



**The influence of Humanness and gender on the Entrepreneurial Orientation  
of small business in Tanzania**

**Empirical evidence from Dar es Salaam**

Master thesis

# The influence of humanness and gender on the entrepreneurial orientation of small business in Tanzania

25-03-2014

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## Abstract

The construct of Entrepreneurial Orientation (EO) studied from within a development economy is argued to be an understudied aspect in the academic literature. The strategic construct EO focuses on the preferences, behaviors and beliefs of the management at the firm level. This study adapted the original conceptualization of the EO construct fit for local entrepreneurs/owner- managers of micro/ small businesses in Tanzania. Especially the aforementioned group has been selected giving their substantial contribution to local economic development(LED). Where most existing studies focus on the consequences of EO in terms of performance, this study looks into one specific antecedent of EO, culture, and defines this through the African socio- cultural philosophy (and management style) Humanness. Best explained as a widespread spirit of caring for your extended family and community where harmony, respect and approachability are important values. The study examines how Humanness influences the EO of small business entrepreneurs in Tanzania. Based on the literature, a negative relation is expected between Humanness and EO. Empirical evidence however shows a different result. Hence, multiple statistically significant positive relations are found. Furthermore, given the patriarchal culture of Tanzania, this study scrutinizes the influence of gender on both Humanness and EO, and finds that in Tanzania there is more equality in gender in relation to EO than anticipated. Given the exploratory design of the research, this study comes with new insights contributing to a better understanding of the Tanzanian entrepreneurial orientation (mindset) and subsequent implications related to EO and local economic development.

*Key words: Entrepreneurial orientation (EO), Humanness (Ubuntu), Local economic development, Female entrepreneurship, Culture, Developing economies, Tanzania, Dar es Salaam.*

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# 1 Introduction

Entrepreneurship is in the literature often associated with economic growth and development (Gorman, Hanlon & King, 1997 ; Lee & Peterson, 2000). Hence, it is seen as the propelling force (Nafukho & Muyia, 2010) and a necessary condition of a country's (long-term) economic development (Sautet, 2013). Through innovation, the creation of jobs as well as increasing competition, entrepreneurship is said to positively contribute to a country's economy. Especially in developing countries, entrepreneurship is making a fundamental contribution to inequality and poverty reduction as it often fosters structural change, employment and other welfare effects (Naudé, 2010).

Research into Entrepreneurship in developing economies, and Africa in particular, is argued to be an important but under-studied aspect within the academic literature (Kshetri, 2011). In terms of local economic development (LED) theory, entrepreneurship is seen as a significant aspect in improving the economic capacity and sustainability of a local area (Canzanelli, 2001). In general, LED is the process of collaboration between local governments, community, private sector and civic groups who jointly establish agreements on how to create jobs, manage existing resources and stimulate the economy of a specific (local) area (Helmsing, 2003). Building on the model of Stimson, Stough & Salazar (2009), who conceptualize on how to create regional economic development by focusing on endogenous variables, this paper uses the recent contribution of Pennink (2013) who proposed a LED model focusing specifically on the role of local actors. Specifically, this research uses the dynamic intervening variable zone of the aforementioned model as its point of departure and specifically looks into the entrepreneurial activities in a local economic perspective.

Focusing on the entrepreneurial activities, the concept of Entrepreneurial Orientation (EO) is used and adapted for local entrepreneurs/owner- managers of micro/ small businesses in Tanzania. In essence EO is best explained as a strategic construct focusing on the preferences, behaviors and beliefs of the management at the firm level (Covin, Green & Slevin, 2006 ). In other words, the 'how' question is key in EO since the concept aims at understanding the process of being entrepreneurial and its related methods, practices and decision-making styles. In order to capture this process and make it measurable three salient dimensions of EO have been developed into an EO scale (Covin and Slevin, 1989). This study uses the three original dimensions; innovativeness, risk taking and proactiveness and adapted them in order to be able to explain the degree of EO in a micro / small business.

The EO construct is argued to be an understudied aspect, especially in a non-western (Lumpkin & Dess, 1996), developing country setting (Wales, Gupta & Mousa 2011). In addition, a focus on the antecedents of EO (e.g. culture) is argued to be an aspect requiring more scrutiny (Engelen, 2010 ; Lee & Peterson, 2000) given that most studies tend to focus on the consequence of EO in terms of firm performance (Fayolle, Basso & Bouchard, 2010).



Most EO research aims at analyzing the orientation in larger enterprises/corporations where top-managers are responsible for the entrepreneurial behavior of the firm. However, given the call for more EO research focusing on developing countries, and even specifically for sub Saharan Africa (Wales, Gupta & Mousa 2011), it was assumed studies existed using scales focusing on the EO of local small business entrepreneurs. Yet, to our knowledge, no particular scales exist specifically focusing on the EO of local entrepreneurs/owner- managers of micro/ small businesses operating in developing countries. In order to contribute to this gap this study develops, based on the original Covin and Slevin (1989) conceptualization, a scale appropriate for the aforementioned group of entrepreneurs.

Where most EO research focuses on the relation with firm performance, this study answers the call to expand research focusing on the antecedents of EO (Fayolle, Basso & Bouchard,2010) .In particular, culture comes forward as having a significant impact on the EO (Zahra, Jennings & Kuratko, 1999 ; Kreiser, Marino & Weaver, 2002 ; Runyan et al, 2012 ; Lee & Peterson, 2000 ; Fayolle, Basso & Bouchard,2010 ; Engelen, 2010) and hence this is the antecedent on which this study is focusing.

Existing studies focusing on the culture- EO relationship, tend to build on renowned conceptualizations of national culture such as Hofstede (1980) and Trompenaars (1994). This study focuses on a different aspect of culture especially relevant in Sub- Saharan Africa, Hence Tanzania where the research is done. Specifically, culture is defined through the African socio- cultural philosophy of Ubuntu, referred to as Humanness in this study. Humaneness can be explained as a widespread spirit of caring for your extended family and community where harmony, respect and approachability are important values (Mangaliso,2001). There are five dimensions who together explain Humaneness. (Poovan, du toit & Engelbrecht, 2006). This five dimensions are: survival, solidarity, compassion, respect and dignity. In order to test the presence of Humanness, the measurement tool developed by Sigger, Polak & Pennink, (2010) was used, taking into account the adjustments and recommendations made by Scholtens (2011) and Boom (2012).

Besides the expected negative relation between Humanness and EO also the influence of gender will be taken into account. Data of the global entrepreneurship monitor (GEM) shows that rates of men entrepreneurship succeeded that of women's (Kelly et al. 2011). Given the patriarchal culture were Tanzanian women are raised (Jagero & Kushoka, 2011) and go through their process of socialization, it is expected that women have a different EO than man. In addition, since the motivation of females to become entrepreneur in Tanzania is often related to providing family support (Nchimbi, 2002), otherwise known as necessity entrepreneurship, the degree of EO is expected to be lower than that of their male counterparts.

Overall, the relation between humanness and EO has never been examined in the academic literature making this research rather explorative in nature. By focusing on the developing country of Tanzania this research contributes to a better understanding of the entrepreneurial orientation (mindset) currently present in Dar-es-Salaam. In addition, as the study also focuses on gender differences in terms of humaneness and EO the research also adds knowledge to the role of female entrepreneurs operating in a development economy. Furthermore, since the focus lies on the entrepreneurial process of local actors, the results contribute to a better understanding of the LED model in terms of how the local entrepreneurs shape and share the future of their environment.

## 2 Literature review

### 2.1 Entrepreneurial orientation

Within the field of entrepreneurship, a large stream of research focuses on entrepreneurial orientation (EO) ( Rauch et al. 2009). After more than 30 years of research, EO is seen as a central concept within entrepreneurship research and is supported by a vast amount of empirical as well as theoretical studies (Covin & Wales, 2012 ; Covin, Green & Slevin, 2006 ). The result today is that the construct of EO has become the most applied metric in research focusing on entrepreneurial behavior in the strategy and entrepreneurship literature ( Runyan et al, 2012).

Specifically, EO is a strategic construct where the conceptual domain focuses on the particular preferences, behaviors and beliefs of the management at the firm level (Covin, Green & Slevin, 2006 ). It is the process and the ‘how’ of the entrepreneurial undertakings in terms of methods practices and decision-making which matter in the EO paradigm (Lee & Peterson, 2000). The roots of the construct lie in the strategy making process literature (Mintzberg ,1973), however Miller (1983) was the first to conceptualize on the construct. Miller (1983) identified three dimensions of EO which are widely used in the literature today. The dimensions; innovativeness, risk taking and proactiveness represent the practices and policies which provide the basis for the entrepreneurial endeavors. Building on the conceptualization of Miller(1983) together with the earlier work by Khandwalla (1977) and Miller and Friesen (1982) , Covin & Slevin (1989) renewed the dimensions in what is now known as the most extensively used operationalization of EO (Runyan et al, 2012 ; Wales, Gupta & Mousa,2011). Covin and Slevin (1989) operationalized the construct of EO through developing a nine-item scale, covering three items per dimension. A higher score on EO indicates the firm would have a relatively higher competitive advantage which is said to eventually improve performance (Rezaei, Ortt & Scholten, 2012) . In addition, higher scores indicate managers to be more involved in innovation, less risk averse and to react more proactively towards opportunities.

With a significant amount of literature written on EO in the organizational and management literature it still remains a phenomenon which is mostly scrutinized in a western setting involving mostly developed countries (Wales, Gupta & Mousa,2011 ; Tang et al, 2008). The importance of examining the EO construct in other country settings has been argued by Lumpkin & Dess in 1996 but, as found by Wales, Gupta & Mousa (2011), still remains underexplored. Specifically mentioned in the aforementioned article are Brazil, India, Russia and clusters in the Middle east, Latin America and Sub-Saharan Africa.

Besides putting EO in a merely western perspective also the research paradigm of entrepreneurial orientation seems to focus most often on EO's consequences in terms of its relation to firm performance (Fayolle, Basso & Bouchard, 2010; Wales, Gupta & Mousa, 2011 ). The antecedents of EO are on the other hand less scrutinized (Fayolle, Basso & Bouchard, 2010). Relatively little attention has been paid to the aspects and conditions which are responsible for yielding an entrepreneurially oriented mindset. Yet, when it comes to aspects influencing EO, various authors focus on the influence of culture and its relation to entrepreneurial activity ( Zahra, Jennings & Kuratko, 1999 ; Kreiser, Marino & Weaver, 2002 ; Runyan et al, 2012 ; Lee & Peterson, 2000 ; Fayolle, Basso & Bouchard, 2010 ; Engelen, 2010).

One of the first to argue that culture was a consistent element of the degree of entrepreneurship and subsequent economic growth in a country was Landes in 1953 (Jones & Wadhwani, 2006). One argued that national cultural factors as well as other social values and attitudes are a driving force in terms of developing a countries' entrepreneurial activity and subsequent economic performance. Also in the paper of Engelen (2010) it is found that EO is, to a certain extent, contingent on the domestic culture since culture influences individual behavior in organizations. Hence, which is consistently described in the paper of Kreiser, Marino & Weaver (2002) who state that individual behavior is especially in entrepreneurship research often related to the formation of EO and that national culture is of significant influence in determining the degree of EO in a firm. Furthermore, in the article of Runyan et al (2012) the growing support for the position of culture in relation to EO is also acknowledged and it is argued that it would be relevant to scrutinize how different cultures impact on EO.

Of course EO is not merely influenced by cultural aspects and therefore it is important to also identify the influence of other institutional factors. In this respect, North and Thomas (1973) distinguish between formal institutions (legal, financial, political and technological) and informal institutions (values and cultural norms). The former type of institutions contribute to create opportunities whereas the latter type of institutions shape the individuals' perception of these opportunities (Welter, 2007). This is why some countries are, in their collective perception, more favorable to entrepreneurial activity than others. This corresponds with the article of Hayton, George and Zahra which states ; ' Cultural values indicate the degree to which a society considers entrepreneurial behaviors, such as risk taking and independent thinking, to be desirable' (2002, p 33). Given the large variance in national cultures and the possible variation this fosters in terms of EO it is relevant to research how different attitudes and behaviors towards EO depend on national culture (Fayolle, Basso & Bouchard, 2010).

