

# **CEO's Values, Management Style and Firm Performance: Evidence from Social Enterprise in Europe**

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## **Abstract**

A substantial body of research emphasizes the importance of the person in charge of an organization for a firm's decisions and performance, yet less is known about which individual traits and experiences can explain variation in management styles that contribute to differences in firm performance. Our paper explores the possibility that a CEO's personal values help shape his or her management style, which in turn helps drive firm outcomes.

Values are guides to decisions and actions. They are enduring beliefs more basic than heuristics and attitudes but can be seen as their building blocks. Values can be thought of as constituents of a person's character traits. Schwartz (2012) identified a set of values that appear to be held in nearly all societies from a survey of over 80 countries. Values are typically stable within individuals, though variation across individuals is common (e.g. Bardi et al., 2009; Zak, 2008).

To empirically test the role that a CEO's values play in explaining differences in management style and firm performance, we exploit a unique panel dataset on social enterprises in Europe. The dataset, which we constructed ourselves, is a two-period panel data set containing information on CEOs' background characteristics including their value profiles, management practices, firm characteristics and firm outcomes. Social enterprises are hybrid organizations: they combine aspects of charity and business at their core. Their purpose is to achieve a social mission through the use of market mechanisms. One of the most profound changes in the social sector over the past thirty-five years has been its steady rationalization and marketization. This gradual change is epitomized by the rapid growth of so-called 'social enterprises'.

We present evidence that the social enterprise CEOs with strong prosocial, self-transcendence values and weak self-enhancement values are more likely to use participatory management practices, while the CEOs who are more open to change adopt an entrepreneurial posture that reflects greater pro-activeness, willingness to take risks and innovativeness. Using CEOs' values as a valid instrument for management styles, we confirm that participatory management practices and strategic entrepreneurial posture positively affect financial performance, as well as social enterprises' success in creating societal impact.

**Keywords:** CEO, upper echelon, managerial practices, values, social enterprise

## **1. Introduction**

Values influence the choices people make and their behaviour. The main proposition of the present research is that the value profiles of social enterprise Chief Executive Officers (CEOs) influence their social enterprises' organisational performance through strategic and human resource management practices. More specifically, CEOs choose to enact different degrees of participation and strategic entrepreneurial orientation guided by their value priorities. Our proposition relies on and integrates two lines of research. On the one hand, upper echelons theory in strategic management research argues that CEO characteristics are important determinants of firm performance (Hambrick, 2007; Hambrick & Mason, 1984). Similarly, research in economics finds support for the notion that individual differences between CEOs (e.g., in age or education, or military service) are related to variation in firm performance (e.g., Benmelech & Frydman 2013; Bertrand & Schoar, 2003). Furthermore, statistical summaries of decades of research into the psychology of entrepreneurship support a link between CEO entrepreneurs' personality characteristics and firm performance (Rauch & Frese, 2007).

A separate, second line of research demonstrates the importance of 'good' management practices for firm performance (e.g., Bloom & Van Reenen, 2007) – for example past research supports the notion that the adoption of participatory, empowering human resources management (Birdi et al., 2008) and a focus on entrepreneurship in strategy making ('entrepreneurial orientation', Lumpkin & Dess, 1996; Rauch, Wiklund, Lumpkin, & Frese, 2009) lead to higher organisational performance. However as Bandiera, Barankay, and Rasul (2011) conclude, the connection of these research streams, i.e. the potential influence of managers' personal characteristics for management practices and organisational performance, remains under-researched. Our research aims to fill this gap. Identifying stable CEO characteristics as drivers of managerial practices will also contribute to a better understanding of the origin and persistence of 'good' vs. 'bad' management practices.

We conduct our study drawing on our own survey of social enterprises – i.e. organisations that strive to create social value and do so in an entrepreneurial way through generating own revenues by actively trading in the market (selling products and/or services)(e.g., Mair & Marti, 2006; Short, Moss, & Lumpkin, 2009). Social enterprises in this definition can be both non-profits actively engaging in market-based, revenue generating activities or for-profits with a clearly focussed social mission (Austin, Stevenson, & Weiskillern, 2006). Three reasons speak for a focus on social enterprises: First, we can expect some variation in both social and economic values in social enterprises – there is likely more value variation in social enterprises than in either pure for profits or pure non-profits. This makes social enterprises a uniquely suitable research setting to explore the impact of CEO values on management practices and organisational performance. Second, social enterprises are commonly seen as a source of creative market-based mechanisms that address pressing social needs and societal challenges without relying on governments. Thus, although admittedly still poorly understood, social enterprises have a significant societal role. They help further progress in the developing world, transition and emerging market economies, but are also increasingly appreciated in the developed world that is faced with the ‘age of austerity’ (The Economist, 2010). Third, social entrepreneurship is by and large under-researched and to the best of our knowledge no large scale quantitative studies of social enterprises exist (Short, Moss, & Lumpkin, 2009). Thus, the present research also aims to increase our understanding of social enterprises in general and successful management practices in social enterprises in particular.

In sum, this study is the first to build evidence on successful management practices in social enterprises. In addition, it contributes to our understanding of management practices and their origins more broadly. We suggest that taking the CEO’s value profile into account can help to understand why - despite widespread knowledge about the effectiveness of certain management practices (e.g. Bloom & Van Reenen, 2007; Rauch, Wiklund, Lumpkin, & Frese,

2009) - ‘bad’ management practices (when consistent with the CEO’s values) persist, nevertheless, in organizations. Finally, we also contribute to specific literatures in strategic management (on upper echelons and entrepreneurial orientation) and organizational behavior (on participatory management and leadership) by providing evidence that certain CEO value profiles are more consistent with and likely lead to the adoption of a strategic entrepreneurial orientation of the firm and participative leadership practices, respectively.

Next, we first motivate our focus on the CEO as a source of variation in management practices and organisational performance. Second we elaborate on the concept of values and derive predictions about the influence of CEO values on management practices and firm performance. Then we describe the empirical methods used, our empirical results and close with a discussion section.

