositional - of start-up formation and development. The contextual approach argues that the social position of an individual in the environment influences his propensity to entrepreneurial activity and its development (Sorensen, 2007, Dobrev and Barnett, 2005; Roberts and others 2011); on the other hand, the dispositional approach underlines that the causes of entrepreneurial entry deal with motivational and personal reasons: entrepreneurship is considered a transitory characteristic, a tendency of certain people with different personal characteristics (Hayek, 1945; Kirzner, 1973) and an aim which leads to different forms, in terms of different recognitions of opportunity and different ways of exploiting them (Venkataraman, 1997).

A long-standing problem for most new ventures is the fund raising activity during the first years of operations. The capability to take access to financial resources is a critical point for new ventures since *"financial constraints are seen as the reason why only a small part of new business actually grow and survive"* (Cassar, 2004, Greene and Brown, 1997). Most start-up firms suffer an inadequate contribution by their founders financial resources and turn to financial institutions to fill the financial gap in order to sustain their early development and growth. This circumstance may jeopardize the success of the initiative since the scarcity of cash flow and liquidity is a typical condition of a start-up company which may suffer to pay back high amounts of bank

loans. Moreover the level of financial resources raised has a renewed importance due to the current economic crisis: the general amount of resources available for company has dropped; there is scarce availability of new capitals to sustain growth (DeBiase 2010; Citibank Report Issue, 2010).

This issue increases the dramaticism of the situation if applied to the entrepreneurship field in which the initial size of a venture is strategically important for growth and development. Empirical evidences and results have shown that the main cause for start up's failure is not industrial but financial (The Economist, 2012). Despite initial size is a crucial feature for entrepreneurial survival (Evans, 1987; Cooper, Woo and Dunkelberg, 1989; Agarwal and Audretsch, 2001); research in this field has gone not much beyond its determinants. Firstly, one explanation could be recognized in the lack of a unique definition of size. In particular in this study we are going to analyze the initial size of the new venture determined by financial capital. Secondly, there is a methodological reason: it is necessary to have some information on the pre-entry phase; in this sense the database we are going to use, Panel Study in Entrepreneurial Dynamics, allows us to overcome this issue. Extant literature focused on initial size, deals with industry-level characteristics (ie. industry size, Acs and Audretsch, 1989) and with the role of previous experience and founder's background. For example Cooper, Woo and Dunkelberg (1989) have found that smaller ventures differ from larger ones because of the diversity in founder's human capital: gender, education and work experience. Kim, Aldrich and Keister (2003) investigated the role of financial resources (household wealth and income); Evans and Jovanovic (1989), Dunn and Holtz-Eakin (2000), Fischer and Massey (2000) have underlined, even if with mixed results, how liquidity constraints inhibit start-up. This approach seems to consider the role of

entrepreneur as negligible. In this paper, following the dispositional approach, we question if individual's level of Core Self Evaluation impacts on new venture's size defined as the level of financial capital raised.

Entrepreneurial financial capital is the amount of capital that entrepreneurs and other external partners decide to invest in the new venture (Bazerman and Samuelson, 1983; Cooper, Gimeno and Woo, 1994; Hayward and others, 2006). We believe that studying a personal trait - such as CSE - is consistent with the framework of the research, since entrepreneur's perceptions are strongly reflected in venture's actions and decisions, also regarding the type and the amount of capital invested. Core self evaluation refers to individual's self assessment and perception. What distinguishes CSE from the multiplicity of dispositional factors (locus of control, narcissism, overconfidence, etc) that have already been studied in different literature (inter alia, see Zao and Seibert, 2006), is the fact that CSE is a rigorous, parsimonious and dynamic scaled conceptual construct (Judge and others, 2003). It is the antecedent of a behavior. In literature different studies have linked empirically CSE with different outcomes: job satisfaction (Judge and Bono 2001), performance (Erez and Judge, 2001), motivation (Chen, Gully and Eden, 2004).

Moreover, prior literature has mainly focused its attention on factors affecting financing process from the *supply side* perspective, analyzing whether and how lender's decision making process and perceptions impact the funding decision (Bruns, Shepherd and Wiklund, 2005; Berger and Udell, 1995) while less is known about the *demand side* perspective. In particular, in this study we aim at investigating whether and how entrepreneur's dispositions will affect not only the amount of personal resources that the

individual wants to risk, but also the amount of external capital he raised. This is a different perspective which may help to disentangle a variety of phenomena related to entrepreneurship and economic activities.

The focus on the supply side perspective doesn't give a clarification on the reasons why the financial resources gathered by new firms is so heterogeneous (Kolvereid and Isaksen, 2006). Moreover some researchers have demonstrated that the propensity of the entrepreneur to have a total control over the business (Berggren et al., 2000; Cressy and Olofsson 1996; Landstrom and Winborg, 19995) may influence his financial decisions and this is an example of the attempt - already started in literature - to change the perspective about the explanation of the entrepreneurial dynamics.

Seeking external financing is a costly activity for the entrepreneur; firstly for the time spent in order to find the right financial counterpart and to prepare all the documentation (i.e. business planning); secondly, in case of capital of risk (equity) he has to renounce to a part of the share of the company. Empirical studies have found that the decision of the founder to seek financial capital is influenced by his expectation on market growth and market competition (Eckhardt and al., 2006).

Following this perspective, we believe that an important role is played by founder's self assessment. This paper investigates if and how CSE affects not only the amount that founders personally invest but also the amount of capital gained from external financiers. We expect to find an inverted U shape relation between CSE and internal financial investment since higher is the level of CSE, higher is the financial commitment to the new firm. Over certain levels, CSE evolves to Hubris and this leads the new entrepreneur to reduce the recourse to internal financial investment since he is

overconfident that his personal capabilities don't require additional financial contributions. In the second hypothesis we expect to find a negative impact of CSE on the amount of external capital gathered, for two reasons: first of all, higher is the CSE higher is the belief to accomplish only with personal resources, starting a sort of isolating mechanism. Secondly, higher is the new entrepreneur CSE (which, by moving to its hyper level, evolves to hubris) higher is the risk misperception by the new entrepreneur and the gap of risk appraisal between the entrepreneur and the financier. This cognitive gap between the two parties leads to an incremental reduction of loans provisions at higher levels of CSE.

The study's findings could contribute to theory and practice in several ways. Firstly this study could have an important impact in understanding the founder's financial seeking decision process, not fully investigated by previous literature. Secondly it contributes in studying if and to what extent dispositional factors, so far overlooked by the literature, could affect initial size given by entrepreneurial financial capital, distinguishing between internal and external one. Nevertheless insights into this phenomenon, should help to understand - more completely and from a different perspective - the entrepreneurial process also for low capitalized start-ups, providing benefits not only for scholars, but also for entrepreneurs, financial institutions and policy makers. Starting from these findings, further analyses may be done to optimize financial provisions for entrepreneurs and overcoming the problems of financial constraints in the first stages of firm's life. Moreover, it may contribute to the CSE literature, quite developed in strategic management and organizational behavior field, validating the role of self-assessment in entrepreneurial outcomes. It is relevant to understand how psychological factors impact economic and financial decisions.