Continuing in the same line of reasoning, the previously mentioned authors have come up with, amongst others, the following research proposition : ‘ *The entrepreneurial orientation of firms in a given country is dependent on the extent to which the national culture in this country is favorable and supportive to entrepreneurship, and encourages entrepreneurial activity among the whole population* ’ (Fayolle, Basso & Bouchard, 2010, P717).

The original EO concept has in the literature mainly been discussed in often larger contexts where top managers and owners are responsible for the entrepreneurial process and hence orientation (Lumpkin & Dess in 1996). Nonetheless, there are authors arguing that the (quasi) psychological origin of the concept makes it appropriate to be used in a micro and small business context (Krauss et al, 2005 ; Frese, Brantjes & Hoorn, 2002). Despite being designed to measure a firm’s EO, basically the construct psychologically assesses the degree of EO of an individual (Krauss et al, 2005). Especially for micro and small firms, the perspective of the owner /manager is what determines the firm’s strategies, culture, mission and vision. As the firm size increases, the influence of other decision makers, processes and protocols become more influential, making the degree of EO less based on the psychological perspective of the owner/manager who in the case of a small/micro firm is representing the firm level EO(Krauss et al, 2005).

In a developing country context, and especially in Africa, micro and small businesses make up a significant part of the local economies (Frese, Brantjes & Hoorn, 2002). The aforementioned authors find in their study, in a similar African context, that the EO of owner/managers is positively related to business success. The authors also stress the importance of a focus on the (psychological) perspective of the owner/manager since one’s actions and processes represent the EO of a smaller firm. Furthermore, Krauss et al (2005) argue that EO is influenced by the culture and business environment of a specific country and that especially in developing countries the influence of culture shows that there is a significant difference between Western countries EO and developing (African) countries EO. Exemplifying the influence of culture is that in a western perspective competitors are more often treated rather aggressively and the results of the Krauss et al (2005) study shows that competitors in some developing African countries are seen as potential cooperators instead of rivals. Reasons for this being that the competitor’s help might be needed in the future in order to favor the owner/manager’s own business prospects and vice versa. Finally, Frese, Brantjes & Hoorn, (2002) argue that more scrutiny is required into the EO of owner/managers of small firms in developing countries.

## **2.2 Dimensions of Entrepreneurial Orientation**

### **2.2.1 Innovativeness**

Innovativeness became one of the first characterizations of entrepreneurship. As argued by Schumpeter (1934) wealth would be created when existing market structures were to be dislocated through the acting of entrepreneurs who would introduce innovative new combinations resulting in a dynamic evolution in the economy. Innovation is by various scholars considered to be at the heart of entrepreneurship (Covin & Miles, 1999). Evidenced by the creation of new products, services, processes or technology, innovation is argued to be fundamental in entrepreneurship (Kreiser, Marino & Weaver, 2002). The innovativeness dimension specifically reflects the ability of a firm to become involved in new ideas, experimentation and other creative processes which may be of influence regarding the creation of new products, services, processes or technology (Lumkin & Dess, 1996). In the basis, innovativeness measures the firm's willingness to depart from the status-quo and look for novelty. Hence, innovative firms distinguish in their commitment to creating and introducing new aspects into a market, being earlier than the competition (Kreiser, Marino & Weaver, 2002). In the specific context of this study, innovativeness and novelty are interpreted as being new toward a relevant market, group or local environment. In a similar study context, Krauss et al (2005) argue that having a positive mindset towards new ideas involving the creation of new products, services, processes or technology in a developing context is more relevant than having an entirely new innovation.

### **2.2.2 Risk-Taking**

Risk taking is a concept which is often associated with entrepreneurs. It is seen as a quality which is in the literature commonly used to describe entrepreneurship (Lumkin & Dess, 1996). The quality specifically reflects the acceptance of uncertainty and risk as a result of some kind of resource commitment to indeterminate activities and results (Hughes & Morgan, 2007). Companies with a higher EO are often more involved in activities such as incurring debt and making resource commitments than companies who are less entrepreneurially oriented (Lumkin & Dess, 1996).

Because to some extent all business endeavors carry at least some risk, the degree of risk-taking is what matters. This range is in the literature referred to as on the one end nominal or 'safe' risk and on the other high risk. The former type of risk-level refers to aspects as depositing money in a bank or holding inventory. The latter type includes having high loans or bringing new products into the market (Lumkin & Dess, 1996). Furthermore it is argued that risk is often seen as calculated risk as the entrepreneur tries to minimize the probability of failure (Krauss et al. 2005). Overall, a positive orientation towards taking risk is believed to positively influence the company's success.

### **2.2.3 Proactiveness**

The proactiveness dimension revolves around the notion of taking initiative, being anticipative and tracking new opportunities (Lumkin & Dess, 1996). In other words, being able to exploit asymmetries in the market place in order to become the first mover in a particular market. The most proactive business in a market is the one which succeeded in being the fastest to innovate and subsequently being one of the first to put it into the market. Henceforth, a proactive business is a leader rather than a follower. According to Lumkin & Dess (1996), when being such a leader there is no need to constantly be the absolute first. However, a constant anticipation and drive to seize new opportunities is key. Another attribute of Proactiveness is aggressiveness towards competitors which would be improving the competitive positioning of a business (Knight, 1997). Specifically, this is the firm's ability to challenge their direct competitors and outperform them in the market place.

### **2.3 Culture and entrepreneurial orientation**

Previous research focusing on the relation between culture and EO often relies on renowned conceptualizations of national culture such as Hofstede (1980) and Trompenaars (1994). So does the study of Lee & Peterson (2000), combines both the dimensions from Hofstede and Trompenaars to build a culture based model of EO and relate this to global competitiveness. The study proves that countries that have a culture which embraces entrepreneurship are capable of engendering a strong EO and hence increase development and global competitiveness. In terms of results relating to some specific dimensions it was found that cultures with a relatively low power distance, low uncertainty avoidance, high on masculinity, low on collectivism, achievement oriented and particularistic in nature, are more likely to nurture a strong EO.

The relation culture is said to have on entrepreneurship is, according to Hayton, George & Zahra (2002), divided into three main research streams. First of all there is the stream focusing on a national cultures' influence on combined measures of entrepreneurship. Such measures are for instance how much innovation a country produces and how many novel businesses there are being created per annum. Most of the studies, in terms of culture, are based on the work of Hofstede (1980).

So does Shane (1993) focuses on four of the Hofstede dimensions in relation to the national rates of innovation. As the study was longitudinal in nature, one of the most important findings was that the relation between the different dimensions are not stable in terms of time. Furthermore, the research of Davidson & Wiklund (1997) focusing on new businesses creation, uses particular cultural values and beliefs in relation to regional new firm formation rates. Although a relation was found, it was marginal in terms of regional cultural variation.

Cultural features are thus to some extent related to national levels of entrepreneurship. Specifically, Shane (1993) found that nations where people are individualistic, marginally power distant and uncertainty tolerant are most likely to be innovative societies. Despite the above described relationship, still an issue remains. The sample sizes used in some of the studies might be too small to be able to tell something about a whole country especially when a broad cultural characterization (e.g. Hofstede) is used. A possible improvement to this issue might be to focus research on culturally homogenous regions wherein variance can be better explained (Hayton, George & Zahra 2002). Nonetheless, culture seems to influence national firm formation by means of supporting the environment and thereby making it more or less accepted in a society to start up a new business (Etzioni, 1987).

The second stream of research looking into the relation between culture and entrepreneurship focuses on individual and psychological characteristics of persons living in a specific country (Hayton, George & Zahra 2002). This stream revolves around the question why some people are more entrepreneurial than others. Of importance are the specific characteristics and traits of the potential entrepreneurs. Various studies look into the relation between entrepreneurial characteristics and national culture. So do Scheinberg & MacMillan (1988) focus in their study on the specific motives of entrepreneurs to start up a business in eleven different countries. The results show that the individual motives vary systematically across the different countries investigated. Specifically the study finds six different dimensions representing the motives of the entrepreneurs. The specific dimensions are: Perceived instrumentality of wealth, need for approval, communitarianism, need for personal development, need for independence and finally the need for escape. In addition, the study of (Shane, Kolvereid & Westhead, 1991) later again confirms the aforementioned systematic variance between specific countries in a different setting and also looks into the role of gender. The latter aspect is too identified as an important factor in determining reasons for new business formation. Another conclusion being made in the study is that the reasons for new business formation (entrepreneurship) are a country specific unique blend of culture, economic infrastructure and government policy (Shane, Kolvereid & Westhead, 1991).

Focusing more on the psychological factors, Thomas & Mueller (2000) look into the relation culture has with four specific personality characteristics which have been commonly associated with entrepreneurship. The four traits used in the aforementioned study are: innovation, risk-propensity, internal locus of control and energy level. The study looks into the cultural distance of various countries in relation to the USA. Results show that the degree of the entrepreneurial traits decrease as the cultural distance from the USA increases. Another study by Mueller & Thomas (2000) focuses on only two entrepreneurial traits (innovativeness and internal locus of control) and questions whether these vary systematically across cultures. The study shows that some cultures are more favorable to entrepreneurship than others. Based on the Hofstede dimensions Mueller & Thomas (2000) show that Individualistic countries have an increased likelihood of an internal locus of control.



Furthermore, cultures which are low on uncertainty avoidance and are individualistic in nature are more likely to be entrepreneurially oriented. Finally, the article stresses the importance of the potential entrepreneurs' psychological awareness and perception of what it takes to act as an entrepreneur.

Also the cognitive perspective has been subject of research in the second stream of culture and entrepreneurship research. In contrast to what is argued in the study of Shane, Kolvereid & Westhead (1991) who state that the reasons for an entrepreneur to start up a new business is country specific and is, among other factors, dependent on national culture, the study of Mitchell et al.(2000) aims at the common (cognitive) ground entrepreneurs are believed to have across countries. In this respect their study concentrates on the venturing cognitions of individuals via examining the venturing scripts and comparing these cross- cultural. The specific cognitive scripts examined in the study are knowledge arrangements, willingness and ability. Results, although not being overly convincing, show there is some evidence of consistency in cognitive scripts of entrepreneurs in a cross- cultural setting. Besides, the cognitive scripts show to be related to individualism and power distance.

The third stream of research focuses on national culture and corporate entrepreneurship (Hayton, George & Zahra 2002). This line of research looks at the corporate level to aspects such as strategic renewal, spin-offs, modes of entry, aspects of innovation and aspects of entrepreneurial behavior involving cross boarder business activities. Furthermore, in terms of international entrepreneurship, corporate research examines the effects of EO in various countries. Specifically in terms of how EO influences globalization developments, technology acquisition and readiness for internationalization (Jones, Coviello & Tang, 2011).

Besides the research streams as argued by Hayton, George & Zahra (2002) also other studies exist focusing on the relationship between national culture and entrepreneurial behavior/orientation. So does the study of Kreiser, Marino & Weaver (2002) takes out two dimensions of entrepreneurship (and EO) : risk taking and Proactiveness and examine the influence cultural values (Hofstede) and institutions have on these dimensions. Results show that national culture has a significant impact on both risk taking and Proactiveness and also affects firm strategies. In addition, it shows that some cultures are more favorable towards entrepreneurship than others.

The work of Fayolle, Basso & Bouchard, (2010) uses three interdependent levels of culture and explain their influence on EO. The three levels: national, industry and corporate, are used to develop various testable hypotheses. The national level stresses the importance of the direct effect culture has on EO. The industry and corporate level shows the mediating nature of the external environment. The explicit role of the external environment can be either emphasized by focusing on differences between industries or neutralized and use only one specific industry. The study concludes that at the firm level culture should be approached as a complex interaction of each of the three levels.

Also Engelen's (2010) research contributes to the culture- entrepreneurship relation in that one researches whether organizational mechanisms related to entrepreneurial organizations are depending on national culture, or if they can be labeled universal to some extent. In the study it becomes apparent that theories and empirical results in terms of firm level entrepreneurship coming from a single culture should not be too easily generalized. Besides that, the findings show that the degree of EO can be influenced by a development (stimulating) culture which is not dependent on the national cultural scenery. This implicates that managers can work towards a preferred result of EO as long as the antecedents of EO, where improvements are feasible, are in line with the core values of a specific national culture.

## **2.4 How gender influences entrepreneurial orientation**

Generally scholars have identified two perspectives in terms of the difference between man and women. First, the so called nature perspective follows the reasoning that gender differences are a direct result of biological origin. Here aspects as genetic evolution, the influence of heredity and the influence of the human environment are considered to be the primary argument. Second, in the nurture perspective, it is argued that gender differences stem from early and constantly continuing processes of socialization (Tundui, 2012).