## **2. Theoretical Arguments**

### **2.1. CEOs’ Influence on Management Practices and Organisational**

The importance of CEOs for firm performance is most clearly described in upper echelons theory in strategic management and in psychological entrepreneurship theory. According to *upper echelons theory*, CEOs are the most powerful and also the main decision makers in their organisation, hence their personality, preferences and leadership style will have profound influence on the organisation they lead (Hambrick, 2007; Hambrick & Mason, 1984). Empirical research has, however, typically investigated relations of socio-demographic characteristics (age, gender, education), functional background, and organisational tenure in their effect on organisational performance (Bertrand & Schoar, 2003; Hwang & Powell, 2009; Rost & Osterloh, 2010; for reviews see Carpenter, Geletkanycz, & Sanders, 2004; Hambrick, 2007). The challenge of using such variables to proxy personality, preferences and leadership style is that they leave “... us at a loss as to the real psychological and social processes that are driving

executive behaviour, which is the well-known ‘black-box problem’ (Lawrence, 1997)” (Hambrick, 2007: 335). In addition, the intervening processes – such as management practices - by which CEO characteristics translate into higher organisational performance are by and large unclear, constituting a second ‘black box’ (Carpenter, Geletkanycz, & Sanders, 2004). Our research tackles both black boxes, it proposes leader personal values (e.g. Schwartz, 2009) as a significant influence on certain strategic and human resource management practices that in turn influence organisational performance. Notably, past research into the psychological traits of entrepreneurs has provided evidence with regard to the first black box, i.e. personality traits (but not values)<sup>1</sup> that are relevant for firm success. We turn to this research stream and its theoretical background next.

Theory in psychology differentiates ‘strong’ vs. ‘weak’ situations (Mischel, 1977). In strong situations, pressures, demands and constraints (such as those imposed by the built environment, product design features, or strong social norms) exist that reduce the variance of observed behaviour, i.e. most people behave in the same way in strong situations. By contrast, ‘weak’ situations are characterized by the absence of situational constraints, i.e. individuals are free to behave as they choose. It is in weak situations in which individuals have decision making autonomy that personal characteristics such as values particularly influence decision-making and actions (Mischel, 1977). Being a (social) entrepreneur is such a ‘weak’ situation as entrepreneurs have considerable decision making authority over their work including which management practices to adopt and the strategic orientation of their organization (Rauch & Frese, 2007; Stephan & Roesler, 2010). Statistical reviews of past research establish that entrepreneurs’ personality traits, i.e. typical patterns of behaviour, emotions and cognitions, are systematically related to firm performance.

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<sup>1</sup> Past research demonstrates that, values predict choices and decision making better than traits (e.g., Roccas, Sagiv, Schwartz, & Knafo, 2002; Schwartz, Caprara, & Vecchione, 2010) and should therefore be more relevant in guiding the CEO’s choice of human resource and strategic management practices.

The two most comprehensive reviews are Rauch and Frese (2007) and Zhao, Seibert, and Lumpkin (2009), which establish that a wide range of personality traits are related to organisational performance, with the strongest associations observed for achievement orientation, innovativeness, personal initiative, self-efficacy, conscientiousness and openness to experience. As is the case for studies adopting the upper echelons perspective, studies that investigate the mechanism of how CEO or entrepreneur personal characteristics translate into higher firm performance remain scarce. The few exceptions are Peterson, Smith, Martorana, and Owens (2003), who conducted an observational study of 17 CEOs and their management team suggesting that CEOs impact firm performance through their influence on top management team dynamics. Chatterjee and Hambrick (2007) study 111 CEOs in the IT industry suggesting that CEO narcissism as measured by several proxy indicators is related to strategic dynamism, grandiosity, acquisitions, and to volatile firm performance. Finally, Nadkarni and Herrmann (2010) study 195 CEOs in the Indian business process outsourcing industry and find their (Big 5) personality traits related to strategic flexibility and firm performance. Thus past studies are scarce, have relatively low sample sizes, and typically focus on one industry and country only – thereby limiting the generalizability of the findings. In addition, all studies focus on financial firm performance.

We wish to broaden the scope of inquiry by drawing on a larger sample of organisations and their CEOs, across various industries and five countries. Furthermore, we are investigating indicators of organisational performance beyond financial performance, namely performance in terms of social impact and introducing innovations. In doing so we acknowledge that the definition of firm or organisational performance needs to go beyond merely considering financial returns (Porter & Kramer, 2011). In addition, we suggest to focus on CEO personal values in place of traits. We make this choice as we are interested in core decisions that CEOs make with regard to their organisations' strategic and human resource management. Past

research demonstrates that, while values and traits both capture stable aspects of a person's character, values predict choices and decision making better than traits (e.g., Roccas, Sagiv, Schwartz, & Knafo, 2002; Schwartz, Caprara, & Vecchione, 2010). We elaborate on the concept of values next.

## **2.2. Values, Management Choices and Behavior**

Values reflect basic aspects of a person's character and can be thought of as desirable, very general goals that people pursue in life. From the age of 30 on values are stable within individuals, but they vary across individuals (Bardi, Lee, Hofmann-Towfigh, & Soutar, 2009; Schwartz, 1994). Values capture what people find important, where they focus their attention and build knowledge, the criteria they use to make decisions and why people engage in certain actions, such as prosocial behaviour, but not others (e.g., Maio, Pakizeh, Cheung, & Rees, 2009; Schwartz, 2010; Schwartz, Sagiv, & Boehnke, 2000). Values are more basic and enduring than heuristics and attitudes, but can be seen as building blocks for heuristics (Zak, 2008) and are underlying attitudes (Hitlin & Piliavin, 2004).

The theory of basic human values developed by Shalom Schwartz over the past 30 years (Schwartz, 1992; 2005; Schwartz & Bilsky, 1990) demonstrates that a core set of 10 values reflecting distinct but related motivational goals (see figure 1) and their relations with one another are similarly recognized and understood in over 70 cultures using population representative samples, samples of teachers and students. These 10 values reflect adaptations to 'tasks' all humans have to deal with, particularly biological needs and the need for coordinated social interaction and the survival and welfare needs of groups (Schwartz, 2005). Consequently, people's value hierarchies, i.e. how they prioritize different values, have been found to be more similar across cultures than different (Bardi & Schwartz, 2001). The relations among the 10 basic values reflect their motivational structure, i.e. some values are in conflict

with another (and therefore are opposing each other in the values circle, figure 1), others are congruent (and therefore are adjacent to one another in the values circle). This implies that focussing on one value alone will not appropriately reflect the tensions that people consider when deriving at decisions (Maio et al., 2009; Schwartz, 2005). Hence the current paper also considers the full motivational value structure.

--- insert Figure 1 and Table 1 about here ---

The individual values types are named after the motivational goals they represent (see figure 1), for instance, self-direction motivates seeking autonomy, seeking out situations and jobs in which one has decision authority and enjoying exploration. The full description of the 10 value types is given in Table 1. The 10 value types are organized in two higher-order dimensions, which broadly summarize the systematic pattern of conflict and compatibilities among them (see figure 1). The dimension of *openness to change vs. conservation* reflects the conflict between valuing one's own independent thought and action as well as change (self-direction and stimulation) versus the “submissive self-restriction, preservation of traditional practices, and protection of stability (security, conformity, and tradition)” (Schwartz, 2005). The second dimension captures the conflict between, on the one hand, accepting close and distant others as equals and concern for their welfare, i.e. ‘*self-transcendence*’ values (universalism and benevolence), and on the other hand, an emphasis on dominating others and demonstrating skill and success relative to others i.e. ‘*self-enhancement*’ (power and achievement)<sup>2</sup>.