This paper is structured as follows. In the next section we describe the theoretical framework for studying a dispositional factor - i.e. Core Self Evaluation- in the entrepreneurial financing context. After describing the characteristics of the construct we come up with its excessive level – called "hubris" which, despite belonging to the same construct, has some peculiarities, with different implications and causal influences on a variety of phenomena. Then we draw the theory building, developing our hypotheses. The fourth section will be dedicated to the description of the dataset and the methodology applied. Finally we provide the comments on the empirical results and at the end we discuss the limitation and the implication for future research in this field.

Core Self Evaluation (CSE).

One key issue faced by scholars in entrepreneurship field is the multiplicity of dispositional factors that could explain the phenomenon of transition: locus of control, narcissism, overconfidence, achievement, self-efficacy just to give some examples. Accordingly, in literature there was the need for a rigorous and parsimonious conceptual construct that had to explain individual choices better than the set of the cited variables, and in that sense scholars have recognized CSE as a considerable step in advance (for a review see Chang and others, 2011).

As far as self-assessment is concerned, the construct of Core Self Evaluation describes "how individuals evaluate themselves, their abilities, and their relationship to the environment in which they operate". It deals with self-perception on personal abilities, beliefs and knowledge (for the validity of the construct see: Judge and others, 2002; Hiller and Hambrick, 2005). The basic intuition behind CSE is that an individual with an higher level of CSE feels himself more secure and, thus, is more able to see and

seize opportunities for himself, also from an entrepreneurial point of view. Empirical evidence indicates that individuals with a higher level of CSE tend to pursue "self-concordant goals", that is, they set objectives and take decisions that are internally consistent with their values, personality and desires (Judge et al., 2005) and this makes it significant in the long run. This statement points out a relevant difference between CSE and self efficacy, since, stated a target, self efficacy implies a capability and awareness of achieving it, so that the process of defining the target is something exogenous to the construct; CSE, instead, encompasses a broader capability of setting self concordant goals, that is objectives which are consistent with one's values and life expectations, and then a capability and engagement to reach them. In the entrepreneurial setting many studies have been addressed on the analysis of the role of self efficacy over the entrepreneurial attitude. It influences the entrepreneurial behavior and the entrepreneurial intention (Zhao, Seibert and Hills, 2005). The study of self efficacy in the entrepreneurial context has conducted to the design of a new construct, called entrepreneurial self efficacy (ESE) which specifically refers to the level of an individual's belief that he will succeed as an entrepreneur, in terms of roles and tasks (Chen et al., 1998). CSE is similar to entrepreneurial self efficacy in the ability to accomplish a task, but more than it, which is a typical short-term attitude, on an effectual side, CSE has a long term orientation influencing long-term decisions about work and private life.

Conceptually speaking, CSE sounds similar to the psychological construct of "self-esteem". But in addition to self esteem, it also reflects beliefs in one's capabilities (to control one's life) and one's competences (to perform, to cope, to persevere and succeed) and a general sense that life will turn out well for oneself (Judge, 2009). This

means that CSE implies an attitude to act which isn't specifically present in self esteem. Furthermore, both constructs imply an high level of locus of control, but CSE refers to a sort of "dynamic locus of control" since, by definition, acting and experimenting new experiences – which are typical manifestations of CSE - imply facing something new which one's cannot control, because one's cannot control what he doesn't know. The construct of CSE solves this contradiction by linking locus of control to self awareness and not to experience (Hambrick, 2005). This circumstance also explains why higher CSE CEO's reject the trap of "strategic persistence" in their decision making (Hiller and Hambrick, 2005) and open up their strategies to external signals coming from the environment, the TMT and the organization.

CSE is the personal trait which affects a set of four qualitative characteristics: self confidence, self-worth, locus of control and freedom from anxiety (or emotional stability). Judge and others (2002) have demonstrated, through a meta-analysis, that each of these components depends on CSE. Core self evaluation may help to disentangle entrepreneurial outcomes better than other behavioral and dispositional variables studied in literature (Judge et al., 2002) because it represents the source, the antecedents of four qualitative traits (self confidence, self-worth, self-potency and emotional stability; see Judge et al. 2002). It has two main characteristics: it is, at the same time, broader and parsimonious. Due to its breadth, it may better or more consistently predict outcome (Judge, 2009) than any other individual behavioral trait. This qualitative judgment is statistically founded in the sense that CSE always predicts an outcome better than any other trait, that is the validity of CSE is more than twice as large as the validity of self esteem or any other individual core trait (Judge 2009). At the same time, CSE is a parsimonious construct, that is, it often predicts an outcome when

the above mentioned four individual core traits are included (Judge, 2003). This happens because CSE is an antecedent of the other four variables since it is a unique latent dispositional variable that causes a variety of individual behaviors. Not only it could be helpful in order to catch how some aspects of personality can change as results of life circumstances (Trzesniewski, Donnellan and Robins, 2003), but also it is statistically correct and preferable to directly analyze CSE instead of the above mentioned traits, whose joint analysis is statistically redundant, since they are all superficial indicators of a latent and deeper construct (Judge, 2003) and often less significant, since the statistical validity of CSE is often twice as significant than the specific mentioned variables (Judge, 2009).

The CSE has been measured and validated by Judge et al. (2002) through a 12-item Likert scale which has shown a robust internal statistical validity. Afterwards other authors (see inter alia Hiller and Hambrick, 2005) have adopted this version of the measurement with the same strongly validity results.

In literature, different studies have empirically linked CSE with different outcomes, such as: job satisfaction (Judge and Bono 2001), job performance (Judge, 2009), performance (Erez and Judge, 2001), commitment (Johnson, Chang ans Yang, 2010) motivation (Chen, Gully and Eden, 2004),creativity (Zhang and others, 2012) and conflict management (Almost and others, 2010; Tasa, Sears and Schat, 2011).

In the entrepreneurial setting, individuals with an higher level of CSE will tend to believe in their own capacity and to get higher profits. It is like to say they expect higher entrepreneurial return to their company than other individuals. Moreover, they

believe that entrepreneurial activity overcomes a certain threshold (Gimeno and others, 1997) allowing them to extract greater returns than other investment opportunity.

CSE is also a dynamic scaled variable. From an empirical point of view it is possible to define 4 different levels of CSE: low, medium, high and hyper. The hyper level of CSE, which is an exaggerated one, has been detected by literature as hubris (Hayward & Hambrick, 1997; Hiller & Hambrick, 2005; Kahneman & Tversky, 1995).

At the extreme side of core self evaluation -the hyper- hubris is one of the most investigated topic in the "psychology of judgment" (De Bondt & Thaler, 1995). It is considered an incorrect appraisal regarding one's own accomplishment which leads to taking credit for positive outcomes which are not causally linked with one's own actions (Lea & Webley, 1997). It is a cognitive bias that can influence decisions (Kahneman, Slovic, & Tversky, 1982), since it enables people to take decisions they would not have taken otherwise (Taylor & Brown, 1988). Hubris occurs when an individual's confidence about his or her own predictions exceeds the accuracy of those predictions (Hilary & Menzly, 2006; Simon & Houghton, 2003) leaving the room for extreme performances: great successes and huge losses (Durand, 2003). In psychology, hubris is deemed "the dark side of pride" (Tracy & Robins, 2007a), since it is related to human arrogance, vanity, exaggerated self-appraisal and overconfidence. In the managerial context, executive hubris leads CEOs to establish a dysfunctional relation with the external environment (Audia *et al.* 2000) since Hiller & Hambrick have stated that hubris CEOs *"are affected by strategic persistence"* - which means the attitude to persist in a chosen decision despite the evidence of environmental changes.