Understanding how gender influences the patterns in social life improves the general understanding of the social world (Hamilton, 2013). Gender studies have in various disciplines often been focused on traits and behaviors specifically related to men and women. The power relation in terms of gender and the analysis of why women are structurally subordinated to men is analyzed in feminist theory (Ahl, 2006). Specifically, feminist theory is classifiable into three different categories. The first group hosts liberal feminist theory and feminist empiricism. Within this group man and women are interpreted as being in essence similar to each other. Both men and women are seen as equally able to think rationally. This fosters that in the case of subordination of women, reasons will more than likely be either discrimination or structural barriers such as unequal access to resources. Critique among feminist scholars on this view revolves around the notion that neither bureaucracy nor leadership is questioned and instead women are advised to follow the status quo.

The second group in feminist theory is home to the social feminist theory, radical feminist theory and psychoanalytic feminist theory (Ahl, 2006). Herein man and women are said to be, or have become, essentially different. Both male and female traits are emphasized upon and stressed as different but beneficial in organizations. This group however does stimulate opposing gender roles and thereby the superior male role is not questioned per se. In terms of criticism, an emphasis on the differences limits the lists of abilities for both male and female.

In the last group, the presence of either differences or similarities are seen as socially constructed. Here the main theories are social constructionist and poststructuralist feminist theory (Ahl, 2006). This subgroup revolves around the social construct of being feminine or masculine without focusing on the biological fact of being either or. In this perspective the difference between the two are due to differences in early and ongoing socialization processes. In other words, the society in which people are brought up have different expectations and standards for behavior of both sexes all around the world. Most behavior is actually learnt during childhood and during this period sex-appropriate behavior results in different attitudes, interests, skills and traits.

This study uses the perspective of the last subgroup and thus reads gender as socially constructed. The reason for choosing this perspective is that we believe that specific socialization processes all around the world are responsible for creating different perceptions of entrepreneurship.

In general, gender relations vary largely in different cultural, environmental and social-economic perspectives (Berg, 1997). Before 1980 scholars predominantly focused on the role and the characteristics of the average male entrepreneur (Carter, 1993). Later, during the 80s, entrepreneurship research began to scrutinize the motivations and characteristics of women wanting to start-up their own business in various settings. The first results in this particular line of work revealed that it is more difficult for women to act as an entrepreneur due to three reasons (Berg, 1997). First of all, women were found to have less opportunity in terms of education and hence improving their business skills. Second, getting credit is said to be more difficult for women because there was a lack of trust in the relationship between women and entrepreneurship. And last, the domestic role women would have to fulfill also negatively influenced the assessment of the female entrepreneur.

Females are generally given different roles in societies than males. Specifically this holds for power levels, authority, responsibilities, values and activities. These differences are subsequently responsible for the, in some countries more than others, gendered division of: labor, access to resources, and a traditionally male dominant control regarding decision making (Ncimbi, 2002). As Coleman (2002) finds in one's study focusing on constraints faced by female small business owners, there are typical characteristics belonging to female-owned businesses. These characteristics are: reduced prospects of lucrativeness, small size and inability to provide covering collateral when applying for loans.

The so called gender gap in entrepreneurship is, despite increasing numbers of women entrepreneurs worldwide, still present to date. Empirical research into the position of women in entrepreneurship and subsequently into national economic growth has been performed by the Global Entrepreneurship Monitor (GEM). Multiple GEM studies, examining the rates of entrepreneurship in over 40 nations worldwide showed that in all countries the rates of men entrepreneurship succeeded that of women's. the actual gap showed to be significant and systematic and varied by a nation's GDP as well as religion (Allen et al. 2007).

Later GEM reports revealed a similar picture in terms of women's partake in entrepreneurship. In the latest report (Kelly et al. 2011) the data covered 59 countries and in only one country (Ghana) women played a larger part in entrepreneurship than men.

Amongst the countries investigated there were found to be very different rates of women entrepreneurs per country. Percentages varied between 1.5 percent of the female population (ages 18 to 64) being entrepreneur up to 45.4 percent. An important trend in the study results of the GEM 2010 women report (Kelly et al. 2011) is that the more factor driven an economy is the more women are involved in entrepreneurship. The GEM reports use three stages of national economic development. The stages, based on Porters typology of phases of economic development (Porter & Schwab, 2008), range from the poorest factor driven economies to efficiency driven economies and end at the most advanced innovation driven economies.

Within the factor driven economies, where nations compete primarily based on unskilled labor and natural resources, women have a relatively more positive attitude towards entrepreneurship, a lower fear of failure and are more likely to start up a business (Kelly et al. 2011). In line with the aforementioned finding is that the percentage of women entrepreneurs turns out to be higher in nations where the general income per capita is relatively low (Allen et al. 2007 ; Kelly et al. 2011). This implicates that women in less developed economies are more often than their male counterparts motivated through necessity to become involved in a start-up. The difference between necessity entrepreneurship and the, more prevalent in efficiency/ innovation driven economies, opportunity entrepreneurship can be understood in terms of push versus pull factors. Where in the push type situation the entrepreneur is starting up a business out of necessity and in the pull type situation certain opportunities attract the entrepreneur (Orhan & Scott, 2001).

A significant part of the GEM reports focuses on the Total early stage entrepreneurial activity (TEA). Specifically, the focus in the TEA group lies on people who are involved in the process of starting a business, or are already running for less than three and a half years. The TEA rates are systematically higher in factor driven economies. Sub-Saharan Africa also has a high percentage of TEA rates and the percentage of women being entrepreneurs is almost exceptionally high as women do sometimes account for representing almost half of the entrepreneurs (Kelly et al. 2011). Furthermore the Sub-Saharan African region results indicated relatively less difference between the sexes and the fear of failure in this region was also lower among women. In addition, the women showed to be especially active in consumer businesses where there generally is a lower entry barrier and usually the startups in these type of business are less capital intensive.

In developing countries, as well as in most Sub-Saharan African countries, the involvement of women in entrepreneurship is increasing (Tundui & Tundui, 2012). Women in Sub-Saharan Africa are especially active in the micro and small business sector of the informal economy. The size of the informal women workforce in Sub-Saharan Africa represents 92 percent of the total job opportunities when agriculture is excluded (Becker, 2004). For the most part, this high percentage of women entrepreneurs in the informal sector translates in street vending. When focusing specifically on Tanzania, data indicates that 43 percent of the micro and small enterprises were owned by women (Stevenson & St-Onge, 2005). Also in Tanzania women are predominantly active in informal, micro level low growth segments. Often women in Tanzania, who are generally poorly educated, become involved into entrepreneurial activities out of necessity. Businesses of choice are according to Stevenson & St-Onge (2005) : food processing, Sewing, farming, crafts and small scale productions/manufacturing.

Tanzanian women entrepreneurs are however still constrained in their ability to grow their micro and small enterprises and become competitive in the formal economy (Stevenson & St-Onge, 2005). This is mainly caused by poor levels of education, business and management skills in combination with the inability to accumulate savings quintessential for a start-up process. Furthermore, Tanzanian women are argued to be risk adverse and there is often little room for costs of failure. There is however a difference between women living in more rural areas compared to those living large urban areas. The latter group is also more often supported by support programs who aim at growth and development of the small business sectors in Tanzania.

According to Nchimbi (2002) a limitation in African as well as Tanzanian entrepreneurship literature is referring to women entrepreneurs as being a homogenous group. One argues this to be unreasonable given the difference in : religion, ethnicity, prosperity, age , schooling, literacy, social status and childhood socialization of every particular female. This can be called consistent to the earlier mentioned social constructionist and poststructuralist feminist theory (Ahl, 2006). As argued in the referred theory, most things are learnt during childhood and due to differences in early and ongoing socialization processes. Also the framework of Bourdieu (2001) has been used (in a Tanzanian context by Tundui, 2012) in explaining gender difference in small business. Bourdieu (2001) argues that the reproduction of the social structure is stemming from a person's habitus. The habitus is something which is developed through childhood socialization and can be explained as a system of lasting and transposable dispositions and meaning giving perceptions and practices. Bourdieu (2001) uses the habitus to explain how humans have exemplified past structures of masculine domination into unconscious patterns of perception and indebtedness. In other words, a gendered view of the world subconsciously becomes part of a person's habitus during early and ongoing processes of socialization.

The historical structures of masculine order subsequently can be of major influence in societies where women are subjected to patriarchal weights which negatively influences the position of the women entrepreneur.

In Tanzania, the socialization processes (habitus) have always been male dominated. Tanzanian women are generally subordinates to men and thus the society can be called patriarchal (Jagero & Kushoka, 2011). Women's motivation to be involved in entrepreneurial activities in Tanzania is often related to providing family support (Nchimbi, 2002). The male motivation is on the other hand more often related to revenue. Both these motivations show that there exists to some extent a different (gendered) perception of entrepreneurial success (Jagero & Kushoka, 2011). Furthermore, Tanzanian women were found to favor slow growth of their micro enterprises and instead of focusing on increasing one enterprise to become relatively large they preferred to have multiple micro-ones (Stevenson & St-Onge, 2005).

## **2.5 Additional control variables**

Besides gender, which is the most important control variable in terms of this study, also three other variables will be introduced given their relevance to the research in general. First of all, the questionnaire will have an item asking whether or not the respondents have a registered or unregistered business. Using this as a control variable gives us insight into the relevance of registering a business and to what extent this either positively or negatively influences the orientation of entrepreneurs in a development country.

The second variable will be the age of the owner/manager. This variable is tested using four age groups. Results eventually increase our understanding of which age group has higher EO scores and if the score increases or decreases when the age increases.

Finally, the level of education will be measured and used as a control variable. In order to measure this variable the respondent can choose from five different levels of education. Using the level of education as a control variable learns us more about how schooling increases or decreases the level of EO.

## **2.6 Humanness**

Before one can even begin to understand to what extent national culture can be supportive and favorable towards entrepreneurial activity, it must be clarified in what perspective, and in which setting, culture will be treated in this paper.

When focusing on Sub-Saharan Africa in terms of national culture, it soon becomes apparent that cultural heritage is a very important aspect in business / management practices.

Generally this African region is highly collectivistic with a paternalistic orientation where the importance of clan interests over individual needs are common (Wanasika et al. 2011). Research into the actual differences between western and Sub-Saharan African countries shows that it is of utmost importance to embrace the indigenous values and norms (Mangaliso,2001) as well as to understand the humanistic values who are meaningfully different from the western world (Karsten& Illa, 2005). The leaders or managers in Sub-Saharan African countries have great responsibility towards their extended families. what follows is that tribes or ethnic groups are more important than reward systems based on performance, resulting in both nepotism and paternalism (Wanasika et al. 2011).

One specifically important African socio- cultural philosophy, common in most Sub-Saharan African countries is Ubuntu. The word Ubuntu comes from the Xhosa expression “ Umuntu ngumuntu ngabantu” which is translated as a person is a person through other persons (Karsten& Illa, 2005).In terms of translating Ubuntu into English the literature uses ‘Humaneness’ (Mangaliso,2001) or ‘Humanness’ (Sigger, Polak & Pennink, 2010). It can be defined as a widespread spirit of caring for your extended family and community where harmony, respect and approachability are important values (Mangaliso,2001). Humanness reflects the family atmosphere and the relationship between individuals and their social surroundings.

Furthermore, humanness emphasizes on working together and being beneficial towards the entire community. An important implication of a Humanness-like culture is that money, power and formal position, aspects which are fairly important in the western-world, are not pivotal in determining a person’s status in society. Interaction, recognition and sharing with others on the other hand are (English, 2002).

Mgibi (1997) , who is in the literature referred to as the founder of the conceptualization (management practice) of the humanness philosophy(Sigger, Polak & Pennink, 2010) , advances five key social values to create one’s conceptual framework. The framework is otherwise known as the collective finger’s theory which can be best explained using the African proverb ‘ a thumb, although it is strong, cannot kill aphids on its own’(Mbigi & Maree, 1995, Cited Poovan, du toit & Engelbrecht, 2006). Henceforth, the metaphorical fingers should be interpreted as individuals who interact collectively towards a goal where each of the individual fingers denote the key values of importance to establish and uphold a collective culture.