Values have been shown to relate to a range of behaviours and decision-making from creativity (Dollinger, Burke, & Gump, 2007; Kasof, Chen, Himsel, & Greenberger, 2007; Stephan, Huysentruyt, & Van Looy, 2010) and risk-taking behaviour (Robin Goodwin et al., 2008) to prosocial and political voting behaviour (Bardi & Schwartz, 2003; Bowles, 2008; Maio, Pakizeh, Cheung, & Rees, 2009; Schwartz, Caprara, & Vecchione, 2010; Schwartz, 2010).

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<sup>2</sup> Hedonism shares elements of openness to change and self-enhancement

Notably, the original predictions of the upper echelon theory saw CEO values as a main source of varying firm performance as CEOs would pursue different firm strategies in line with their values (Hambrick & Mason, 1984). Nevertheless as of to date, we could only find two studies that explore CEO values. The first study relates CEO values of self-direction, benevolence and security to three types of organisational cultures and firm performance (sales growth, efficiency and employee satisfaction) drawing on an industry-heterogenic sample of 26 Israeli firms (Berson, Oreg, & Dvir, 2008). The second study provides evidence that CEO personal values influence strategic choices. Using a sample of 150 Dutch firms from various industries, this research shows systematic associations of CEO entrepreneur values with the criteria (e.g., profitability, innovation, giving back to society) that these CEOs use to assess their firm's success (Gorgievski, Ascalon, & Stephan, 2011). Again, generalizations based on these studies are relatively difficult due to their focus on a specific country and small sample sizes.

To our knowledge, no research to date has explicitly theorized and tested whether and which CEO values would lead to an increased use of participatory human resources management practices and an entrepreneurial focus in the strategic management of the organisation. At the same time, accumulating research finds that both empowering human resource management practices including participatory leadership and a strategic focus on entrepreneurship are critical management practices for achieving high firm-performance. Notably, research to date has focussed on for-profit firms, thus we have no empirical evidence that the same management practices are relevant for social enterprise performance. However, first research into the value profiles of CEO social entrepreneurs suggests that adopting participatory leadership and entrepreneurial strategic management practices would fit particularly well with their personal value profiles.

### **2.3. CEO values, Participatory Management Practices and Organisational Performance**

Emerging research into the value profiles of social enterprise CEOs supports the notion that these CEOs emphasize self-transcendence values particularly universalism and openness to change values more strongly, and self-enhancement values particularly power and conservation values less strongly relative to representative samples of the adult population, employees and commercial entrepreneurs (Stephan, Huysentruyt, & Van Looy, 2010).

Participatory leadership or management practices involve employees in decision making, i.e. giving them a say regarding their work. Managers and organisational leaders are commonly regarded to be one of the most important source of employee participation, through their direct influence on employees, e.g. through involving employees in business decisions and goal setting (e.g. Huang, Iun, Liu, & Gong, 2010; Koenig, Steinmetz, Frese, Rauch, & Wang, 2007), but also indirectly through structuring employees work (Jermier & Kerr, 1997; Stephan, Dej, & Gorgievski, 2011).

We argue that participatory management practices are particularly compatible with high self-transcendence values and low self-enhancement values and are in fact the basis, or origin, for the adoption of participatory management practices in social enterprises. Self-transcendence values emphasize that others are equal to oneself and that one should care about them. One way CEOs can demonstrate that they treat their employees as equals and care about them is by engaging in participatory leadership, i.e. listen to their employees' opinion and giving them a say. By contrast, CEOs emphasizing self-enhancement values are more likely to engage in non-participative management practices that support their superior position relative to their employees. Some related evidence for our proposition comes from negotiation research which finds prosocial, self-transcendence values to be related to an integrative and collaborative style

in interacting and negotiating with others (e.g. Bersma & De Dreu, 1999; Schwartz, 2005).

Thus,

*Hypothesis 1: CEO self-transcendence values are positively and self-enhancement values are negatively related to participatory management practices in social enterprises.*

Empirical evidence on how participatory management practices may influence organizational performance in social enterprises is limited or non-existent. However, participatory management practices should not have a different effect on organizational performance in social vs. commercial businesses. In fact, the underlying mechanisms through which participation leads to high organizational performance - namely by empowering employees, increasing their intrinsic motivation and thereby effort provision and creativity (Huang, Iun, Liu, & Gong, 2010; Zhang & Bartol, 2010) – is likely to be the same in social enterprises and commercial businesses. Based on these arguments and existing evidence regarding the positive effect of participatory management on organizational performance including profitability, sales growth and innovation in commercial firms (e.g., Batt, 2002; Birdi et al., 2008), we hypothesize:

*Hypothesis 2: Participatory management practices are positively related to organizational performance in social enterprises.*

#### **2.4. CEO values, strategic entrepreneurial orientation and organisational performance**

Entrepreneurial orientation, or short EO, is one of the most intensely researched concepts in entrepreneurship research. EO also receives considerable attention in strategic management as it suggests that large corporations may outperform smaller, entrepreneurial firms – who are often the cause of disruptive innovations – by adopting a strategic focus on entrepreneurship. More in particular, EO describes a firm's strategic posture, i.e. it's striving for entrepreneurship

and its propensity to act entrepreneurially. ‘Entrepreneurial’ refers to being proactive, risk-taking and innovative (Covin & Slevin, 1989; Lumpkin & Dess, 1996; Miller, 1983), i.e. being the first mover opening new markets by taking bold actions and continuously developing new processes, products and services (Covin & Slevin 1989; Miller 1983). In contrast, a “... non-entrepreneurial firm is one that innovates very little, is highly risk averse, and imitates the moves of competitors instead of leading the way.” (Miller 1983, p:771). We argue that CEOs emphasizing openness to change values (and de-emphasizing conservation) values are particularly likely to adopt an entrepreneurial orientation in the strategic management of their organisation.