Furthermore, hubris leads to a misperception of high control which normally results in poor outcomes (Durand, 2003).

Prior researches have studied certain impacts of CEO hubris on firm decisions and outcomes. For instance, in case of M&A, firms with hubris CEOs are prompt to pay higher premiums (Hayward & Hambrick, 1997), to rely on internal rather than external financing (Malmendier & Tate, 2005), to miss their own forecasts of earnings (Hribar & Yang, 2006) and to undertake more value-destroying mergers (Malmendier & Tate, 2006) because they are confident about their capability to add value to the acquired company.

In the entrepreneurial setting, nascent entrepreneurs with an hyper level of CSE (hubris) tend to refer to past personal experiences and beliefs instead of taking into account external signals and noises when they take decisions (i.e. strategic persistence).

They are confident to face and fix problems regarding the start-up phase also if the situation appears risky and challenging (Camerer and Lovallo, 1999) and tend to underestimate the negative signals coming from the environment. This approach may lead to a misperception of reality which influences the cognitive mindset of the entrepreneur himself.

We believe that studying CSE in the entrepreneurial setting could be powerful because not only entrepreneur's dispositions impact directly his decisions and outcomes with respect to established firm (Simon and Houghton, 2003), but also because this kind of setting is characterized by an higher level of uncertainty that determine a decision

process more grounded on the use of personal beliefs and dispositions (Eisenhardt, 1989)

Hypothesis

CSE and Entrepreneurial Financial Capital.

A long-standing problem for most new ventures is the fund raising activity; in this part of the study we question if different levels of CSE impact the level of the entrepreneurial financial capital. Entrepreneurial financial capital is defined as the amount of monetary resources that entrepreneurs and other partners decide to invest in the new venture (Bazerman and Samuelson, 1983; Hayward and others, 2006). For the purpose of the analysis we distinguish between internal and external financing. In particular literature defines internal financing as the amount of capital given by entrepreneurs, his family and friends. For the purpose of this study, we consider personal financing as the amount of the capital that a nascent entrepreneur himself assigns to the entrepreneurial project. We do not consider the amount given by family and friends because we believe that, in this case, affective and moral implications offset the role of dispositional factors in the capability to raise or not money. External financing, on the other side, is the amount of capital obtained from professional partners, sources other than founding entrepreneurs and his family or friends (i.e. individuals not emotionally linked with the entrepreneurs) (Zaleski, 2010). Although the structure of initial capitalization appears to be a contributing factor for the success or failure of small business, it has only recently been examined in depth. Extant literature

on investment in start-ups focuses on venture scale (Cooper, Wu and Dunkelberg, 1989) and liquidity constraints (Hurst and Lusardi, 2004).

Accepted financial theory has little to offer to managers of small businesses in terms of the optimal mix of debt and equity in their capital structure (McConnell & Pettit, 1983). Van Auken and Carter (1988) found that initial equity is typically obtained from a combination of sources while initial debt comes primarily from lending institutions. In addition to financing of new businesses, managerial behavior may also be a critical factor in their growth and maintenance. In independent studies, Peterson, Kozmetsky, and Ridgway (1983) and Ibrahim and Goodwin (1986) found that small business managers consider entrepreneurial behavior a key factor for the success of their firms. Empirical results applied to new businesses ventures has demonstrated that, for this kind of ventures, the pecking order theory (Meyer, 1984) has very little evidence (Helwege and Liang, 1996) due to the fact that firstly the duration is longer, secondly, in the early stage, this kind of ventures need huge and replicative investments (Hogan and Hutson, 2005; Paula and others, 2007); that is to say that equity seems to be crucial.

Moreover, we believe that studying a personal trait, such as CSE, is consistent with the framework of the research since entrepreneur's perceptions are strongly reflected in venture's actions, decisions and also in the amount of personal capital that he wants to risk.

Individuals with an higher level of CSE will tend to believe in their own capacity and to get higher profits. It is like to say they expect higher entrepreneurial return to their company than other individuals. This circumstance will lead them to invest more of their personal capital, for a given level of risk. High CSE people rely more on their

internal beliefs than on external information and noises (Bernardo and Welch, 2001), that is to say that they are confident to see and seize better opportunity than external financial market. Nevertheless CSE operates at two different levels: motivational and cognitive. From a motivational perspective, the higher is the CSE the higher is the motivation and believe to obtain the expected return. The entrepreneur is more patient and he seems to be aware of the long duration of is project. He strongly believes on the goodness of the venture and he seems not to be worried about the lack of the positive results during the initial stages. This is a typically crucial issue since in the early stages of life, new ventures don't provide high cash inflows. From a cognitive perspective, entrepreneurs strongly believe in their capability to assess risk (Simsek 2010) and predict higher returns on their projects than other people. This is why, for higher levels of CSE they accept to destine higher amounts of personal financing. Moreover, the increase of CSE is more than the increase in personal financing raised because, higher is the CSE higher is the tendency to underestimating the right required financial capital for the new venture. This misperception is typical in case of a significant role of dispositional factors in the explanation of the phenomenon of entry, since the new entrepreneur tends to consider more important the role of the dispositional approach than the objective and contextual conditions, and in this particular case the financial resources their venture could require (Zhao and others, 2005).

In case nascent entrepreneurs reach an hyper or exaggerated level of CSE, which is recognized by literature as hubris (Li and Tang 2010; Hambrick, 2006; Hiller & Hambrick, 2005; Hayward & Hambrick, 1997; Kahneman & Tversky, 1995), the expectation of revenues will be higher and the perception of risk lower. This may lead to under-raising of financial capital caused by a misperception of the real amount

required. An hyper level of CSE leads to a series of cognitive biases which may lead the nascent entrepreneur to reduce the amount of personal financial capital raised. Such a misperception of high control normally results in poor outcomes (Durand, 2003). An "hubris" entrepreneur is overconfident on his abilities and starts having a cognitive misperception not only on return but also on risks (Li and Tang, 2010). About the nascent entrepreneur financial strategy, hyper levels of CSE lead the nascent entrepreneur to underestimate the amount of personal investments required for running the new venture because of his over optimistic projections on his abilities (Cassar, 2009) to overcome risks and obtain returns. This leads to the inverted U shape effect of CSE on nascent entrepreneur personal financing, because, under a certain level, CSE positively impacts on personal amount of resources deployed, while over a certain point (which corresponds to the switch of CSE to Hubris) additional levels of CSE negatively impact the amount of resources invested. This is a typical cognitive failure which impact a financial decision. The cognitive impact also refers to the flow of information and on the role of external environment to the decision making process. Excess confident nascent entrepreneur tends to refer to personal judgments and past experiences when he takes decisions, defines by strategim management literature as *strategic persistence* (Audia, Locke and Smith, 2000), instead of taking into account the information and feedbacks coming from the environment and the external financial providers. Moreover, this misperception is a very critical issue if related to the turbulent contexts in which firms operate, characterized by a dramatic change of competitive strategies over time.