The five closely related dimensions of humanness based on Mbigi’s (1997) work are; Survival, Spirit of solidarity, compassion, respect and dignity. These dimensions were later used by Sigger, Polak & Pennink, (2010) to develop a measurement tool related to the philosophy of humanness. The aforementioned authors were the first to develop a questionnaire enabling scholars to conduct empirical research since the level of humanness now is measurable. Today, this is the only known and validated metric in this line of research.

The questionnaire's explicitness, reliability and consistency are verified by the authors themselves and later again confirmed by Scholtens (2011) and Boom (2012).

## **2.6 Dimensions of Humaneness**

### **2.6.1 Survival**

The first dimension, survival, is in the literature seen as the heart of the humanness concept (Sigger, Polak & Pennink, 2010). The sharing of resources and common strengths is how many African people survived the often difficult living conditions and distress and this is how a strong collective psyche was formed. Sharing the little you have with other members of the community creates a strong and shared will to survive. Sharing one's expertise and resources and commonly focus on the benefit of the group is important in creating strong communities. As Mbigi(1997) explains, the effectiveness of organizations should be increased when the individual team members can entirely rely on each other. Brotherly care, as opposed to individual self-reliance, is essential in the survival of the community (Poovan, du toit & Engelbrecht, 2006).

The extend family where people are living in tends to raise a strong feeling of coexistence (Mangaliso,2001). Subsequently, coexistence is what makes the people work together and depend on each other. The survival dimension is also argued to be accountable for a strong degree of kinship in communities and organizations (Mangaliso,2001). Furthermore, The survival dimension can be called closely related to the solidarity dimension as it consistently includes feelings of collective responsibility and working together to reach mutual goals.

### **2.6.2 Solidarity**

Solidarity is de result of the combined efforts of the individuals working closely together in their community (Poovan, du toit & Engelbrecht, 2006). In accomplishing difficult tasks as a community, the people's personal interests are subordinate to the needs of the community. The spirit of solidarity can be translated into various collective ceremonies all contributing to a sense of belonging and trust (Sigger, Polak & Pennink, 2010). Also the cohesion between members in a specific team or enterprise can increase, yielding empowerment and better team work results (Broodryk, 2006). The people within the community all believe that by working together and being solidary towards each other, significantly more can be accomplished than when working on an individual basis. Especially more difficult tasks/problems are believed to be better taken care of when approached collectively (Broodryk, 2006). Furthermore, because solidarity is more important than specific goals, time is also perceived as being less important.



### **2.6.3 Compassion**

The compassion dimension is all about understanding the troubles and concerns of the people within the community and also sensing an urge to help whenever necessary (Mbigi, 1997 ; Poovan, du toit & Engelbrecht, 2006).

During childhood Africans are brought up with a strong sense of interconnectedness, implicating that only through giving and sharing one can eventually receive (Mbigi, 1997). Due to this interconnectedness and compassion people are highly willing to help members both within and outside their communities (Poovan, du toit & Engelbrecht, 2006) In addition, by means of compassion members in a community or team develop a shared vision (Sigger, Polak & Pennink, 2010). Poovan, du toit & Engelbrecht (2006) argue the compassion dimension to be the basis for a culture of sharing and caring.

### **2.6.4 Respect & dignity**

Originally introduced as two separate dimensions, Respect and dignity are because of their close relatedness most often combined in the academic literature (Sigger, Polak & Pennink, 2010 ; Poovan, du toit & Engelbrecht, 2006 ; Scholtens, 2011; Broodryk, 2006). Both values are highly important social values and are seen as one of the most crucial building blocks of African culture. Respect is best defined as an objective and unbiased consideration and regard for rights, values and belongings of the community (Poovan, du toit & Engelbrecht, 2006). Already taught during childhood is how respects translates into dignity. The elders and authoritative people are learnt to be respected which is how they become dignified. Also there is respect for other cultures, communities and traditions which can be interpreted as an asset within an organization as it approves new insights. All insights will be respected because under the values of humanness, decisions are made via consensus seeking (Poovan, du toit & Engelbrecht, 2006). Furthermore, having high levels of mutual respect within an organization is positive towards effective performance (Sigger, Polak & Pennink, 2010).

## 3 Hypotheses

### 3.1 Problem statement

With the humanness philosophy being a significant part of Tanzanian (management) culture (Sigger, Polak & Pennink, 2010 ;) and the influence culture is said to have on EO (Kreiser, Marino & Weaver 2002 ; Runyan et al 2012), research into the relationship between the humanness dimensions and the dimensions of EO should be able to give a better insight into how cultural values influence entrepreneurship in Tanzania. Coming from a LED perspective, where the focus lies on the local actors and their specific entrepreneurial actions and activities (Pennink, 2013), this study aims to better understand how the qualities of the local community, in terms of their cultural values, influence their entrepreneurial activities as defined by the orientation. The EO is used given its relevance and status of being the most applied metric in research focusing on entrepreneurial behavior in the strategy and entrepreneurship literature (Runyan et al, 2012). Nonetheless, an adopted version of the original concept seems more appropriate in the specific context of this study. The main reason being the difference in scale. Since the original instrument usually is applied on larger enterprises (top managers) and not on the owner managers of micro / small scale businesses. Furthermore, the original scale has not specifically been designed for developing countries. Hence, which is in the literature considered to be a gap (Wales, Gupta & Mousa 2011; Frese, Brantjes & Hoorn, 2002). In addition, given the patriarchal culture where Tanzanian women are raised and go through their process of socialization (Jagero & Kushoka, 2011), also gender will be integrated to be able to better understand how the gender gap (Allen et al. 2007) is of influence on Tanzanian entrepreneurial orientation.

In order to scrutinize the influence of Humanness on the EO of Tanzanian entrepreneurs, various hypotheses have been developed based on a review of the literature. In general, the hypotheses are designed to be able to give an answer to the following problem statement :

*To what extent do culture, in terms of humanness, and gender influence entrepreneurship as defined by entrepreneurial orientation in the micro and small business sector in Dar-es-Salaam.*

### 3.2 Entrepreneurial orientation in Humanness cultures

Based on the theoretical analysis of this study it becomes apparent that one of the most important characteristics of humanness is the interdependence between people and the strong feeling of community (Sigger, Polak & Pennink, 2010). Consistent to these key aspects of Humanness is the claim of Wanasika et al. (2011), that in Sub-Saharan African countries collectivism is highly important and the interest of the clan supersedes individual needs.

The importance of the humanistic values and norms in the Sub-Saharan African culture are argued to be a significant part of their culture and is highly relevant in matters of business. (Mangaliso, 2001). The importance of the Humanness values in Sub-Saharan African countries (Karsten & Illa, 2005) and in the context of this study in Tanzania in particular (Sigger, Polak & Pennink, 2010), become especially relevant when relating them to entrepreneurship. As argued by Kreiser, Marino & Weaver (2002) and Runyan et al (2012), the cultural values of a particular business environment are of significant influence on the EO, especially when it concerns a developing country (Krauss et al 2005).

The EO Concept uses three dimensions to measure to what extent a firm (in this study represented by the owner/manager) is more or less entrepreneurially oriented which in the former case is likely to improve its competitive advantage and business performance (Rezaei, Ortt & Scholten, 2012). Higher scores on the EO scale thus indicate the owner/manager to be more competitive and relatively more successful in terms of business performance. As it is argued that cultural values indicate the degree to which a society considers entrepreneurial behaviors to be desirable (Hayton, George & Zahra, 2002), and the humanness values claim the interests of the community to go before individualistic success it seems fair to assume a negative relation exist between humanness and EO. Strengthening this assumption is the fact that the degree of EO is higher when a firm is more aggressive towards the competition and is constantly looking to outperform its rivals (Knight, 1997). Henceforth, which is not in line with the humanness values, since the people's personal interests are subordinate to the needs of the community (Poovan, du Toit & Engelbrecht, 2006). In addition, research shows that especially in Sub-Saharan African countries competitors are treated as potential cooperators instead of rivals (Krauss et al, 2005).

Overall, given the expected negative relationship between Humanness and EO, this paper argues that the owner/ managers who score higher on the humanness scale will be less Entrepreneurially oriented. This results in the following testable hypothesis :

***Hypothesis 1 : Owner/ managers that have a higher score on the humanness values will show a lower degree of entrepreneurial orientation than those Owner/ managers that do not score high on the humanness values.***

### **3.3 Humanness and EO dimensions**

Based on the main assumption in the first hypothesis the next set of hypotheses tests how humanness is related to each of the three EO dimensions. It is expected that the individual EO dimensions are negatively related to Humanness. This results in the next set of hypotheses arguing that the higher the score on the humanness values the lower the score on each of the EO dimensions.

***Hypothesis 2a :** Owner/ managers that have a high score on the humanness values will show a lower degree of innovativeness than those Owner/ managers that do not score high on the humanness values.*

***Hypothesis 2b :** Owner/ managers that have a high score on the humanness values will show a lower degree of risk-taking than those Owner/ managers that do not score high on the humanness values.*

***Hypothesis 2c :** Owner/ managers that have a high score on the humanness values will show a lower degree of proactiveness than those Owner/ managers that do not score high on the humanness values.*

### **3.4 Humanness dimensions and EO**

The next set of hypotheses represent the assumptions about the four individual humanness dimensions and the concept of EO. Following the same line of reasoning, the individual humanness dimensions are expected to be negatively related to EO.

***Hypothesis 3a :** Owner/ managers that score high on Survival will show a lower degree of EO than those Owner/ managers that do not score high on Survival.*

***Hypothesis 3b :** Owner/ managers that score high on Solidarity will show a lower degree of EO than those Owner/ managers that do not score high on Solidarity.*

***Hypothesis 3c :** Owner/ managers that score high on Compassion will show a lower degree of EO than those Owner/ managers that do not score high on Compassion.*

***Hypothesis 3d :** Owner/ managers that score high on Respect & dignity will show a lower degree of EO than those Owner/ managers that do not score high on Respect & dignity.*

### **3.5 Humanness dimensions and EO dimensions**

The following set of hypotheses individually tests the relationships between the dimensions of both constructs. Also in this section the relations are expected to be negative.

#### **Survival**

***Hypothesis 4a :** Owner/ managers that score high on Survival will show a lower degree of innovativeness than those Owner/ managers that do not score high on Survival.*

**Hypothesis 4b :** *Owner/ managers that score high on Survival will show a lower degree of Risk-taking than those Owner/ managers that do not score high on Survival.*

**Hypothesis 4c :** *Owner/ managers that score high on Survival will show a lower degree of Proactiveness than those Owner/ managers that do not score high on Survival.*

### **Solidarity**

**Hypothesis 5a :** *Owner/ managers that score high on Solidarity will show a lower degree of Innovativeness than those Owner/ managers that do not score high on Solidarity.*

**Hypothesis 5b :** *Owner/ managers that score high on Solidarity will show a lower degree of Risk-taking than those Owner/ managers that do not score high on Solidarity.*

**Hypothesis 5c :** *Owner/ managers that score high on Solidarity will show a lower degree of Proactiveness than those Owner/ managers that do not score high on Solidarity.*

### **Compassion**

**Hypothesis 6a :** *Owner/ managers that score high on Compassion will show a lower degree of Innovativeness than those Owner/ managers that do not score high on Compassion.*

**Hypothesis 6b :** *Owner/ managers that score high on Compassion will show a lower degree of Risk-taking than those Owner/ managers that do not score high on Compassion.*

**Hypothesis 6c :** *Owner/ managers that score high on Compassion will show a lower degree of Proactiveness than those Owner/ managers that do not score high on Compassion.*

### **Respect & dignity**

**Hypothesis 7a :** *Owner/ managers that score high on Respect & dignity will show a lower degree of Innovativeness than those Owner/ managers that do not score high on Respect & dignity.*

**Hypothesis 7b :** *Owner/ managers that score high on Respect & dignity will show a lower degree of Risk-taking than those Owner/ managers that do not score high on Respect & dignity.*

**Hypothesis 7c :** *Owner/ managers that score high on Respect & dignity will show a lower degree of Proactiveness than those Owner/ managers that do not score high on Respect & dignity.*

### 3.6 Conceptual model

The next two figures give a visual representation of the constructs and dimensions which are tested in this study. The first figure (figure 1), represents the two main concepts and shows that Humanness (independent variable) is expected to influence EO, the dependent variable. Based on the literature review this relation is expected to be negative. In terms of the influence of gender, both constructs are tested and, again following the literature, it is expected the EO of men to be higher than that of their female counterparts.