Openness to change values focus on exploring, novelty, challenge, independence and autonomous decision making, seem well aligned with the three facets of entrepreneurial orientation – proactivity, innovativeness and risk-taking. Conversely, a CEO emphasizing conservation values, i.e. valuing stability, maintaining the status quo, tradition and conformity, seems less like to push his/her organisation to adopt an entrepreneurial orientation. Supportive of these arguments is past research, albeit on the individual level, which shows that emphasizing openness to change (vs. conservation) is related to generating creative and novel ideas (e.g., Kasof et al., 2007; Stephan et al., 2010) and to engaging in risky behaviours (Robin Goodwin et al., 2008). Taken together, we state:

*Hypothesis 3: CEO openness to change values are positively and conservation values are negatively related to entrepreneurial strategic management practices in social enterprises.*

Empirical evidence on how an entrepreneurial strategic orientation may influence organizational performance in social enterprises is limited or non-existent. However, entrepreneurial orientation may have a similar positive effect on organizational performance in social enterprises compared with commercial businesses. Social enterprises are characterized

by their adoption of business- and market-based methods to create social value (e.g., Mair & Marti, 2006) and are in this respect similar to commercial firms. Extensive past research on entrepreneurial orientation demonstrates its positive impact on firm performance. This research shows that businesses willing to take risks, being proactive and innovative show better financial performance (Wiklund, 1999; Zahra & Covin, 1995, for a statistical summary of this research see Rauch et al., 2009). Thus,

*Hypothesis 4: Strategic entrepreneurial orientation is positively related to organizational performance in social enterprises.*

### **3. Data**

#### **3.1. Sample**

In winter 2009/2010, we initiated a detailed, systematic panel database on over 523 social enterprises across Hungary, Romania, Spain, Sweden and the UK. We combined a structured phone interview with an internet survey to obtain information about the social enterprises and their CEOs. CEOs and social enterprises respectively were operationally defined as those leading an organization with a social mission (social criterion), which generated a minimum of 5% of its revenues through trading in the market (selling products or services) (entrepreneurial criterion) and employing at least one full-time equivalent (excluding self-employed and volunteer-only organisations). Both non-profits that are actively trading in the market and are self-generating revenue as well as for-profit enterprises with a social mission are part of the sample - in line with the dominant view that no one legal form solely and adequately represents social enterprises (Austin, Stevenson & Wei-Skillern, 2006). Social mission characteristics were interviewer-rated, rather than entrepreneur-reported, based on entrepreneur reports of their enterprises mission. For more detail see [www.selusi.eu](http://www.selusi.eu).

In contacting our sample we were faced with two challenges, first no exhaustive list or registry of social enterprises exists in any European country to date, and second, relative to a country's adult population social entrepreneurs are rare. For instance, the Global Entrepreneurship Monitor – an annual population-representative survey focussed on entrepreneurship – identified 0.3 to 4.3% of the adult population as social entrepreneurs broadly defined across 49 countries (Justo, Lepoutre & Terjesen, 2010). Given these constraints we used Respondent Driven Sampling (RDS) (Heckathorn, 1997, 2002; Salganik & Heckathorn, 2004) to identify our sample. RDS combines “snowball” or “network-based” sampling (respondents refer those they know, who in turn refer those they know and so on) with a mathematical model of the recruitment process which weights the sample to compensate for the fact that the sample was collected in a non-random way.<sup>3</sup> This approach enables drawing statistically representative samples of previously unreachable groups, that is, groups that are small relative to the general population, and for which no exhaustive list of population members is available. RDS has been applied to various hard-to-reach populations such as =drug injectors, prostitutes, and gay men, street youth, homeless, as well as jazz musicians and other artists. Studies show that RDS leads to representative samples equivalent to large poll surveys (Heckathorn, 2002). In following the RDS methodology to extract nationally representative samples we first identified a set of so-called, *seed* social entrepreneurs, chosen to stratify for industry sector, geography, age of organisation, company size, source of information from which the name of the seed enterprise was obtained, etc.. Each social entrepreneur we interviewed was then asked to nominate three peers, whom we subsequently contacted and asked for three referrals. The peer recruitment represents the network-based sampling approach. Heckathorn (1997, 2002) shows that if referral chains are long enough (4-5 waves), the characteristics of the seeds have no significant impact on ultimate sample composition. In sum,

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<sup>3</sup>This model is based on a synthesis and extension of two areas of mathematics, Markov chain theory and biased network theory, which were not a part of the standard tool kit of mathematical sampling theory.

the RDS approach enabled us to recruit nationally representative samples of social enterprises in the five analysed countries.

***Characteristics of Social Enterprise CEOs.*** Social entrepreneurs were predominantly male (43% female), 87% had university education (bachelor and higher). The mean age of social entrepreneurs in the sample was 46.1 years (*Mdn* 45.0, *SD* 10.00, Range 21-77 years), and their mean tenure as director of their organization was 5.7 years (*Mdn* 1.0, *SD* 8.64, Range 0-62 years). In terms of nationality, entrepreneurs were predominantly Spanish and British (25% and 23%, respectively), Hungarian (19%), Romanian (12%) and Swedish (12%). Other nationalities were Albanian, American, Austrian, Burundian, Canadian, Danish, Dutch, French, German, Greek, Icelandic, Indian, Iranian, Irish, Israeli, Italian, Mexican, Slovakian, South African, Swiss, and Tanzanian. 51% were founders of their organization and 51% were also the owner of their organization.<sup>4</sup>

***Social enterprise characteristics.*** Social enterprises were on average 13.5 years old (*Mdn* 11.0, *SD* 11.0 years, Range 0 – 90 years), and had an average workforce of 96.1 (*Mdn* 11.0, *SD* 406.45, Range 1-5000) full-time equivalents (FTE, not counting owners or volunteers) - although 46% employed less than 10 FTE. They worked with an average of 35 volunteers (*Mdn* 5.0, *SD* 247.22, Range 0-5000). Social enterprises financed their activities primarily through self-generated revenues derived mainly from the sales of products or services (mean of 56% self-generated revenue, *Mdn* 60.0, *SD* 34.27, Range 5-100). The industry sectors in which social enterprises were active with their main three activities varied widely (for a breakdown see Table MMM).

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<sup>4</sup> For an overview, see Table WWW. The sample size differs across variables due to missing values.

### 3.2. Measures

*Value measure.* We captured social entrepreneurs personal values with the Portrait Value Questionnaire (PVQ). We used the PVQ-21, which is a short version of the original 40 item form (Schwartz, Melech, Lehmann, Burgess, & Harris, 2001) specifically developed for use in large scale surveys (Schwartz, 2003). It has been widely applied and validated in past research (e.g. Davidov, Schmidt, & Schwartz, 2008; Schwartz, 2003, 2009; Schwartz & Rubel, 2005). The PVQ presents respondents with gender-matched descriptions of a person in terms of his/her goals and aspirations, e.g. “Thinking up new ideas and being creative is important to him. He likes to do things in his own original way. “(for a male respondent). Respondents indicate on a 6-point scale (from not like me at all to very much like me) how much the described person is like them.