This statement seems consistent with previous literature results: in the strategic setting, the presence of high CSE managers is a predictor of additional capital

investment (McCarthy, Shoorman and Cooper, 1993). Moreover the higher is the CSE the higher is the belief in personal valuations. On the other side overconfident managers believe that the external market tends to under-evaluate firm's Securities (Forbes, 2004; Hayward and others, 2006) compared with their positive personal expectations on the outcomes.

All this premised, we can formulate the following hypothesis:

Hypothesis 1: There is an inverted U shape effect between CSE and nascent entrepreneur personal financing

As previously defined, external financing is related to the amount obtained by nascent entrepreneur from professional lenders. In this study, we consider as external partners: banks, government agencies and other financial institutions. The amount received from external financing depends not only form the objective valuation of the suppliers, but first of all it depends on entrepreneur's decision to seek external financing and on his dispositions and perceptions towards the entrepreneurial project.

First, higher is the level of CSE and higher is the beliefs that personal abilities will be enough to reach the entrepreneurial success, underestimating the amount of capital needed by the venture also from external partners. High CSE people rely more on their internal beliefs than on external information and noises (Bernardo and Welch, 2001), that is to say that they are confident to see and seize better opportunity than external financial market. Second, this circumstance will start an isolating process in which the entrepreneur will more and more concentrate in his personal ownership and decision making, excluding from his activity possible powerful contributions from other people

and from external environment (Hambrick, 2007). This mechanism leads the entrepreneur to seek less financing from outsiders and it will affect also the way to communicate the project, becoming less convincing for external investors. These circumstances seem to justify a negative impact of CSE on external financing.

The inability to test one's perceptions as well as the tendency to lose touch with reality, because one occupies a top position, is a danger anyone can fall victim when he holds a leadership position (Kets de Vries, 1989). Thus, generally speaking, an increasing level of CSE leads individuals to overestimate the likelihood of the success of a strategic initiative, even though it is associated with great risk, and to underestimate the importance of data gathering in the course of the strategic decision making process, modifying his cognitive approach (Li and Tang, 2010). On the other side, the difference in risk perception between entrepreneur’s valuation and external investors will lead to a cognitive gap; external investors will perceive the exaggerated level of risk compared with the expected returns and tend to diminish their amount of funds invested in the new venture, generated a different assessment of the entrepreneurial project. This mismatching generates a negative impact of CSE on external fund raising. Another explanation is linked to the nature of the funds, since external funds require a constant paying back over the years, so that the borrower is more focused on cash flow budgets than on value creation expectations. This means that the above mentioned misperception about risks and paybacks, referred to the amounts and times, confirm a negative impact as CSE increases.

Another point is the tendency of high CSE entrepreneur to posit in innovative and risky sectors than other people. CSE is positively linked with novelty. It has been

studied that firms that recently develop a novel innovation obtain less of their desired capital (Cosh et al., 2009) and innovative small firms have a low level of loan application success (Freel, 2007). Generally speaking novelty is negatively related to the amount of invested financial capital since financiers may be more reluctant to finance more novel business ideas.

All this premised, we can formulate the following hypothesis:

Hypothesis 2: There is a negative relationship between CSE and external financing

To test the role of CSE on entrepreneurial financial capital, we control both for nascent entrepreneur individual level factors and for contextual business level ones. The amount invested in the new venture, indeed, will depend from different factors: business industry and idea as for nascent entrepreneur previous experience.

Data and Methods

Dataset and sample

Data collection in the field of entrepreneurship is one of the most challenging issue (Strom, 2011). For the purpose of this study and in order to avoid reverse causality, we need data on all adult population who are at risk of becoming entrepreneur. The data we aim to use are present in the PSED, which has been largely used in entrepreneurship field and allow us to overcome issues associated with recall biased and survivorship, such as self-justification bias and attribution bias due to the fact of surveying entrepreneurs already in the business (Reynolds, 2007; Reynolds and Curtin 2009, Cassar 2010). Many databases, often used in the past, as for example the BLS (Business Employment Dynamics), and Us Census Integrated Longitudinal Business Database, only include organizing efforts that successfully transitioned into start-up; while other databases, as for example the PSID (Panel Study of Income Dynamics), even if focused on job's shifts over individual's life courses, have very limited information (Martinez and others, 2011). PSED captures the initial moment when nascent entrepreneurs begin their activities, such as planning, searching for funding and etc. It also solves the problem of selecting only successful entrepreneurs by using random population, because the sample has been identified through a random digit dialing methodology. A sample of nascent entrepreneurs selected from this process was subsequently interviewed by phone and by mail. A control sample has also been interviewed to avoid some selection biases and to allow the comparison between people involved and not involved in entrepreneurship. PSED comprises two separate longitudinal projects: PSED I enacted in 1998-2000 with an original screening of 64.000 American adults[1]; PSED II begun in 2005-6 with a new sample involving about 31.000 adults. Both studies are longitudinal in nature, with PSED I surveying

[1] Eighteen years old or more.

individuals four times in a period of five years, whereas PSED II had interviewed respondents four times in four years. For the purpose of our analysis, we aim to use PSED I. In particular we are going to consider the first wave of the database that consists in a first phone interview and in a questionnaire sent by mail. This database is unique because it provides high quality data about not only early stages of entrepreneurial activities as for example investment choices or financial planning, but also dispositional and contextual factors at both macro and micro level (Gartner, 2004). Moreover, we are going to consider people involved in the first

Following existing literature in entrepreneurship, nascent entrepreneurs have been defined as individuals actively involved in the start-up process of a new firm (Reynolds 2009) involving not only "*operating activities*" but also "*assuming risk*" (Sorensen 2007; Casson 2003; Aldrich 1999)[2]. In this study several requirements are used in order to include nascent entrepreneurs in the sample. First, to be identified as nascent entrepreneurs, respondents have to answer yes to the following question: " Are you alone or with others, trying to start a new business?" (Delmar & Daviddson, 2010; Reynolds 2008). Moreover since this study is related to the entrepreneurial decision, all respondents that were trying to start a new business for their employer as a task of their job, were excluded from the sample. In addition, because the motivation behind the entrepreneurial decision is important for the purpose of this study, we excluded all entrepreneurs that decided to start a new venture or inherit it for family tradition. This would ensure to have in the sample only individuals that make their selves the final

[2] Literature in entrepreneurship has recognized nascent entrepreneurs with several definitions: individuals trying to start an independent business (Reynolds 1997); people actively involved in firm creation (Gartner, 1988; Kim, Aldrich, Keister, 2003); individuals who are currently trying to start a new firm and are active in the process (Autio and Wennberg, 2010). All these definitions are underlying three main issues: independence, activism and commitment.

decision (Reynolds, 2008). Second, in order to detect commitment in the new activity they have to expect at least some ownership in the new firm and been active in the last 12 month in the startup-phase of the new venture, including fund raising. Finally we exclude venture with the legal form of sole proprietorship because previous literature have demonstrated not only that business in this kind of legal form are more likely to be small but also that they can not be suitable for studying financial investment choices. (Amit, Glosten and Muller, 1990). These criteria determine a sample size of 254 nascent entrepreneurs. Finally, we tried to have no missing values for dependent independent and control variables. This reduced the number of observation because of the presence of missing values mostly on the dependent and control variables.