Figure 1: General conceptual model <sup>1</sup>

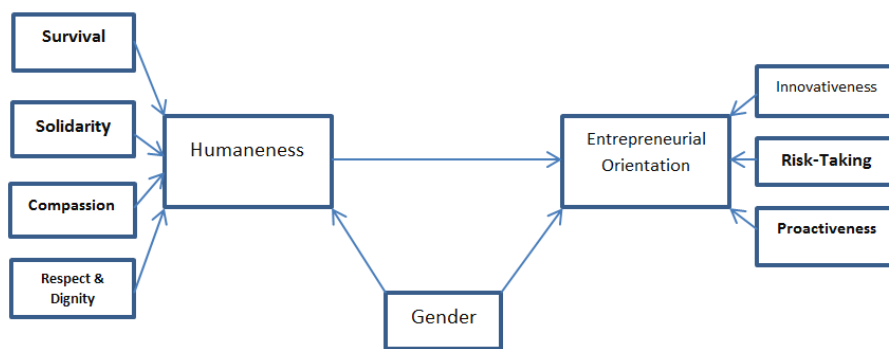
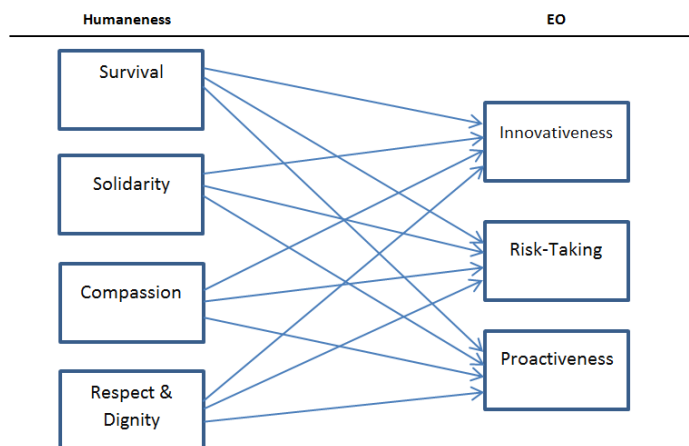


Figure 2 presents the individual dimensions of both constructs. All relations are expected to have a negative sign.

Figure 2: Conceptual model individual relationships



<sup>1</sup> The influence of gender is tested on both constructs. The main reason being the comparison of results to previous studies in terms of the measurement of humanness controlled for gender. On the dependent variable (EO) also three other control variables are tested which are not visualised in the conceptual model yet they are shortly introduced in section 2.5 and the results are presented in section 5.4. The three variables are: Registered/Unregistered business, age group and the level of education.

## 4 Methodology

### 4.1 Data collection

In order to obtain relevant data for this study, field research has been conducted in Dar es Salaam, Tanzania. The reason field research gained preference is because previous, similar in nature, research (Scholtens, 2011 ; Boom, 2012) shows that performing the study on site proved to be more efficient than using the internet or telephone for distributing the questionnaires. Hence, hard copy questionnaires were used and distributed to owner/managers of micro and small businesses.

The main reason Tanzania has been selected is because the existence of humanness has already been shown in this country by multiple researchers (Sigger, Polak & Pennink, 2010 ; Scholtens, 2011). This justifies using the Humanness scale in this country setting. Coming from the aforementioned established and validated scale this study then continues to look for relations the concept has to other concepts which in this case is the EO. Another reason Tanzania has been selected is because it very well fits the criteria of being a developing country, something where this study is specifically focusing on given its link to LED. Furthermore, the EO literature also argues more research is needed in a sub Saharan developing country perspective (Wales, Gupta & Mousa, 2011).

Another, more practical, reason to explain the choice of Tanzania is due to the contacts which were already established in Dar es Salaam which increased the feasibility and likelihood of succeeding. This lastly mentioned aspect gave the author access to a small network of relevant business people working in the private sector. Before distributing the actual questionnaires various local experts, generated from this existing network, were consulted in order to gain justification regarding the questions asked, language, general information, and distribution.

The city of Dar es Salaam is the largest commercial city of Tanzania and is located directly at the Indian Ocean making it an important transport hub. In all of Tanzania the labor force consists of 18.7 million people and in Dar es Salaam the entire population is 4.4 Million<sup>2</sup>. This makes Dar es Salaam the most densely populated city of Tanzania. Unfortunately no accurate data exist on the total number of entrepreneurs or owner/managers of SME's living in the city. Hence, which makes it more difficult to calculate an exact required sample size. The literature however suggests to aim for a sample of around 200 in cases when the population size is unknown (Thomas, 2004).

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<sup>2</sup> National bureau of statistics, Tanzania in figures. Source:  
[http://www.nbs.go.tz/takwimu/references/Tanzania\\_in\\_figures2012.pdf](http://www.nbs.go.tz/takwimu/references/Tanzania_in_figures2012.pdf)

The questionnaires were to be filled out anonymously and were all distributed in person. In most cases the researcher was present while the list was filled out being able to directly answer the questions of the participants. The survey has only been provided in the English language. The reason not to translate into Kiswahili was that three local experts individually concluded, after reading the list of questions, most entrepreneurs/managers would be able to fill out the list in English.

The questionnaires were distributed using various channels. First of all an NGO (IBUTTI) was consulted which has a quite extensive network of small entrepreneurs and also organizes networking events and trainings. During two of their events questionnaires have been distributed to entrepreneurs /managers working in various types of industry. Subsequently, some of the contacts made during the events led to access into other networks of entrepreneurs/managers. Secondly, various contacts via the Institute of Finance Management (IFM) were used to find suitable respondents. Finally, questionnaires have been randomly distributed in the city center where multiple entrepreneurs/ managers have been approached and asked if they were willing to participate.

Of the in total 200 questionnaires distributed, 139 were returned. Hence, yielding a response rate of 69.5 %. Of the 139 returned questionnaires seven participants were ignored because they were not from African descent. Finally, of the remaining 132 questionnaires used for analysis, 75 are male (56.8%) and 57 are female (43.2%). With the number of male respondents being higher than the female respondents the literature seems to correspond with the results in practice. As theory argued that entrepreneurship in Tanzania is still male dominated and an estimated 43 % of micro and small businesses are owned/managed by women (Stevenson & St-Onge, 2005).

Table 1 gives a clear overview on the distribution of the participants in terms of their backgrounds.

	Frequency	Percentage
<i>Age :</i>		
20-30	16	12.1
31-40	55	41.7
41-50	39	29.5
51 +	22	16.7
<b>Total</b>	132	100.00
<i>Education:</i>		
Primary school	15	11.2
Secondary school	56	42.4
1 <sup>st</sup> degree (Univ.bachelor)	41	31.1
Master's degree / post graduate	20	15.2
<b>Total</b>	132	100.00
<i>Registered:</i>		
Yes	111	84.1
No	20	15.2
<b>Total</b>	131	99.2

Table 1: Distribution of participants' background

	Frequency	Percentage
<i>Gender:</i>		
Male	75	56.8
Female	57	43.2
<b>Total</b>	132	100.00
<i>How many employees:</i>		
1-5	81	61.4
6-49	46	34.8
50-100	4	3.0
<b>Total</b>	131	99.2
<i>Establishment:</i>		
1-5 years ago	55	41.7
6-10 years ago	51	38.6
11-20 years ago	18	13.6
21+ years ago	5	3.8
<b>Total</b>	129	97.7



## **4.2 Scales and measures**

Both the degree of Humanness as well as the level of EO are measured using a questionnaire(appendix 3) including 42 questions covering both concepts and seven general questions. The first concept (Humanness) uses the questions developed by Sigger, Polak & Pennink (2010)(Appendix 2). In addition, taking into account the suggested adjustments of both Scholtens (2011) and Boom (2012). The scale has been developed as a measurement tool for Humanness. The scale uses a total of 33 questions to cover the four dimensions; survival , solidarity, compassion & respect/dignity. The other concept (EO) is measured using an adopted version of the EO scale (Covin and Slevin, 1989)(Appendix 1). This particular scale is in the literature widely used to measure entrepreneurial orientation. The three original dimensions; Innovativeness, risk taking and proactiveness are used covering 3 questions per dimension. Given that the original questions are more focused on larger firms/enterprises and this study specifically focuses on micro and small businesses, the questions have been adopted accordingly with the help of local experts.

For both concepts a five-point Likert scale is used to rate the individual items. 1 indicates strongly disagree and 5 strongly agree. All negative questions have been reversed in order to be able to perform correct comparisons. Furthermore, all dimensions have been grouped into seven scales representing both Humanness and EO.

The items per dimension are summed and divided by the number of items in order to calculate the means for the individual dimensions. The same has been done in order to get the total mean scores for both concepts. In terms of rating the means the following rating has been used. When the score is lower than 2.4 there is a low level of Humanness and a negative EO. Between 2.5 and 3.5 a moderate level of both Humanness and EO is present. Scores higher than 3.6 indicate a high level of Humanness and a high EO.

## **4.3 Means and reliability**

Based on the above explanation, the results of table 2 can be assessed. Table 2 presents the means and standard deviations for both concepts and individual dimensions. For the Humanness dimension all scores are above 3.6 indicating a high mean level of Humanness among the respondents. Focusing on the EO means, only the dimension innovativeness scores high whereas the other two dimensions even as the general EO score is considered moderate. In terms of the standard deviations, the high scores indicate that the scores are not closely distributed to the mean. A possible explanation for such a large deviation can be sought in the fact that within the group of respondents there is a considerable difference in the age of the entrepreneurs as well as their level of education and size of the firm. In addition, this means that the sample size has been fairly random and the opinion of people seems to vary heavily depending on their background.

Table 2: Means and Standard Deviations

	N	Mean	Std. Deviation
<b>Humanness</b>	<b>129</b>	<b>3.992</b>	<b>.862</b>
<i>Survival</i>	<b>131</b>	<b>4.231</b>	<b>.790</b>
<i>Solidarity</i>	<b>130</b>	<b>3.724</b>	<b>.922</b>
<i>Compassion</i>	<b>127</b>	<b>4.203</b>	<b>.811</b>
<i>Respect &amp; Dignity</i>	<b>127</b>	<b>3.811</b>	<b>.928</b>
<b>Entrepreneurial Orientation</b>	<b>132</b>	<b>3.486</b>	<b>1.011</b>
<i>Innovativeness</i>	<b>131</b>	<b>3.77</b>	<b>1.035</b>
<i>Risk-taking</i>	<b>132</b>	<b>3.33</b>	<b>.941</b>
<i>Proactiveness</i>	<b>132</b>	<b>3.357</b>	<b>1.058</b>

Another aspect important to assess the degree of reliability is to calculate if the data is normally distributed. Appendix 4 shows the normal q-q plots for both constructs as well as each individual dimension. Based on the plots, both the constructs and dimensions seem to be normally distributed.

Furthermore, the internal consistency or inter item reliability has been calculated using Cronbach's alphas. The alphas have been calculated for both construct and each dimension individually.

Specifically the Cronbach's alphas show whether the individual items within each scale measure the same underlying construct. In the literature it is generally accepted that using a Cronbach's alpha of 0.6 or higher indicates an intrinsically correct and reliable scale.

Table 3 presents all alpha's and shows that all items are reliable to use in the study except for the risk-taking dimension of EO. This dimension shows a Cronbach alpha of 0.434 which is below the 0.6 threshold. In appendix 5 (A and B) all Cronbach's alphas when an item is deleted is presented. When focusing specifically on the risk-taking dimension (see appendix 5B3), it shows that when the third risk item will be deleted the new Cronbach Alpha becomes 0,612 which is an acceptable value. This basically shows that the other two items left in the dimension together represent a better measurement of the dimension than when combined with the third.

When focusing on all the other dimensions of both constructs in terms of item deleted, the data indicates no large improvements of the alpha's in all cases (except risk-taking ). There are only few items which improve however only with 0.01 and 0.02 which is such a minimal effect that leaving the items as they are is more practical. For the risk-taking dimension however, the third item will be deleted (risk3) in order to increase the reliability of the scale.