Social entrepreneurs completed the PVQ as part of a supplementary online questionnaire to an interview about their management practices. The PVQ-21 can exhibit low measurement reliability due to the fact that it measures each value (except for universalism) with only two items only<sup>5</sup>. To ensure high reliability nevertheless, we 1) used the full set of items from the PVQ-40 for values which are of particular interest to the present research (i.e. six items for universalism, three for benevolence, three for self-direction, three for achievement and three items for power) and 2) relied on the four higher-order values in the main analyses (Knoppen & Saris, 2009). Cronbach Alpha reliabilities are all satisfactory with .64 for Openness to Change (combining self-direction and stimulation), .68 for Conservation (combining security, tradition and conformity), .79 Self-transcendence (combining universalism and benevolence), and .82 for Self-Enhancement (combining power and achievement).

*Participatory management practices.* Although many measures of participation exist (typically from the perspective of employees), very few are suitable to capture the CEO’s stance

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<sup>5</sup>Schwartz and Rubel-Lifschitz, 2009 document the validity of the PVQ-21 despite its low reliability.

towards participation. We used a measure that has been directly validated using samples of business owners (Koenig, 2008; Koenig, Steinmetz, Frese, Rauch, & Wang, 2007). It measure the extent to which the CEO encourages participation in decision making, giving employees a say, and equal distribution of decision power across the organization vs. pushes through decisions without regard to his/her employees and encourages unequal, hierarchical distribution of 'power'. It is a scenario-based measure consisting of five items that reflect decisions and typical behavior of the CEO regarding employee involvement vs. use of the CEO's position power to implement decisions without regard to employees. Example items are "Imagine that you have to make a decision that has important consequences for your organization. What do you do? You make the decision after having consulted your employees. vs. You make the decision without consulting your employees before.", "Imagine that one of your employees criticizes the way you run your organization. What do you do? You ask your employee to make suggestions for improvement. vs. you tell your employee to stop his criticism." All items are answered on a 6-point scale. Koenig (2008) and Koenig et al. (2007) provide evidence for the psychometric quality of the scale (composite reliability, Cronbach's Alpha and six month test-retest reliability) as well as for its convergent and discriminant validity with respect to related constructs. We conducted a principal component factor analyses, which corroborated the single-factor structure of the measure and Cronbach's Alpha was good at .77.

***Entrepreneurial orientation.*** The most frequently used measure of entrepreneurial orientation (Rauch, Wiklund, Lumpkin, & Frese, 2009) is Covin and Slevin's (1989) entrepreneurial orientation scale or adapted versions of it. In line with the original measure and after conducting principal component factor analyses and reliability analyses we use the following items to measure the three facets of entrepreneurial orientation (all on a 7-point scale): *Proactivity* "In dealing with competition, my organization typically responds to action which competitors initiate vs. In dealing with competition, my organization typically initiates

action which competitors then respond to.”, “In dealing with competition, my organization typically seeks to avoid competitive clashes, preferring a “live-and-let-live” posture vs. typically adopts a very competitive “undo-the-competitors” posture.”, and “My organization has a strong tendency to “follow the leader” in introducing new products, services or ideas vs. to be ahead of other competitors in introducing novel ideas or practices.”

*Risk-Taking* “In general, my organization believes that owing to the nature of the environment it is best to explore it gradually via careful, incremental behavior vs. bold, wide-ranging acts necessary to achieve the organization’s objectives.”, “In general, my organization has a strong proclivity for low risk projects (with normal and certain rates of return)vs. for high risk projects (with chances of very high return)”, and “When confronted with decision-making situations involving uncertainty, my organization typically adopts a cautious, “wait-and-see” posture in order to minimize the probability of making costly decisions vs. a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities.”

*Innovativeness* “In general, my organisation favours a strong emphasis on the marketing of tried and true products and services vs.an emphasis on R & D, and innovations.”, “How many new lines of products or services has your organization marketed in the past 12 months? No new lines of products or services, vs. very many new lines of products or services vs. very many new lines of products and services.” and “Changes in product or service lines have been mostly of a minor nature vs. usually been quite dramatic.” Cronbach’s Alpha reliabilities were .63 for the Proactivity scale, .64 for Risk-Taking, .61 for Innovativeness and .63 for the overall Entrepreneurial Orientation scale. Notably, two items capturing competitive aggressiveness did not correlate with the other three aspects of Entrepreneurial Orientation and also unlike the other three facet scales did not load onto a common second-order Entrepreneurial Orientation factor. These two items were excluded from the analyses. Detailed results are available from the authors.

***Organizational performance.*** We assessed organizational performance with three criteria 1) social performance, i.e. the organization's success in generating social impact, 2) financial performance, and 3) innovation.

Since no standardized measures of *social performance* are available, we obtained the CEOs' rating of social performance relative to other organizations in the field and overall. We adopted items that are frequently used in entrepreneurship and small business research to measure the firm performance. Specifically, we obtained an overall social performance rating and a rating relative to competitors in the field both on a 5-point scale (Chandler & Hanks, 1993; Venkatraman & Ramanujam, 1986; Wall et al., 2004). The items were "How would you rate your organization in terms of social performance in comparison with other similar organizations in your field?" 1 - I belong to the less successful half, 2 - Average successful, 3 - I belong to the more successful half, 4 - I belong to the upper 20% of successful organizations, 5 - I belong to the 5% most successful organizations<sup>6</sup> and "In general, how successful is your organization in achieving social impact?" 1 - not successful, 3- average successful, and 5 - very successful.

*Financial performance* was measured as growth (over the past year) in revenues and profits. For non-profit organizations in our sample this measure refers to surpluses generated beyond expenses incurred instead of profits.

*Innovation* was measured using standardized questions from the European Union Community Innovation Surveys (OECD, 2005). We calculated one overall dummy-coded measure of innovation. An organization was counted as 'innovating' when it answered at least one of the following a, b, or c with 'yes': "Have you over the past 12 months introduced any new or significantly improved a) products/ b) services/ c) processes?" 89.0% of social enterprises were 'innovating' in line with this definition.

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<sup>6</sup> The answering options are skewed to take into account the fact that the majority of CEOs rate their firms as performing better than their competitors.

We also included a follow-up question in which respondents specified whether the product/service/process innovation they had introduced was new to their organization or new to their market. Again in line with the Community Innovation Survey methodology, we coded new to the market innovations as radical innovations and created a second dummy variable '*radical innovator*'. A coding of '1' reflects that the organization had introduced at least one product, service or process that was new to the market, which was the case for 61% of the organizations in our sample.