Tab 1. The sample of nascent entrepreneur

	N. of cases	N. of cases
Population	1248	
Trying to start a new business	798	
Actively involved in the stat up phase	787	
Nascent intrapreneur		-141
Intend to have no ownership in the start-up		-5
family tradition		-107
sole-proprietorship		-280
Final sample of Nacent Entrepreneurs	254	

All the variables considered in this study were asked during the first questionnaire sent and by phone interviews in the first wave. A total control sample of 401 individuals not nascent entrepreneurs were also interviewed.

In order to check for potential selection bias between nascent entrepreneurs and not nascent entrepreneurs we run a Chi-square test also considering the criteria used in

order to define nascent entrepreneurs. It reveals no statistically significant differences at 0.10 level with regard to age, gender, education, marital status, race and household income. For example, nascent entrepreneurs' (not nascent entrepreneurs') average age and job tenure were 39 (40) and 17 (16). Regarding the educational attainment 5% (8%) have no high school degree and 14% (11%) have post college experience.

These results determine that selection bias is not a serious problem relating to the analysis of the sample. Moreover, an examination for potential response bias between respondents and not respondents, indicate that individuals who respond to the phone interview but not to the written questionnaire were likely to be younger ($p<0.01$) with less job tenure ($p<0.05$) and less educational attainment ($p<0.05$).

Table 2 summarizes the measurement for the dependent, independent and control variables.

INSERT TABLE 2 ABOUT HERE

Dependent variables

With regard to financial capital invested in the start up phase of the new venture, we take into consideration two different sources: the internal and the external one. Concerning personal funds given by entrepreneur, the following question was asked at the time of the questionnaire : "How much of your own money, in total dollars, have you put in the business?". The dependent variable "NEPF" (Nascent Entrepreneur Personal Financing) is denoted by the log of the amount in total dollar put in the venture. NEPF gives us a precise measure of the personal financial commitment of the entrepreneur (Zaleski, 2010). We do not consider other internal sources as for example financial resources invested by family and friends because the motivations behind the amount given by people emotionally linked with the entrepreneurs are exogenous to his/her ability and self assessment. The dependent variable "EF" (External Financing) is denoted by the log at the total amount in dollar given by banks and other financial actors (i.e. private investors or government agencies[3]) (Zaleski, 2010). In particular, referring to the initial stage of the new venture, bank loans consist in about 85% of the total external amount raised. Since both the amount for internal and external financing were skewed, the variables were built by calculating the logarithm of each response adding a constant of 1.

Independent variable

The independent variable "CSE" (Core Self Evaluation) has been operationalized following consistent method used by previous literature (Simsek and Veiga 2010; Hiller and Hambrick 2005; Judge 2003). The measure of CSE is obtained from self reported

[3] In particular there is a specific question on the amount received by SBA: the US Small Business Administration. The U.S. Small Business Administration (SBA) is an independent agency of the federal government to aid, counsel, assist and protect the interests of small business concerns. The SBA helps thought different financiang and tutoring programs Americans to start, build and grow businesses.

question, in the survey, derived from psychology. In particular, the CSE variable is measured using twelve items. All the items were taken from Judge et al (2003). Respondents were asked to indicate their agreement level using a five point Likert-scale: 1= strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree. Answers to the items were added together and the total divided by twelve. Example items include: "Overall I am satisfied with myself", "I rarely have doubts on my competences" or "When I try I generally succeed". Of the 1248 respondents (total population), 837 answer all the CSE questions. The mean (median) of CSE variable is 3.307 (3.33). For the purpose of the analysis we also consider the variable "CSE2" as the square of CSE. In order to avoid multicollinearity, the independent variables were centered. A Cronbach's alpha value of 0.76 indicates an acceptable level of internal consistency. We perform Confirmatory Factor Analysis (CFA) producing an acceptable fit indices: χ^2 (54)= 187.36 p<0.01; Comparative Fit Index (CIF)= 0.92; Tucker-Lewis Index (TLI)= 0.86 and Root Mean Square Approximation (RMSEA)= 0.048.

Control Variables

Previous literature has focused on different aspects when investigating entrepreneurial process and investment choices: human capital, demographics and financial capital (Delmar and Daviddson, 2000; Dobrev and Bartnett, 2005; Kim, Aldrich and Keister, 2003; Autio and Wennberg 2010; Folta and Wennberg, 2010). Our control variables, defined in the appendix, are denoted in order to control for all the most important variables used by literature. With regard to human capital we control for: education, previous working experience, previous start-up experience and number

of businesses helped to start, previous start up industry experience. With regard to demographics, we control for age, gender, marital status, race, parents born in the US, household size, parental self employment experience. With regard to the initial financial condition we control for household wealth and household income. Moreover we control for other variables specifically suitable for the purpose of this study. In order to control for the small firm effect we consider previous employer size (Chen 2011; Elfenbein et al, 2010). In order to control for non monetary benefits, we control for ex-job satisfaction. Because external financiers could be reluctant to invest in innovative business (Cosh and others, 2009) we control not only for start-up industry but also for R&D expenses as a major priority for the business (Reynolds et al, 2002). We also consider different measures detecting the stage of development of the new venture that could be important for fund raising activity (Shane and Delmar, 2004): stage of product/business development and expenses for marketing, promotion, equipment, raw materials and presence of income and savings for the new business. We build a dummy variable for detecting independent business. Entry modes like acquisition or franchising, indeed, could have a mature financial position since they are characterized by past experience and risk to affect the analysis because of the presence of a financial track record already defined. Moreover because financial strategy could be affected by entrepreneur's risk preference we also control for this variable (Elston and Audretsch, 2010).

Data analysis

Table 3 shows descriptive statistics: means, standard deviations, and correlations for all the variables considered.

INSERT TABLE 3 ABOUT HERE

Looking at these results, it seems that our data are not affected by discriminant validity: all the interfactor correlations are under the recommended level of 0.7 (Tabachnick and Fidell,1996) and all the VIF scores are less than the recommended level of 10 (Neter and al, 1996), underlying the absence of problem of multicollinearity. CSE is correlated with the independent variables in the direction we hypothesized: CSE has a positive correlation with NEPF ($p<0.05$) and a Negative with EF; CSE2 a negative correlation with NEPF. CSE is also positively correlated with managerial tenure ($p<0.05$) (Hiller and Hambrick, 2005) entrepreneurial self experience ($p<0.001$) (Simon, Houghton and Aquino, 2000; Zhao and Seibert, 2006), parental self employment experience ($p<0.05$) (Sorensen, 2007; Judge and Hurst, 2007), previous job satisfaction ($p<0.05$) (Judge, 2009).

Ordinary least squares (OLS) regressions for continuous variables were used to test the hypotheses relating to the financing amount. The analyses used to test our hypotheses are shown in Model 1 to 4 in Table 4 and 5, containing $R^{2,}$ mean VIF scores and standardized coefficients.

INSERT TABLE 4 ABOUT HERE

In model 1 we regressed NEPF with all the control variables in model 2 we regressed BL with all the control variable. In model 3 we entered CSE and CSE2 to model 1.