Table 3 : Cronbach's Alphas

	Cronbach's Alphas	Nr. Of items
<b>Humanness</b>	<b>.910</b>	<b>33</b>
<i>Survival</i>	<b>.694</b>	<b>8</b>
<i>Solidarity</i>	<b>.716</b>	<b>7</b>
<i>Compassion</i>	<b>.754</b>	<b>8</b>
<i>Respect &amp; Dignity</i>	<b>.810</b>	<b>10</b>
<b>Entrepreneurial Orientation</b>	<b>.843</b>	<b>9</b>
<i>Innovativeness</i>	<b>.658</b>	<b>3</b>
<i>Risk-taking</i>	<b>.434</b>	<b>3</b>
<i>Proactiveness</i>	<b>.792</b>	<b>3</b>

Finally, a Factor analysis<sup>3</sup> has been performed in order to assess the validity of the scales used in this research. The Factor analyses are performed for both constructs and are presented in Appendix 6 A for the Humanness part and in B for EO. In addition, they are performed using the Principal components analysis in combination with the Varimax rotation method.

Starting with the Humanness scale, first it has been determined that the data is suitable to perform factor analysis on. Based on the Kaiser-Meyer-Olkin measure, which should be greater than 0,6 and Bartlett's test of sphericity, which should be significant, both conditions are met (Appendix 6A).

In appendix 6A1 the initial Eigenvalues are listed and it shows that, based on the Kaiser criterion, there are eight components which have been extracted with a score above 1,0 on their Eigenvalues. Together these components explain 64,19% of all variance. When using the eight suggested components in a rotated component matrix (Appendix 6A2) it becomes clear that not all items seem to load in ways they are expected and no clear pattern emerges. A reason for this might be that the Kaiser criterion tends to extract too many components (Pallant, 2005). Therefore the aforementioned author argues to use a parallel analysis which would be more accurate.

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<sup>3</sup> The reason the factor analysis has been performed after calculating the Cronbach's alphas is that we wanted to use the same Humanness scale as used by Sigger, Polak, Pennink (2010) Scholtens (2011) & Boom (2012). The aforementioned authors already proved the validity of the instrument. When changing the items again based on the outcomes of the factor analysis of this study the setting keeps on changing which is inefficient when comparing the results of the Humanness scale to previous and/or future studies.

The parallel analysis is based on the calculation of average Eigenvalues from randomly generated correlation matrices. Nonetheless, the calculation is tailored based on the number of variables and subjects of this research. When performing the analysis, the number of components is determined by comparing the randomly generated numbers to the results of the Eigenvalue totals. All totals which are higher than the ones in the random set should be retained.

In Appendix 6A3 it shows that the number of components accepted becomes four. This is also the number of component used in previous research using the same scale. Together these four factors explain 49,19 of all variance. Furthermore, the factor analysis shows no further evidence to change the composition or loading of the dimensions. Hence, no communality items are found below 0,3 indicating that no items are expressively, negatively influencing the efficiency. Therefore this study will continue to use the four component structure as it is.

Also for the EO scale a factor analysis has been performed. First of all the Kaiser-Meyer-Olkin measure and Bartlett's test of sphericity are both positive with the former being 0.863 and the latter significant (Appendix 6B). In appendix 6B1 the initial Eigenvalues are listed and it shows that, based on the Kaiser criterion, there are two components which have been extracted with a score above 1,0 on their Eigenvalues. Together these components explain 64,14% of all variance. Next to the Kaiser criterion also a parallel analysis has been performed for the EO scale. In appendix 6B3 it shows that again two factors are assigned to best measure EO. Unlike in the case of the Humanness scale, this time the Kaiser criterion is in accordance with the factor analysis.

In terms of the best loadings to the two factors, the new rotated component matrix (Appendix 6B4) shows the best combination of factors. The most efficient way of composing both factors designed to measure EO will first of all be to use only two components instead of the original three. In order to get the highest loadings to both components the matrix shows Innovativeness and Risk-taking should be combined into one. Furthermore, one of the Innovativeness items has a higher loading under the second component. In other words, one item (Innov2) will be added to Proactiveness. With one risk item being previously omitted due to a negative influence on the Cronbach Alpha, this leaves the new EO scale now to be consisting out of two components(Innovativeness/Risk-Taking & Proactiveness) covering a total of eight items (questions).

In order to get a clear overview of the changes Appendix 6B4 presents the new arrangement of the EO items. In addition, the table below(table 4), shows the new Cronbach's alphas. Compared to the previous Cronbach's alphas (Table 3), the new arrangement increased the alpha's and thus increased the inter item reliability of the EO scale. In terms of the Cronbach's alpha's when item deleted there now is no further need to delete any item in order to increase the alpha's. Appendices 6C1-3 show the specific statistics justifying the aforementioned statement.

Table 4 : Cronbach's Alphas based on new item arrangement

	Cronbach's Alphas	Nr. Of items
<b>Entrepreneurial Orientation</b>	<b>,861</b>	<b>8</b>
<i>Innovativeness &amp; Risk-taking</i>	<b>,797</b>	4
<i>Proactiveness</i>	<b>,805</b>	4

#### 4.4 Consequences for the hypotheses

Based on the new combination of items and because Innovativeness and Risk-taking are now combined into aspect there are various changes in the initial hypotheses. The hypotheses which change are described and renamed below. All other hypotheses remain in their present state.

First of all hypotheses 2a and 2b are now combined into one hypothesis. Because hypothesis 2c remains as it is it will not be renamed and the new (combined) hypothesis will be:

***Hypothesis 2ab*** : Owner/ managers that have a high score on the humanness values will show a lower degree of Innovativeness/Risk-Taking than those Owner/ managers that do not score high on the humanness values.

The next changes occur in section 3.5 which focuses on all dimensions of both concepts. Hypotheses 4a and 4b will be combined into:

***Hypothesis 4ab*** : Owner/ managers that score high on Survival will show a lower degree of Innovativeness/Risk-Taking than those Owner/ managers that do not score high on Survival.

Furthermore, hypotheses 5a and 5b will also be combined:

***Hypothesis 5ab*** : Owner/ managers that score high on Solidarity will show a lower degree of Innovativeness/Risk-Taking than those Owner/ managers that do not score high on Solidarity.

This also holds for hypotheses 6a and 6b:

***Hypothesis 6ab*** : Owner/ managers that score high on Compassion will show a lower degree of Innovativeness/Risk-Taking than those Owner/ managers that do not score high on Compassion.

And finally also for hypotheses 7a and 7b:

***Hypothesis 7ab*** : Owner/ managers that score high on Respect & dignity will show a lower degree of Innovativeness/Risk-Taking than those Owner/ managers that do not score high on Respect & dignity.

## 5 Analyses and results

### 5.1 Gender differences

Now that the measurement instruments are tested on reliability and validity, it is ready for comparison and further use. Before looking at the correlations between the two central concepts in this study first another important comparison will be made. Because this study also focuses on gender differences in terms of entrepreneurship, an independent- samples T-test is performed to be able to see if the mean scores of men and women differ. Based on the results of the Global Entrepreneurship Monitor(GEM), it is expected that the EO of women is significantly different than the EO of men. In addition, the EO of women is expected to be lower than the EO of men because studies show men are generally more involved in entrepreneurship(Allen et al.2007). In addition, specifically for Tanzania, research shows that approximately 43 percent of the micro and small businesses were owned by women(Stevenson & St-Onge, 2005).

Furthermore, it will be interesting to see to what extent the humanness scores differ in terms of gender and compare the results to previous studies focusing on measuring Humanness.

First the t-test has been performed for the mean scores of Humanness (Appendix 7A1). The results in table 5 show that there are no significant values found for the Levene's test. This indicates that the variances are approximately equal. Looking at the results of the t-test, for all variables the t values are statistically significant. *This means the null hypothesis may be rejected and thus there is a significant difference in the mean scores between man and women. In addition, all female mean scores are higher than the scores of males.* This means that based on the empirical results of this study, women appear to have a higher level of Humanness than men. When comparing this result to both the studies of Sigger et al. (2010) and Scholte (2012) who also look into gender differences, there seem to be different outcomes. Both the aforementioned studies namely do not find any statistically significant difference between the scores of males and females whereas this study finds all variables to be significant.

Table 5 : independent samples t-test: Humanness

	Gender	N	Mean	Sig. (Levene's test)	Sig.(t-test)
<b>Humanness</b>	Male	<b>75</b>	3,841	,932	0,000*
	Female	<b>57</b>	4,190		
<i>Survival</i>	Male	<b>75</b>	4,109	,309	0,001*
	Female	<b>57</b>	4,389		
<i>Solidarity</i>	Male	<b>75</b>	3,596	,566	0,001*
	Female	<b>57</b>	3,908		
<i>Compassion</i>	Male	<b>75</b>	4,103	,722	0,004*
	Female	<b>57</b>	4,346		
<i>Respect &amp;Dignity</i>	Male	<b>75</b>	3,578	,315	0,000*
	Female	<b>57</b>	4,099		

\*Significant at the 0,05 level

Next to the gender comparison in terms of Humanness, the same kind of analysis has been done in terms of EO. Appendix 7A2 shows all results and in table 6 a summary is provided. First of all the results for Levene's test of equal variances shows to be not significant meaning that we may assume that the variances are approximately equal. Looking at the results of the t-test, none of the values are significant. *This indicates that there is no statistically significant difference between the EO scores of man and women. This result does not correspond with the expectation of this study that the EO of man would be higher than that of women.* A reason for this difference in results might be that, despite that the literature argues men being more involved in entrepreneurship and the country being patriarchal (Jagero & Kushoka, 2011), it is also a trend that in countries where the general income per capita is relatively low women tend to be more involved (often out of necessity) in entrepreneurship (Allen et al. 2007 ; Kelly et al. 2011). Furthermore, another study shows that there is a trend in developing countries, as well as in most Sub-Saharan countries, which shows the involvement of women in entrepreneurship is increasing (Tundui & Tundui, 2012).

Table 6 : independent samples t-test: EO

	Gender	N	Mean	Sig. (Levene's test)	Sig.(t-test)
<b>EO</b>	Male	<b>75</b>	3,605	,599	,130
	Female	<b>57</b>	3,796		
<i>Innovativeness/Risk-Taking</i>	Male	<b>75</b>	3,967	,707	,061
	Female	<b>57</b>	4,205		
<i>Proactiveness</i>	Male	<b>75</b>	3,243	,547	,345
	Female	<b>57</b>	3,387		

\*Significant at the 0,05 level

## 5.2 Correlations

First of all the correlations between the two central concepts, and their dimensions, will be assessed by using the Pearson correlation test. This test gives an indication if there is a relation between the variables and if this relation is positive or negative.

Arguably the most important correlation in answering the central research question of this study is the one between Humanness and EO. When computing Pearson's  $r$  ( $r = -.088$ ), using the means of both Humanness and EO, the results indicate the relation to be, as expected, negative. Nonetheless the relation is not statistically significant. For all analyses in this section the missing values have been excluded pair wise in order to make optimal use of the answers given in the questionnaires. Table 7 shows the rest of the correlations first for the individual dimensions of EO and in table 8 also for the dimensions of Humanness.

The results in table 7 shows that the individual correlations between the dimensions of EO and Humanness are only negative for Proactiveness. The correlation between Innovativeness/Risk-Taking is slightly positive. Nonetheless both correlations are not statistically significant.

*Table 7 : Correlations between Humanness and the individual EO dimensions*

		<b>Humanness</b>
<b>EO</b>	Pearson correlation	<b>- ,088</b>
	Sig. (2 tailed)	<b>,317</b>
	(N)	<b>132</b>
<b>Innovativeness/ Risk-Taking</b>	Pearson correlation	<b>,020</b>
	Sig. (2 tailed)	<b>,821</b>
	(N)	<b>132</b>
<b>Proactiveness</b>	Pearson correlation	<b>- ,162</b>
	Sig. (2 tailed)	<b>,063</b>
	(N)	<b>132</b>

Focusing on the specific dimensions of Humanness, the correlations are all negative except for the Survival dimension which is slightly positive ( $r=.055$ ). Furthermore only the solidarity dimensions is significant ( $r=-0,204$  :  $p<0,05$ ).

*Table 8 : Correlations between EO and Humanness dimensions*

		<b>EO</b>
<b>Humanness</b>	Pearson correlation	<b>- ,088</b>
	Sig. (2 tailed)	<b>,317</b>
	(N)	<b>132</b>
<b>Survival</b>	Pearson correlation	<b>,055</b>
	Sig. (2 tailed)	<b>,529</b>
	(N)	<b>132</b>
<b>Solidarity</b>	Pearson correlation	<b>-,204*</b>
	Sig. (2 tailed)	<b>,019</b>
	(N)	<b>132</b>
<b>Compassion</b>	Pearson correlation	<b>-,005</b>
	Sig. (2 tailed)	<b>,952</b>
	(N)	<b>132</b>
<b>Respect &amp; Dignity</b>	Pearson correlation	<b>-,139</b>
	Sig. (2 tailed)	<b>,111</b>
	(N)	<b>132</b>

\* Correlation is significant at the 0.05 level (2-tailed)

As the results in both tables above are simplified, the matrix with the complete set of results can be found in appendix 8A1 and 8A2.