***Control variables.*** Gender, age and to a lesser extent education differences in values are well known (e.g. Inglehart, 2006; Schwartz & Rubel, 2005). Hence these variables are included as covariates in the analyses. Furthermore, we include various characteristics of the social enterprises which were collected as part of the structured interview with the CEO. Specifically, we include the organization's age, size (number of employees as full-time equivalents), whether the CEO was the founder (dummy coded), the number of co-founders (log transformed), the owner (dummy coded), the number of co-owners (log transformed) and whether s/he has at least equal decision making authority on a daily bases compared to the other owners (dummy coded). CEOs are likely to influence management practices and organizational performance more strongly, the younger and smaller the social enterprises, when the CEO also founded, owns, and has a considerable say in how the social enterprise is run. Finally, we include four dummy variables to control for country-specific effects and the CEOs' perception of the munificence of the firm environment. The latter is in response to research suggesting that the entrepreneur's values are likely a stronger influence on management practices and organizational performance when the environment is uncertain and competitive. We used four items to measure environmental uncertainty (see Covin & Slevin, 1989). The Items read "The external environment for our organization is very risky, a false step can be our undoing" "... is very stressful, exacting, and hostile; [it is] hard to keep afloat.", "...poses a great deal of threat

to the survival of our organization.” and “is characterized by a great deal of uncertainty about how our target population really values our products and/or service”. Cronbach’s Alpha reliability was .88.

### 3.3 Analysis Strategy: Instrumental Variables (IV) Approach

Consider a simple ordinary least squares (OLS) regression of an organisational outcome ( $OO$ ) measure as a function of management practices ( $MP$ ) and a set of other control variables ( $X$ ):

$$OO_i = \alpha_0 + \alpha_1 MP_i + \gamma_j X_{ji} + u_i \quad (1)$$

where  $u_i$  is an error term.

$$OO_i = \alpha_0 + \alpha_1 MP_i + \gamma_j X_{ji} + unobservables_i + v_i$$

$$E[MP_i u_i] = E[MP_i unobservables_i] \neq 0$$

Estimation of equation (1) by ordinary least squares (OLS) will yield an unbiased estimate of  $\alpha_1$  only if  $MP_i$  is exogenous. If unobserved characteristics of CEOs drive organisational outcomes, but also management practices, then least squares estimates of  $\alpha_1$  will be biased. This is a key issue to the extent that unobserved characteristics affecting management practices decisions may be correlated with unobservables influencing the organisational outcomes of the company. Thus if management practices can be instrumented with a variable - like values - that is not subject to unobservable influences such as reversed causality (e.g., organisational performance might lead to different management practices) – then a causal interpretation of the effect of management practices on organisational performance is warranted.

***CEO values as instrument (predictor) of management practices.*** The instrumental variables estimator is a consistent estimator for  $\alpha_1$  provided the instruments are valid. This requires that instruments are: *Relevant* (instrument must be correlated with the endogenous explanatory variables variable which they are predicting, in our case, management practices) and *Exogenous* (not correlated with unobservables in the error term, that is, the instrument

cannot suffer from the same problem as the original predicting variable). In other words, an instrument is a variable that does not itself belong in the explanatory equation and is correlated with the endogenous explanatory variables, conditional on the other covariates. We choose values as instruments – apart from the motivation in the introduction – values make good instruments as they have been shown to be stable from early adulthood on. Thus, there is no reason to assume that they would be influenced by organizational performance. In addition we developed theoretical reasons to expect a systematic relationship of values with management practices. Figure 2 lends first support to these associations and shows the correlations of values with participatory management practices and entrepreneurial orientation.

--- insert figure 2 about here ---

Since

$$E[MP_i u_i] = E[MP_i \text{unobservables}_i] \neq \mathbf{0},$$

CEO values form a vector of instruments  $z_i$  such that:

$$E[z_i u_i] = [SE \text{Values}_{ti} u_i] = \mathbf{0}$$

First-stage (reduced form) regression looks as follows:

$$\widehat{MP}_i = \delta_0 + \delta_t SE \text{Values}_{ti} + \gamma_j X_{ji}$$

OLS applied on the second-stage regression is the IV estimator:

$$OO_i = \beta_0 + \beta_1 \widehat{MP}_i + \varphi_j X_{ji} + \varpi_i \quad (2)$$

## 4. Results

We use CEO values as instruments for managerial practices, i.e. participatory management practices (also in the following referred to as HR management practices) and strategic management practices such as proactivity, risk-taking and innovativeness<sup>7</sup>. In an IV setup, we estimate the effect of managerial practices on different measures of organisation's success (self-

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<sup>7</sup> We use these three facts of the strategic entrepreneurial orientation of an organisation rather than an overall score to be able to account for potentially artificially inflated associations of EO innovativeness with innovation as an organisational performance measure.

perceived success in achieving social impact, recent growth in revenues and profits, and measures of innovation and radical innovation). The set of explanatory variables included in all specifications are variables at the level of the CEO (gender, age, education, being founder, being owner) and at the level of an organisation (FTEs, organisation's age, number of founders, number of owners, decision-making authority as owner), as well as four country dummies.

--- insert Table 4 about here ---

The statistical validity of the CEOs' values as instruments for managerial practices is provided in the first-stage regression estimation results (Table 4). More specifically, Table 4 shows the first-stage results where we regressed four measures of management practices (participation, proactivity, risk-taking and innovativeness) on four dimensions of CEO values, controlling for a set of explanatory variables (see notes to the Table). Each column (1) – (4) represents results from a different least squares regression. The F-test at a bottom of each column provides statistical evidence on validity of the instruments. To recap the results, controlling for a set of explanatory variables, *openness to change* is positively significantly related to three measures of management practices (proactivity, risk-taking and innovativeness), while it is not related to participation. *Conservation values* are negatively significantly related to all four measures of management practices (participation, proactivity, risk-taking and innovativeness), although the negative association with proactivity is only significant at the 1% level. *Self-transcendence values* are positively significantly related to three measures of management practices (participation, proactivity and innovativeness), but not risk-taking. *Self-enhancement values* are significantly negatively related to participation, while they are not significantly related to entrepreneurial orientation practices (risk-taking, proactivity and innovation).

--- insert Table 5 about here ---

Table 5 presents the second step of the instrumental variables estimation results, where we used the four CEO value orientations (openness to change, conservation, self-transcendence and self-enhancement) as instruments for managerial practices (participation, proactivity, risk-taking and innovativeness), controlling for a set of explanatory variables (see notes to the Table). Each cell in the table presents results of an IV regression. In sum, Table 5 shows that values are important predictor of management practices and organisational success. For example: CEOs who are self-transcendent also encourage participation of employees, which positively affects turnover and radical innovation. CEOs who are self-transcendent and open to change are also proactive, which positively affects social performance, turnover and innovation, and CEOs who are open to change also prefer risk-taking which positively affects social performance and innovation.

## **5. Discussion**

This paper investigated whether CEOs' values can explain variation in strategic and human resource management practices across organisations and ultimately also performance differences across organisations. We find evidence supporting all our hypotheses. Participatory leadership was positively related to prosocial, self-transcendence values and negatively to self-enhancement values; while CEOs openness to change (and conservation) values were positively (negatively) related to the organisation's strategic orientation towards entrepreneurship (proactiveness, risk-taking and innovativeness). Using an IV regression approach we found, furthermore, evidence that values influence management practices that are highly consequential for the organisation's success - in terms of all social, financial and innovation performance.