The regression equation for model 3 is presented in the following way:

$$NEPF=a+ \beta_1 CSE+ \beta_2 CSE2+ c_i CV_i+ e$$

where a is the intercept, e is the error term, the betas are the coefficient on the CSE variables and c is the vector for the control variables.

INSERT TABLE 5 ABOUT HERE

In model 4 we entered CSE to model2.

$$EF=a+ \beta_1 CSE+ c_i CV_i+ e$$

where a is the intercept, e is the error term, the beta is the coefficient on the CSE variable and c is the vector for the control variables.

All the models were tested using 2-tailed t-test. Findings are first presented for the depend variable Nascent Entrepreneur Personal Financing and then for External Financing. As shown in Table 4, Hypothesis 1, which predicted an inverted u-shaped relationship between nascent entrepreneurs Core Self Evaluation and Personal Financing, was supported (β_1= 1.78, $p<0.05$ and β_2= -2.80, $p<0.01$).[4] The model has a R^2 of 0.44. This results confirm that for low level of CSE entrepreneur's personal financial commitment to the new venture is increasing at a decreasing rate, while for high level of CSE, we can state for excess level of it, the personal financial commitment is decreasing. With respect to Hypothesis 2, our prediction that the amount of external financiers is decreasing was also supported (β_1= -1.08, $p<0.1$) with a R^2 of 0.20. For this second model we introduce some additional control variables. We control for NEPF, because the amount of external financing could be affected by initial size of the venture (Cooper, Gimeno and Woo; 1994) but also for the level of R&D expenses, because it has been found that innovative ventures obtain not only less capital but also a lower level of success for loan application (Cosh and others, 2009). We also control for the stage of development of the product/service of venture and for the level of operating expenses such as marketing, promotion, raw materials and equipment (Shane and Delmar, 2004; Cassar 2010). Because professional partners evaluate projects on the basis of objective documents, we take into consideration also a dummy for a business

[4] Because similar findings between the model with and without control variables (β_1= 1.58, $p<0.01$ and β_2= -2.07, $p<0.05$), we reserve comment on the discussion of the full model.

plan already done (Malmendier and Tate, 2005; Eckhardt, Shane and Delmar 2006) and for the presence of savings to invest in the business (Reynolds, 2007)

Discussion and implications

This study contributes to the literature by conducting a novel investigation on the role of core self evaluation on the amount of initial capital invested in entrepreneurial ventures from two different perspectives: internal (i.e entrepreneur) and external (i.e banks or other external lenders). Previous literature has been focused on one hand on the effect of dispositional factor in fostering entrepreneurial entry (Camerer and Lovallo, 1999; Zhao and Siebert, 2006), without considering CSE; on the other hand it has been focused on the effect of initial size on performance (Cooper, Gimeno and Woo, 1994) understanding also the perfect mix and sources for equity and debt (Theory of Capital Structure and Pecking Order Theory). Although financing is a fundamental activity for a start-up process (Venkataraman, 1997; Shane and Venkataraman, 2000) and much prior research have investigated this phenomenon (Sorenson and Stuart, 2001; Uzzi and Gillespie, 1999), to a very little extent has been questioned if entrepreneurs' self assessment could impact not only his financial commitment but also the external one: "for a sequential nature of the financing process financiers do not finance ventures that do not seek external financing" (Eckhardt, Shane and Delmar, 2006). The empirical results confirm that entrepreneur's self confidence matter both with the amount of financial capital invested by himself and obtained by external financers, primarily banks. An interesting result is due by the fact that personal financial commitment is inverted u-shape associated to CSE, confirming that an increasing level of self confidence may determine the conviction of being able to have success and good

performance because of personal abilities (Hayward and others, 2006), knowledge, experiences, determining an underestimation of the amount of capital needed by the venture. This results is also confirmed both theoretically and empirically speaking with entrepreneur's risk perception (Siebert and Hills,2005). From a normal level of CSE to an exaggerated one, initial capital seems to be less and less crucial in entrepreneur's perception for new venture's performance and success.

Based on the results of our second Hypothesis, we claim that the effect of entrepreneur's CSE is negative to the amount of external financing. Pushing on this relation is possible to recognize two different effect: firstly the fact that entrepreneurs' will seek external financing based on their self assessment (Eckhardt, Shane and Delmar, 2006) and we have already demonstrated that for hyper level of CSE it is possible to recognize an isolating mechanism (Simsek, Havey and Veiga, 2010). Secondly financiers decide not only on objective features of the new venture (as for example the rate of innovativeness or the goodness of the Business Planning) but also on the basis of entrepreneur's self confidence Another important aspect – which seems consistent with previous literature (Bates 1990: Eckhardt, Shane and Delmar 2006) - is that even if most studies on entrepreneurial financing have focused on the role of venture capitalist, from our sample entrepreneurs mostly seek financial resources at the initial stage of the activity from banks, government agencies and other external landers.

These findings could have important implications for practitioners. Firstly, entrepreneurs have to be aware that an high level of self confidence could be detrimental for the survival of the start up, especially if the external conditions are declining; secondly also policy makers and external investors have to be aware of the

importance of personal evaluations on the fund raising activity, trying with specialized programs to support nascent entrepreneurs in defining the right financial structure for the new venture. It could happen that good business idea do not reach the adequate amount of initial capital because of an excess sureness on personal abilities showed by entrepreneur.

This study, of course, has some limitations. First, we use as key items of entrepreneurial stage of development respondent's answers. This features could be affected by individual level-biases. Unfortunately not only the nature of the database but also the nature of the initial stage of entrepreneurial activity does not allow us to control for this biases. Only entrepreneurs know the effective status of the marketing activity or the Business Plan formalization. A way suggested by previous literature in trying to reduce this problem is to ask for specific questions as for example: "Have been the BP prepared" or "Have you purchased, rent raw materials ore equipment?" Even if this specific question are present in PSED database, the problem for individual-level biases remains. Moreover, it is possible that due to the fact that the initial entrepreneurial stage is more uncertain than an established and mature one, uncertainty on results could have an enhancing effect on CSE. For this reason, the possibility to generalize this relationship to all the financing stages of the entrepreneurial venture is limited. This could be a starting point for future research: it could be interesting studying if CSE has a different impact on financing activity due to a different stage of start-up process. Another important aspect that could be worth to be analyzed is the decision making process of the entrepreneur: considering not only the size of start-up team and the relationship between team members but also understanding the dynamics on the decision. Strategic management literature that studied the impact of CEO CSE on

decision process found important results (Hiller and Hambrick, 2005). Understanding if CSE have a different impact on the type and the amount of capital sought/raised: equity or debt and regarding the type of counterpart sought/found could be an interesting area for future research in this setting.

Conclusion

This study explores the effect of entrepreneur's Core Self Evaluation on entrepreneurial capital. In particular, using PSED database, we distinguish between personal financing and external professional ones. These relationships are both statistically and economic significant. Entrepreneurs are more likely to invest money in their venture based on the level of their self perception and confidence. This effect is confirmed also for external financing, entrepreneurs with higher level of CSE tend to use less financial resources given by external partners. Our findings' contributions are clustered around the understanding of how psychological factors affect investment decisions in the entrepreneurial setting, providing important implication for both theory and practice.