### 5.3 Control variables

Before starting with the regressions a set of control variables will first be tested directly to the dependent variable to see which are the most important. The most important one's will subsequently be used in the various regressions presented in the next section.

In terms of this study, is the influence of gender is considered the most important control. When using gender as a control variable in relation to Humanness there is a significant difference between men and women (for full results see Appendix 9.1). Specifically, the Std.  $\beta$  belonging to the female control group is ,364 higher than that of the male group. In addition, a significance level of  $p=,000$  and an  $R^2$  of ,133. This result is consistent with earlier findings in section 5.1 where the t-test results also show that women have higher scores than males.

When doing the same analysis only now using EO as the depended variable, the regression results are insignificant(for full results see Appendix 9.2). This indicates there is no statistically significant difference on the score of EO when controlling for gender. ( $p=,130$  ; Std $\beta=,133$  ;  $R^2= ,018$ ). Again, when comparing this result to the results of section 5.1 there is consistency since also using a t-test no statistically significant differences are found.

Besides the most relevant control variable, gender, also three others have been analyzed to see how this changes the regression. Specifically, these variables have been analyzed using EO as the dependent variable.

First, the regression will be controlled for registered and unregistered businesses (for full results see Appendix 9.3). In this respect, unregistered businesses score significantly lower on EO than registered businesses do (Std.  $\beta= ,-.354$  ;  $P=,000$  ;  $R^2= ,125$ ). This means registered firms tend to have a higher EO and a higher EO is in the literature related to increased levels of success. Therefore the registration of small individual firms might be something which should be stimulated among entrepreneurs in Tanzania.

The second control variable is age. The age category was already grouped into four age groups. In order to test the influence of age in EO dummy variables have been created and the regression is done using the age group 20-30 (youngest) as the test(default) variable. In all age categories there is no sign of statistically significant increased (or decreased) values of EO when belonging to a certain age group. The results of all specific age groups can be found in appendix 9.4.

The last control variable used in this report is level of education. Similar to the age groups, the level of education is divided into groups. The test variable in this case is primary school. When looking at the differences compared to one level higher, in terms of education, there is no statistical significant prove that participants who attended secondary school have higher EO score ( $p=.236$ ). For the next two levels higher however, there is statistical significant evidence the EO score is higher than compared to having only attended primary school. Specifically, for the category 1<sup>st</sup> degree/university bachelor the Std.  $\beta$  is ,427 ( $p=.001$ ) meaning that people in this category score higher on the EO scale than people with only primary school. Also for the next (and highest) level of education there is a positive significant Beta: Std  $\beta = ,546$  ( $p=.001$ ). This specifically means Tanzanians who have a master's degree(or post graduate) tend to score higher on the EO scale than people who only attended primary school. For full results of this last control variable see appendix 9.5.

Based on the above results of the various control variables, the age group variable will not be added to the regression equations in the next section. This because there is no sign of statistically significant increases or decreases in the value of EO. Because all other variables seem to have a significant influence, the final set of control variables will be : Registered/Unregistered business, gender and the level of education.

## 5.4 Regression

Now that we have determined there are indeed correlations between Humanness and EO, the next step is to assess the direction and strength of the relationships. Using multiple linear regression this study aims to predict to what extent the relationships are causal and how they influence the changes between the different variables. The analysis starts with a one-on-one regression between the main concepts Humanness and EO. Subsequently hierarchical multiple linear regression analyses is performed between Humanness and the dimensions of EO, between the dimensions of Humanness and EO and finally on the third level between all dimensions of both concepts. In addition, in all regressions the final set of control variables, as presented in section 5.3, are included.

### 5.3.1 Humanness (dimensions) and EO

First of all a one-on-one regression has been performed analyzing the relation between the two central concepts. In this analysis Humanness is identified as being the independent variable and EO as the dependent. In Appendix 10.1 all results are presented and table 9 shows a summary.

Table 9: Model summary influence Humanness on EO

Model	R	R Square	Adjusted R Square	Std. Error of the estimate	Unstandardized coefficients: Beta	Std. Beta
2	,568 <sup>b</sup>	,322	,290	,60513	,239	,159

<sup>b</sup>Predictors: (constant) Master's degree/ post graduate, Gender, Primary school, 1<sup>st</sup> degree univ. bachelor, registered business or not, total mean Humanness

The results of the one-on-one regression show that the model has reasonable explanatory power. With the  $R^2$  being ,322 and the F value ( $F=9,830$ ) with a significant level of  $p=,000$  the null hypothesis, that the model has no explanatory power, can be rejected. Specifically, the results indicate that 32,2% of all variability in EO can be explained by the variance in the presence of Humanness. In terms of the direction, the Beta indicates ( $\beta= ,239$ ) that for each standard deviation unit of presence of Humanness ,239 is positively influencing EO. When applying a confidence level of  $p<0,1$  it can be argued there is a weak statistically significant relation between the tested variables ( $p=,095$ ). However, given that the expectation, based on the literature, suggested a negative relation there is no evidence to support hypothesis 1. *Hence, based on the results of the one-on-one regression Hypothesis 1 is rejected.*

The one-on-one regression uses the grouped mean of the independent variable's dimensions. In order to analyze the independent influence of the four dimensions of humanness a multiple regression analysis has been performed (for full results see appendix 10.2). Based on the results of the multiple regression the  $R^2$  is ,360 which is significant with  $F=7,572$  ( $p=,000$ ). This means that 36% of all variability in EO can be explained by the presence of Humanness. Specifically the following regression equation presents the results:

$$\begin{aligned} \text{Entrepreneurial Orientation} = & 2,182 + 0,365x \text{ Survival} - 0,107x \text{ Solidarity} + 0,223x \text{ Compassion} \\ & - 0,234x \text{ Respect/dignity} + 0,273x \text{ Gender} - 0,530x \text{ Registered} + \\ & 0,066x \text{ primary school} + 0,502x \text{ Bachelor} + 0,705x \text{ Master} + \epsilon \end{aligned}$$

The results in the above regression equation show that two of the four humanness variables have a negative influence, whereas it was expected all variables would have a negative influence on the EO. The influence of survival is the greatest of all humanness variables and is positive. In addition, the survival variable shows to be significant at the  $p<0,1$  level ( $p=,062$ ). Furthermore, the other humanness variables are not significant. In terms of the control variables, gender has a statistically significant positive influence. That is, females tend to have a ,273 higher score on EO than males ( $p=,027$ ). Looking at the control for registered versus unregistered business the results show there is statistically significant ( $p=,005$ ) evidence that unregistered businesses score ,530 lower on EO than registered businesses do. And finally in terms of education it can be argued that a higher level of education has a positive and significant influence on the level of EO. Nonetheless when looking at the hypothesis related to the above regression equation, hypothesis 3, all have to be rejected.

### 5.3.2 Humanness and EO (dimensions)

In this section both the sole and multiple regressions for Humanness and the EO dimensions will be described starting with the one-on-one regression (full results appendix 10.3) *it becomes evident that hypothesis 2ab should be rejected*. The expected result would be a negative relation between the two variables. However the results show that there is a statistically significant positive result. This means that based on the results of this study people who have a higher score on humanness are likely to score higher on the Innovativeness risk taking variable of the EO scale ( $p=,003$  ;  $\beta=,430$ ). Furthermore the  $R^2$  is ,328 meaning that 32,8% of the variability in Innovativeness/Risk-Taking can be explained by the Humanness mean.

When looking at the same relation using multiple regression, starting with the dimension of EO; Innovativeness/Risk-Taking, the model has even more explanatory power (full results appendix 10.4). First of all, looking at the results of the analysis of variances the model indicates the model proves to have explanatory power ( $p=,000$ ). The  $R^2$  is 0,429 which indicates that 42,9 % of the variability in Innovativeness/Risk-Taking can be explained by the Humanness dimensions. The following regression equation specifies the results.

$$\begin{aligned} \text{Innovativeness/Risk-Taking} = & 1,527 + 0,680x \text{ Survival} - 0,075x \text{ Solidarity} + 0,295x \text{ Compassion} \\ & - 0,446x \text{ Respect/Dignity} + 0,297x \text{ Gender} - 0,156x \text{ Registered} - \\ & 0,076x \text{ primary school} + 0,597x \text{ Bachelor} + 0,813x \text{ Master} + \varepsilon \end{aligned}$$

Against the expected, again two Humanness variables show to have a positive influence on the EO variable Innovativeness/Risk-Taking. Especially survival proves to have a relatively high, and significant, positive influence on Innovativeness/Risk-Taking ( $\beta=,680$ ). Furthermore, *the negative and significant ( $p=,017$ ) influence of Respect/Dignity on Innovativeness/Risk-Taking makes us able to support Hypothesis 7ab*. In terms of the weakly negative influence of Solidarity ( $\beta= -,075$ ), *there is not enough statistically significant evidence ( $p=0,637$ ) to support 5ab therefore this hypothesis will be rejected*. Furthermore, based on the above results also hypotheses 4ab and 6ab will have to be rejected.

In terms of the control variables, the results are comparable to the first regression equation. Females again prove to have a higher EO score since the  $\beta=,297$  and significant ( $p=,012$ ). Furthermore unregistered businesses have a lower EO score based on this regression and the two highest level of education also tend to have statistically significant higher scores on EO.

Now the second EO variable, Proactiveness will be analyzed starting again with sole regression followed up by multiple. The results of the sole regression (full results appendix 10.5) again is statistically significant in terms of the ANOVA table ( $p=,000$ ) Therefore the null hypothesis can be rejected and thus the model has explanatory power.

As argued in the literature, an important attribute of Proactiveness is aggressiveness towards the competition in order to achieve a better competitive positioning of the business( Knight,1997). This attribute is something which is not in line with the values and beliefs related to Humanness and therefore the expected result was a negative relation. Nonetheless, apparently the two attributes do not have a relation at all given the insignificant and close to zero beta.

Specifically the  $R^2$  is ,264 indicating that 26,4% of the variability in Proactiveness can be explained by the total Humanness mean. Nonetheless hypothesis 2c has to be rejected ( $\beta = ,048$  ;  $P = ,788$ ).

Continuing with multiple regression(full results appendix 10.6), results show an  $R^2$  of ,270. This score indicates that 27% of the variability in Proactiveness can be explained by Humanness and the control variables.

The regression equation that suits this particular model is the following:

$$\begin{aligned} Proactiveness = & 2,838 + 0,051x \text{ Survival} - 0,140x \text{ Solidarity} + 0,152x \text{ Compassion} \\ & - 0,022x \text{ Respect/Dignity} + 0,249x \text{ Gender} - 0,904x \text{ Registered} + \\ & 0,207x \text{ primary school} + 0,408x \text{ Bachelor} + 0,598x \text{ Master} + \epsilon \end{aligned}$$

The above equation shows that both solidarity and Respect/dignity have a negative influence on Proactiveness. Nonetheless for both variables counts that they are not statistically significant. in addition, also the other two, positively influencing, variables are not significant. looking at the control variables, the difference in gender has no statistically significant influence. What is significant on the other hand, is both the influence of being registered or not and the two highest levels of education also have a significant positive influence on the degree of EO.

In terms of the hypotheses the above results makes us able to reject hypotheses : 4c 5c, 6c and 7c. As all hypotheses have now been accounted for, the table below (table 10) will give an overview of all relevant regression outcomes.

Table 10 : summary regression outcomes<sup>4</sup>

Dependent variables	Independent variables										
	Humanness , total mean				Survival, Solidarity, Compassion, Respect/Dignity						
	R <sup>2</sup>	F	β	Constant	R <sup>2</sup>	F	Constant	β Survival	β Solidarity	β Compassion	β Respect/Dignity
<b>EO</b>	,322	9,830	,239***	2,438	,360	7,572	2,182	,365***	,107*	,223	-,234
Innovativeness/Risk-Taking	,328	10,107	,430**	1,968	,429	10,118	1,527	,680*	-,075	,295	-,446**
Proactiveness	,264	7,430	,048	2,908	,270	4,971	2,838	,051	-,140	,152	-,022

\* significant at the 0,01 level

\*\* significant at the 0,05 level

\*\*\* significant at the 0.1 level

Not all variables have the expected negative beta's and the influence on Humanness cannot be interpreted as very high. Hence, meaning that next to the already included control variables there are multiple other factors which influence the degree EO of Tanzanian small business owner/managers.