The pattern of associations of values and management practices with the different measures of organisational performance is interesting. Notably the overall pattern of results suggests that participatory leadership and entrepreneurial orientation are effective management

practices in social enterprises – they lead to higher social, financial and innovative performance. This finding extends past research in that it demonstrates that participatory leadership and a strategic entrepreneurial orientation are also effective management practices in social enterprises (not ‘just’ in commercial businesses) and have positive effects not only on financial performance but also on the organisations’ success in creating social impact and innovations. We now turn to discuss nuances in this overall pattern. Participatory leadership and all three facets of entrepreneurial orientation are positively associated with the organisation’s social performance – albeit participatory leadership is significantly associated with one not both social performance measures. Similarly, participatory leadership, proactivity and innovativeness are positively associated with revenue and profit growth. Contrary to past research in commercial businesses (e.g. Rauch et al., 2009), risk-taking was not associated with these two measures of financial performance. We can only speculate why this may be the case. Social enterprises are often seen as inherently risky business – a form of businesses not many people and institutions are familiar with and that challenge the way both commercial firms and non-profits ‘do business’, respectively not social and not entrepreneurial enough. It may thus be that adopting a strategic stance towards high risk-taking is not paying off financially (in terms of creating growing revenues and profits).

Our findings with regard to the organisations’ innovation performance are surprising. A strategic entrepreneurial orientation should result in high innovation performance, yet we fail to find such an association for the radical innovation indicator. In other words, entrepreneurial orientation increased the organisation’s propensity to introduce new or significantly improved products, services and/or processes to the organisation – it does not make the organisation more likely to introduce radical innovation that are new to the market. Participatory leadership, on the other hand, is clearly associated with radical innovation but not with the broader and more generic measure of innovation. This is a novel finding, since past research into participatory

leadership and entrepreneurial orientation has usually not differentiated between incremental and radical innovation. Our findings suggest that both are important, but for different types of innovations.

Interestingly participatory leadership is driven by high self-transcendence and low self-enhancement values – rather than by high openness to change and low conservation values which past research found to be associated with creativity. This makes sense in the context of our sample, social enterprises are often argued to be radical innovators that create new markets due to their social drive (Elkington & Hartigan, 2008) – but apart from case studies, we found no empirical evidence supporting this assumption. It is up to future research to establish whether participatory leadership is also in commercial businesses associated with radical innovation. We would expect this. For instance, Jeppesen and Lakhani (2010) present evidence that marginal actors are highly effective and creative in problem-solving and one could suspect that participatory leadership works to engage ‘marginal’ employees, i.e. those that would typically not be asked to contribute to the solution of a problem as they are not experts in the problem area.

Taken together our research contributes new insights to upper echelon theory in strategic management by focussing attention on values as decision-making guides and demonstrating their relevance for management practices and organisational performance. It also extends research in entrepreneurship on entrepreneurial orientation and in organisational behaviour on participatory management practices in demonstrating that their adoption is guided by CEO’s values and that they are relevant to a broader range of organisational performance measures as established until now – namely they positively influence social, financial and innovation performance. Finally and importantly, our research is one of the first – if not the first – to build evidence on effective management practices in social enterprises and their origin. Although more research is needed, the practical implication of our findings seems to be to encourage

social enterprises to adopt participatory leadership and a strategic entrepreneurial orientation – both because of the performance effects of these practices and because they ‘fit’ the value profile of social enterprise CEOs.

Some limitations of our research should be kept in mind. One concern might be common method bias, as all data were obtained from the same respondents (the social enterprise CEO). However against such an interpretation speaks that we collected data through different media (online and phone survey) typically apart in time (between 1 day and more than 1 week). Furthermore, if common method bias was present we should find automatically inflated associations – however we also find zero-correlations and non-significant associations (e.g. Table 4, or Figure 2). Finally, we find associations that are in line with our theoretical predictions while we mostly find non-significant associations for relationships that we did not predict. A second concern may be the fact that we collected data on values and management practices at roughly the same point in time. However, extensive research shows that values are highly stable and that value change in fact takes place through intergenerational replacement (Inglehart, 2008; Schwartz, 2005) while intra-individual value stability is high (e.g., Bardi et al., 2009; Goodwin, Verkasalo, & Bezmenova, 2008).

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**TABLE 1****Definition of Value Types (Schwartz, 1992, 1994)**

Value type	Description	Second-order value type
Universalism	Understanding, appreciation, tolerance and protection for the welfare of all people and for nature.	Self-transcendence
Benevolence	Preservation and enhancement of the welfare of people with whom one is in frequent personal contact.	Self-transcendence
Tradition	Respect, commitment and acceptance of the customs and ideas that traditional culture or religion provide the self.	Conservation
Conformity	Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms.	Conservation
Security	Safety, harmony and stability of society, of relationships, and of self.	Conservation
Power	Social status and prestige, control or dominance over people and resources (incl. money).	Self-enhancement
Achievement	Personal success through demonstrating competence according to social standards.	Self-enhancement
Hedonism	Pleasure and sensuous gratification for oneself.	Self-enhancement and Openness to Change
Stimulation	Excitement, novelty, and challenge in life.	Openness to Change
Self-direction	Independent thought and action, choosing, creating, exploring.	Openness to Change

**TABLE 2****Descriptive Sample Statistics**

Variable	N	Mean	Std. Dev.	Min	Max
<b>Characteristics of Social Enterprise CEOs</b>					
CEO education	513	3.368	.790	1	5
CEO gender	518	.427	.495	0	1
CEO age	520	46.123	9.982	21	77
Tenure	506	5.729	8.638	0	62
<b>Social Enterprise Characteristics</b>					
Organisation's age	518	13.465	11.005	0	90
# Full-time employees	519	96.157	406.446	1	5000
# Volunteers	518	34.902	247.222	0	5000
Sales of products/services	506	55.633	34.265	5	100

**TABLE 3****Industry Sector First Three Main Social Enterprise Activities**

Industry Sector	Activity 1 (%)	Activity 2 (%)	Activity 3 (%)
Agriculture, Hunting And Forestry; Fishing	1.91	1.34	0.76
Manufacturing	4.78	3.06	3.63
Electricity, Gas And Water Supply	2.10	1.34	1.15
Construction	0.19	0.57	0
Wholesale And Retail Trade; Repair Of Motor Vehicles, Motorcycles And Personal And Household Goods	7.46	2.87	4.59
Hotels And Restaurants	3.06	2.68	1.53
Transport, Storage	0.57	1.15	0
Communication	0.96	0	0.57
Financial Intermediation	3.44	1.72	1.53
Real Estate	2.87	1.72	1.72
Renting And Business Activities	15.11	16.06	13.96
Public Administration And Defense; Compulsory Social Security	0.57	0	0.19
Education	16.63	15.11	8.41
Health And Social Work	14.15	9.75	7.46
Other Community, Social And Personal Service Activities	15.49	14.34	10.71
Other Service Activities	4.40	5.93	3.44
Private Households With Employed Persons	0.57	0.19	0.19
Extra-Territorial Organizations And Bodies	0.57	0.57	0.96
Other or not applicable	5.16	21.61	39.20
Total	100.00	100.00	100.00