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TABLE 2- Sample descriptive statistics and correlation matrix (*(p < 0.05); **(p<0.01) ;***(p<0.001))

	Mean	SD	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. CSE	-4.07e-08	0.345	-1.140	1.360	1													
2. CSE2	0.119	0.215	0.000	1.850	0.104**	1												
3. NEPF	7.078	2.745	0	12.899	0.133*	-0.098	1											
4. EF	0.912	3.025	0	14.375	-0.021	-0.015	0.170**	1										
5.GENDER	0.489	0.500	0	1	0.051	-0.017	0.035	0.067	1									
6. AGE	39.108	12.066	18	92	-0.070*	0.067*	0.018	0.015	-0.056*	1								
7. MARRIED	0.551	0.498	0	1	-0.025	-0.067	0.050	0.066	-0.007	0.179***	1							
8. lgHHINC	10.657	0.759	6.896	14.403	-0.010	-0.080*	0.088	0.040	0.071*	0.082**	0.296***	1						
9. lgHHw	10.898	1.665	0	14.771	-0.045	-0.010	0.160**	0.034	0.091**	0.260***	0.236***	0.545***	1					
10. EDUC3	0.813	0.642	0	2	-0.018	0.020	0.081	-0.062	-0.009	0.145***	0.055	0.261***	0.239***	1				
11. HHsize	3.224	1.589	1	8	0.012	-0.036	-0.009	0.102**	-0.049	-0.208***	0.342***	0.111***	0.007	-0.117***	1			
12. RACE	0.530	0.499	0	1	-0.064	-0.041	0.097	0.098**	0.009	0.193***	0.178***	0.179***	0.225***	0.124***	-0.101***	1		
13.PARBORNUS	0.828	0.378	0	1	-0.010	-0.033	0.058	0.055	-0.042	0.086**	0.019	0.028	-0.013	0.022	-0.027	0.238***	1	
14. mngtenure	1.718	1.045	0	4	0.087*	0.005	0.088	0.004	0.100***	0.441***	0.183***	0.222***	0.301***	0.212***	-0.091**	0.215	0.089**	1
15.prevemplsize	4.611	2.165	0	10	-0.002	-0.053	-0.013	-0.066	0.138***	0.132***	0.041	0.212***	0.134**	0.124***	-0.139***	-0.028	-0.004	0.130***
16.entrselfexp	0.444	0.497	0	1	0.154***	-0.069*	0.246***	0.050	0.083**	0.090**	0.039	0.054	0.114***	0.021	0.048	0.136***	0.047	0.171***
17.parententrep	0.479	0.498	0	1	0.089*	0.015	0.141**	0.061	-0.042	-0.008	0.008	0.096**	0.099**	0.089**	-0.026	0.153***	-0.007	0.095**
18.su-industry	71.824	21.545	10	100	0.004	-0.052	-0.061	-0.176***	0.154***	-0.020	-0.040	0.106**	0.053	0.173***	-0.068	-0.047	-0.038	-0.003
19. suindexp	2.116	1.059	0	5	0.008	0.095*	0.108*	0.046	0.033	0.439***	0.102**	0.115**	0.177***	0.133***	-0.048	0.024	0.050	0.254***
20.helpstart	1.175	3.122	0	60	0.050	-0.046	0.084	-0.014	0.127***	0.053	0.024	0.080*	0.100*	0.073*	-0.045	-0.010	-0.017	0.177***
21.indbus	0.836	0.370	0	1	0.041	0.039	0.161**	-0.035	0.018	-0.015	-0.078*	-0.115**	-0.030	0.012	-0.072*	-0.062	0.003	-0.025
22.mkting	0.570	0.495	0	1	0.003	-0.055	0.267***	-0.000	0.009	0.068	0.064	0.094*	0.048	0.040	-0.019	0.099**	0.051	0.072*
23.rawmat	0.710	0.453	0	1	-0.003	-0.022	0.351***	0.038	-0.072*	0.033	0.051	0.001	0.074	0.040	0.018	0.127***	0.063	0.016
24.equip	0.516	0.564	0	1	0.015	-0.009	0.232***	0.134***	0.040	0.008	0.050	0.060	0.036	-0.029	-0.024	0.072*	0.055	0.018
25.income	0.407	0.491	0	1	-0.015	-0.060	0.164**	0.094**	-0.059	0.088*	0.081*	0.038	0.031	0.064	-0.008	0.199***	0.055	0.075*
26.exjobsat	3.048	1.375	1	5	0.084*	-0.089*	-0.011	-0.021	0.019	-0.018	0.063	-0.009	-0.066	-0.015	-0.004	0.073*	0.083*	0.037
27.riskpref	0.828	0.378	0	1	0.170***	0.046	0.130*	-0.056	-0.227	0.009	0.028	-0.061	-0.074	-0.043	0.039	0.028	-0.010	-0.050
28.R&D	0.304	0.460	0	1	0.132**	0.092*	0.010	-0.033	0.062	-0.061	-0.166***	-0.043	-0.103*	0.005	-0.042	-0.193***	0.022	0.008
29.prod.dev	1.885	1.142	0	3	-0.022	-0.108*	0.235***	0.066	-0.015	0.135***	0.145***	0.076*	0.092*	0.055	-0.024	0.229***	0.042	0.097**
30.BP	0.397	0.490	0	1	0.140***	-0.094**	0.054	0.166***	0.084**	-0.032	0.040	0.100***	0.090**	0.064+	0.025	0.060*	0.040	0.110***
31.Savings	0.696	0.460	0	1	-0.01	0.008	0.117*	-0.031	0.090*	-0,180***	-0.045	-0.060	-0.084*	-0.111**	0.041	-0.134***	-0.072*	-0.043

TABLE 2 (cont) - Sample descriptive statistics and correlation matrix (*(p < 0.05); **(p<0.01) ;***(p<0.001)

	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
15.prevemplsize	1																
16.entrselfexp	0.119***	1															
17.parententrep	-0.042	0.110***	1														
18.su-industry	0.064	-0130***	0.001	1													
19. suindexp	0.110*	0.012	0.004	-0.042	1												
20.helpstart	0.036	0.115**	0.126**	-0.093	0.107**	1											
21.indbus	-0.036	-0.054	-0.066	0.041	0.163**	-0.068	1										
22.mkting	0.060	0.207***	0.028	0.014	0.0136	0.104*	0.135***	1									
23.rawmat	0.009	0.169***	0.026	-0.100**	-0.020	0.010	0.025	0.316***	1								
24.equip	-0.071	0.219***	0.065	-0.073*	0.036	-0.03	-0.008	0.187***	0.307***	1							
25.income	-0.036	0.295***	0.055	-0.109**	0.041	-0.012	-0.111**	0.373***	0.299***	0.208***	1						
26.exjobsat	-0.020	0.149***	0.000	0.019	0.140***	-0.015	-0.033	0.005	-0.037	0.034	-0.042	1					
27.riskpref	-0.074*	-0.096**	0.029	0.038	0.000	-0.139***	0.039	-0.053	-0.038	-0.006	-0.016	0.006	1				
28.R&D	0.061	0.015	-0.015	0.004	0.069	0.107*	0.045	0.017	0.013	-0.010	-0.060	-0.051	-0.052	1			
29.prod.dev	-0.039	0.264***	0.098**	-0.074*	-0.000	0.027	0.186***	0.389***	0.328***	0.181***	0.435***	-0.039	0.009	0.131***	1		
30.BP	0.060	0.257***	0.060*	-0.046	0.207***	0.004	-0.107**	0.159***	0.043	0.060	0.053	0.315***	0.073*	0.079*	0.080*	1	
31.Savings	-0.005	-0.046	-0.033	0.074*	0.032	-0.003	0.097**	-0.038	0.023	0.016	-0.106**	-0.001	-0.018	0.082*	0.166***	0.065	1

Table 3-Variable definition * (All the variables have been built following existent literature, some paper of major references have been: Folta Delmar Wennberg (2010); Delmar and Daviddson (2000); Dobrev and Bartnett (2005): Sorensen (2007); Cassar (2010); Kim & al (2003); Shane(1996); Reynold & White 1997)

Variable name	Definition
CSE	Mean of 12 item. This variable has been centered
CSE2	Variable CSE squared. This variable has been centered
NEPF	Log of the amount of capital invested in the SU plus 1
EF	Log of the omount of capial invested in the by banks, financial institutions and governmanet agencies, plus one
Age	Individual number of years
Gender	Dummy variable =1 if individual is male
Married	Dummy variable =1 if individual is married
lgHHincome	Log of total household income (last year)plus 1
lg HHW	Log of total houshold net worth (last year) plus 1
EDUC3	Educational atteinment rank (1-3) where 1= no high school 2= high school degree 3=college and post college experience
HHsize	number of children under 18 in the household
RACE	dummy variable =1 if individual is white
ParborninUS	dummy variable =1 if at least one of the parents is born in US
Mngtenure	log of the number of years individual had a previous managerial experience
Prevemplsize	log of the number of employees in the firm in which individual has worked
entrepreneurial selfexp.	Dummy variable =1 if the individual had a previous experience as self employed
parental SE exp.	Dummy variable=1 if at least a member of the family was previously self employed
Suindustry	current two digit industry of the start-up
Suindustryex	log of the year individual has worked in the same industry of the SU
helpstart	number of business individuals helped to start
indbus	dummy variable=1 if the business is an independent one
mkting	dummy variable=1 if marketing expenses have been undertaken
rawmat	dummy variable=1 if raw materials have been acquired
equip	dummy variable=1 if equipments have been acquired
income	dummy variable=1 if first income have been realized
exjobsat	categorical variable for the level from 1 to 5 of previous job satisfaction
riskpref	dummy variable=1 if NE prefer risky situations
R&D	dummy variable=1 if R&D expenses are a major priority in the business
proddev	categorical variable for the stage of product development
BP	dummy variable =1 if Business Plan has been prepared
savings	dummy variable =1 if savings for incremental investment in the SU have been saved

TABLE 4-Results of OLS regression on Nascent Entrepreneur Personal Financing

	Model 1	Model 2
	NEPF	NEPF
CSE		1.76**
		0.76
CSE2		-2.77***
		(0.89)
Gender	0.33	0.16
	(0.44)	(0.42)
Age	-0.01	-0.00
	(0.03)	(0.02)
Married	-0.12	-0.27
	(0.51)	0.53
lgHHInc	0.05	0.00
	(0.44)	(0.43)
lgHHw	-0.11	0.05
	(0.19)	(0.20)
USeduc	Incl.[a]	Incl.[a]
HHsize	0.01	-0.01
	(0.18)	(0.17)
Race	0.00	-0.05
	(0.43)	(0.44)
Parbornus	0.53	0.67
	(0.57)	(0.57)
mngtenure	0.32	0.34**
	(0.21)	(0.19)
prevsize	-0.01	-0.07
	(0.09)	(0.09)
entrselfexp	0.44	0.40
	(0.59)	(0.59)
parententrexp	0.18	-0.01
	(0.38)	(0.39)
industry	0.02	0.02**
	(0.01)	(0.01)
Suindustryexp	0.09	-0.03
	(0.22)	(0.21)
helpstart	0.00	0.02
	(0.07)	(0.07)
indbus	2.28*	2.56
	(0.93)	(0.85)***
mkting	0.14	-0.06
	(0.45)	(0.48)
rawmat	2.11**	2.51***
	(0.72)	(0.74)
equip	0.03	-0.07
	(0.52)	(0.46)
income	0.26	0.46
	(0.46)	(0.42)
Exjobsat	Incl.[a]	Incl.[a]
R&D	-0.75	-1.04***
	(0.48)	(0.48)
Riskpref	-0.54	-0.57
	0.54	(0.56)
Const.	0.99	0.04
	(4.49)	(4.55)
Observations	156	149
R-Squared	0.35	0.43
F-statistic	2.20	2.86
Prob (F-statistic)	***	***
mean VIF	1.76	1.76

(*p < 0.10, **p < 0.05, ***p < 0.01, standard errors in parentheses. [a] Dummy variables for each categorical variable are included in the analysis but not shown to preserve space)

TABLE 5-Results of OLS regression on External Financing

	Model 3	Model 4
	EF	EF
CSE		-1.08*
		(0.64)
Gender	0.48	0.59
	(0.46)	(0.50)
Age	0.01	-0.00
	(0.02)	(0.01)
Married	-0.42	-0.47
	(0.35)	(0.36)
lgHHInc	0.10	0.06
	(0.34)	(0.34)
lgHHw	-0.12	0.10
	(0.14)	(0.15)
USeduc	Incl.[a]	Incl.[a]
HHsize	0.07	0.07
	(0.11)	(0.11)
Race	0.63**	0.35
	(0.32)	(0.29)
Parbornus	0.73	0.73
	(0.52)	(0.50)
mngtenure	-0.12	-0.02
	(0.25)	(0.24)
prevsize	-0.09	-0.07
	(0.09)	(0.10)
entrselfexp	0.39	0.40
	(0.30)	(0.31)
parententrexp	0.09	0.16
	(0.43)	(0.47)
industry	0.01	0.02*
	(0.01)	(0.01)
Suindustryexp	0.16	0.19
	(0.15)	(0.16)
helpstart	-0.08	-0.10
	(0.18)	(0.17)
indbus	0.21	0.40
	(0.44)	0.43
mkting	-0.03	-0.20
	(0.49)	(0.48)
rawmat	0.17	0.43
	(0.45)	(0.42)
equip	0.08	0.05
	(0.15)	(0.14)
income	0.04	-0.21
	(0.52)	(0.51)
prod.dev	Incl.[a]	Incl.[a]
R&D	-0.22	-0.37
	(0.43)	(0.40)

TABLE 5 (cont.)-Results of OLS regression on External Financing

NEPF	0.16**	0.13**
	(0.07)	(0.06)
BP	0.48	0.62
	(0.40)	(0.40)
Savings	0.25	0.59
	(0.56)	(0.51)
Const.	-4.19	-6.39**
	(3.35)	(3.49)
Observations	151	144
R-Squared	0.17	0.19
F-statistic	0.32	0.27
Prob (F-statistic)	*	*
mean VIF	1.72	1.73

(*p < 0.10, **p < 0.05, ***p < 0.01, standard errors in parentheses. [a] Dummy variables for each categorical variable are included in the analysis but not shown to preserve space)