**TABLE 4****First Stage Results: Effect of Values on Management Practices**

<b>Management practices →</b>	<b>Strategic Entrepreneurial Orientation</b>			
	<b>HR Management</b>			
<b>Values ↓</b>	<b>Participation (1)</b>	<b>Proactive (2)</b>	<b>Risk-taking (3)</b>	<b>Innovative (4)</b>
<b>Open to change</b>	-.000 (.049)	.177** (.076)	.323*** (.081)	.381*** (.080)
<b>Conservation</b>	-.149*** (.041)	-.118* (.065)	-.219*** (.069)	-.169** (.068)
<b>Self-Trans</b>	.356*** (.061)	.201** (.096)	.117 (0.103)	.174* (.102)
<b>Self-Enhan</b>	-.098** (.044)	.022 (.069)	.080 (.074)	-.039 (.073)
<b>F-test</b>	F(4, 475) = 13.87 [p=.000]	F(4, 467) = 4.36 [p=.002]	F(4, 471) = 9.15 [p=.000]	F(4, 469) = 10.38 [p=.000]
<b>Controls</b>	Yes	Yes	Yes	Yes
<b>Sample</b>	493	485	489	483

Note: Each column presents results of an IV regression. Set of controls: CEO's gender, age and education, organization's age, organization's size (number of employees as full-time equivalents), whether the social entrepreneur was the owner (dummy coded), whether s/he has at least equal or more decision making authority on a daily bases compared to the other owners, log transformed total number of founders, log transformed total number of owners, and four dummy variables to control for country-specific effects and the entrepreneurs' perception of the munificence of the firm environment. p-value in parentheses. \*p<.10, \*\*p<.05, \*\*\*p<.01.

**TABLE 5**

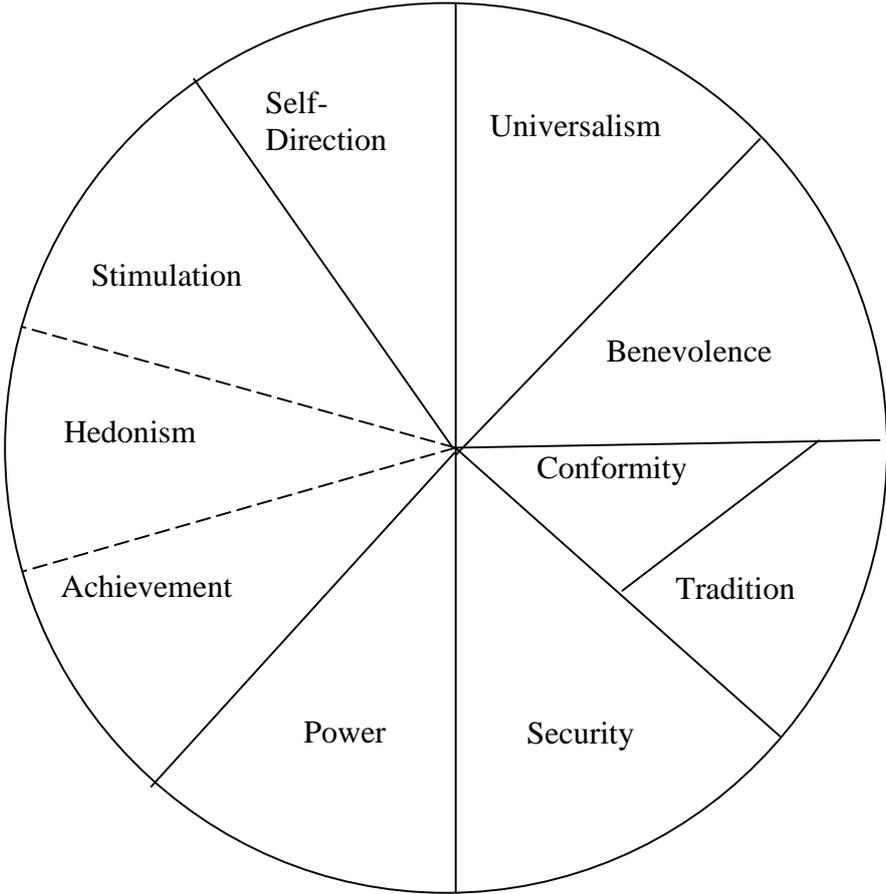
**Instrumental Variables (IV) Estimation Results**

	<b>Soc.perf1</b>	<b>Soc.perf2</b>	<b>Rev.dev</b>	<b>Prof.dev</b>	<b>Inno</b>	<b>Rad.inno</b>
<b>HR mgmt</b>						
Participation	.355** (.172)	.132 (.148)	.828*** (.287)	1.262*** (.386)	.025 (.059)	.207** (.095)
Sample	468	473	393	289	493	438
<b>Str. mgmt</b>						
Proactive	.672*** (.224)	.363** (.178)	.717** (.328)	1.363*** (.604)	.149** (.074)	.126 (.111)
Sample	462	467	386	284	485	432
Risk-taking	.442** (.144)	.226* (.116)	.338 (.218)	.381 (.286)	.127*** (.045)	.032 (.075)
Sample	464	469	390	287	489	435
Innovative	.346*** (.116)	.189* (.106)	.374* (.215)	.595* (.326)	.101*** (.039)	.075 (.070)
Sample	462	467	388	285	487	433
Controls	Yes	Yes	Yes	Yes	Yes	Yes

Note: Each cell presents results of an IV regression. Set of controls: CEO's gender, age and education, organization's age, organization's size (number of employees as full-time equivalents), whether the social entrepreneur was the owner (dummy coded), whether s/he has at least equal or more decision making authority on a daily bases compared to the other owners, log transformed total number of founders, log transformed total number of owners, and four dummy variables to control for country-specific effects and the entrepreneurs' perception of the munificence of the firm environment. Standard errors in parentheses. \*p<.10, \*\*p<.05, \*\*\*p<.01.

**FIGURE 1**

**Circumplex model of value types, reflecting their motivational dynamics (Schwartz, 1992)**



**FIGURE 2**

**Correlations 10 value types with Participatory Management Practices and Entrepreneurial Orientation**