## 5.5 Final research model

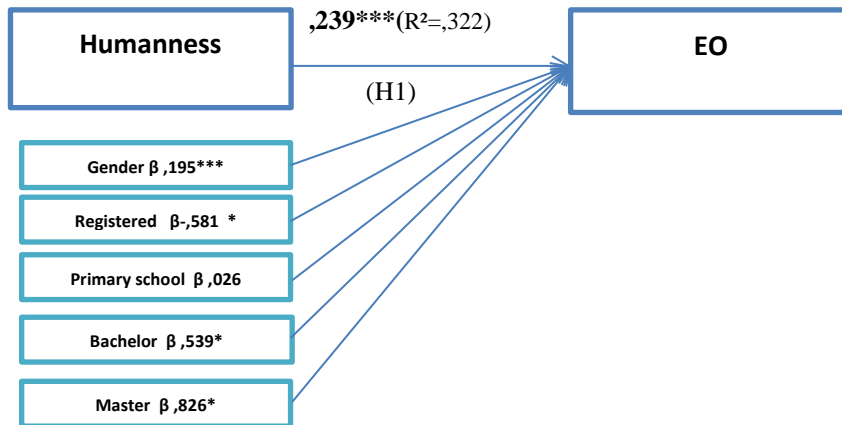
Now that all regression results have been presented, the research model will be discussed and visualized based on three layers. The three layers help interpreting the specific influence each construct and subsequent dimensions have on each other.

Figure 3 shows the direct relation between Humanness and EO. Based on the literature review it is expected that the Tanzanian owner/managers will have high scores on Humanness due to the importance of culture. This leaves fewer room for more individualistic features such as competitiveness and performance which are related to having a high EO. The owner/managers in Tanzania are, because of the importance of Humanness (Karsten & Illa,2005), believed to lay emphasis on these values and less on EO aspects which are closely related to individualistic interest's and outperformance of competition. As the EO score will get higher when firms become more aggressive towards competition, and this school of thought is said not to be part of the culture present in Tanzania (Poovan, du Toit & Engelbrecht,2006), the study expects the relation between Humanness and EO to be negative.

<sup>4</sup> All regression analyses have been tested for multicollinearity using the variance inflation factor (VIF) test. Results are presented in the coefficients table of each specific regression in appendix 10. The study uses 5 as it's critical value. All VIF scores are below this critical value meaning there is no reason to assume results are influenced by multicollinearity. In addition also all models have been tested for auto correlation using the Durbin Watson test. All scores are within the 1.7 to 2.3 range which indicates no or ignorable auto correlation.

In terms of general results, the scores of the Tanzanian managers on Humanness are indeed categorized as high(see section 4.3) and the scores of EO are labeled moderate. In terms of direction however, in general the sign is rather positive instead of an expected negative relation. In addition, the beta is ,239 and significant at the  $p < 0,1$  level. *The influence of Humanness on EO thus is positive meaning that hypothesis one cannot be supported and thus this data does not support the proposition that owner managers who have a higher (mean) score on the Humanness values will show a lower degree of EO.*

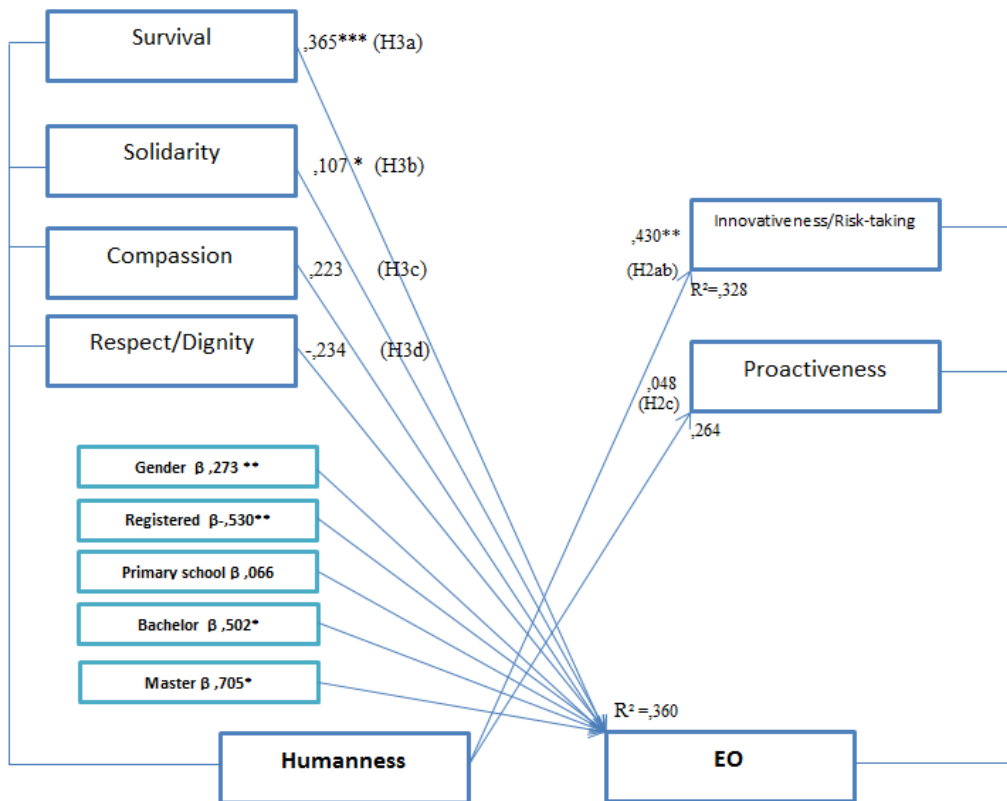
Figure 3, one-on-one relation Humanness & EO



\* significant at the 0,01 level \*\* significant at the 0,05 level \*\*\* significant at the 0,1 level

The second layer (figure 4) presents how the individual dimensions of Humanness influence EO. Besides, the model also shows how the Humanness mean influences the individual dimensions of EO. Again the expectation is the relationships to be negative. *The individual Humanness dimensions, in combination with the control variables, together explain 36% of all variability in EO meaning there are possibly multiple other factors influencing EO.* In terms of the variability in Innovativeness/Risk-Taking, 32,8 % can be explained by the Humanness dimensions. And finally 26.4% of the variability in Proactiveness which can be explained by Humanness.

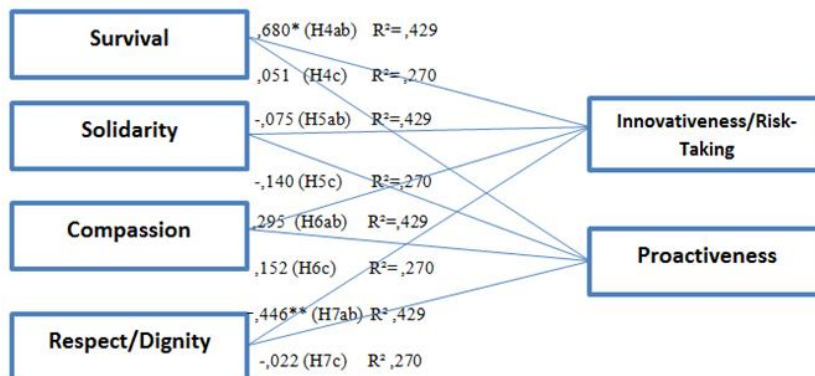
Figure 4, Multiple relationships Humanness & EO



\* significant at the 0,01 level \*\* significant at the 0,05 level \*\*\* significant at the 0,1 level

Finally, the final layer of the model (figure 5) shows the relationships between all individual dimensions of both constructs.

Figure 5, individual relations Humanness & EO <sup>5</sup>



\* significant at the 0,01 level \*\* significant at the 0,05 level

<sup>5</sup> All regressions in figure 5 have been performed with the same control variables as used in figure 4. For a better overview of the results they have not been visualized in the model.



Table 11 Gives an overview of all hypothesis and their results. The results will be subsequently be discussed and placed in a broader context in the next chapter.

Table 11: Summary table all hypotheses

Hypothesis	Notion	$\beta$	Result
H1	A higher score on Humanness shows a lower degree of EO	,239***	Rejected
H2ab	A higher score on the Humanness values shows a lower degree of Innovativeness/Risk-taking	,430**	Rejected
H2c	A higher score on the Humanness values shows a lower degree of proactiveness	,048	Rejected
H3a	A higher score on Survival will show a lower degree of EO	,365***	Rejected
H3b	A higher score on Solidarity will show a lower degree of EO	,107*	Rejected
H3c	A higher score on Compassion will show a lower degree of EO	,223	Rejected
H3d	A higher score on Respect/Dignity will show a lower degree of EO	-,234	Rejected
H4ab	A higher score on Survival will show a lower degree of Inovativeness/Risk-taking	,680*	Rejected
H4c	A higher score on Survival will show a lower degree of Proactiveness	,051	Rejected
H5ab	A higher score on Solidarity will show a lower degree of Inovativeness/Risk-taking	-,075	Rejected
H5c	A higher score on Solidarity will show a lower degree of Proactiveness	-,140	Rejected
H6ab	A higher score on Compassion will show a lower degree of Inovativeness/Risk-taking	,295	Rejected
H6c	A higher score on Compassion will show a lower degree of Proactiveness	,152	Rejected
H7ab	A higher score on Respect/Dignity will show a lower degree of innovativeness/Risk-taking	-,446**	Accepted
H7c	A higher score on Respect/Dignity will show a lower degree of Proactiveness	-,022	Rejected

\* significant at the 0,01 level \*\* significant at the 0,05 level \*\*\* significant at the 0.1 level

## 6 Discussion

Coming from a LED perspective, this study aimed at focusing on a specific group of local actors by looking into their specific entrepreneurial orientation and research how cultural values influence their entrepreneurial mindset. The results in the previous sections are not all in line with the expectations based on the literature review. Of the 15 hypotheses, only one found support based on the data collected in Dar es Salaam, Tanzania. Nonetheless, this means the data can be of high value to further developing a testable model looking into the relation between (management)culture and Entrepreneurship.

The exploratory design of the study made it possible to test an adopted version of the EO scale, and subsequently see to what extent this scale is influenced by the (management) culture of Tanzania. In a broader context this learns us more about the influence culture has on entrepreneurship, in a developing country setting.

This section will elaborate on the results and will try to give more meaning to them. Furthermore, both the practical and academic value of this study will be discussed as well as the study's limitations and suggestions for further research.

### 6.1 Elaboration on findings

First of all, the relationship between (management) Culture, as defined by Humanness, and Entrepreneurship, as defined by EO, has been empirically researched in this paper. Based on data collected in Dar es Salaam, a series of analyses have been performed producing multiple new insights into the aforementioned relation.

First of all, the general results regarding the actual presence of both Humanness and EO tell us that for the first concept a high presence has been measured and for the latter a moderate. When comparing the presence of Humanness to previous studies also measuring Humanness, the results can be called consistent as both the studies of Scholtens (2011) and Sigger, Polak & Pennink (2010) find a high ( $\mu > 3,6$ ) level of humanness in Tanzania. The high presence of Humanness indicates the concept of Humanness to be an important part of their (management) culture. The moderate degree of EO cannot be compared to previous studies as this is the first time the concept is used to measure entrepreneurial orientation in its adapted state and in a developing country. However, given that the level is moderate and not low means entrepreneurial orientation is relevant in a developing country and the results of this study might serve as a first benchmark for future EO research.

After some changes were made to the initial arrangement of items within the EO concept the model statistically proved to have a better loading which improves the reliability of the measurement instrument. Given that this study used the adopted EO scale for the first time it makes perfect sense some of the items were deleted, combined and/or changed dimension. Future research now has to prove the significance of the current setting.

All individual hypotheses were designed to give an answer to the question to what extent (management) culture influences the entrepreneurial orientation of micro/small business owners. Equally relevant in this question is the role of gender. The study expected to find higher levels of EO among the male respondents because studies show men are generally more involved in entrepreneurship(Allen et al.2007). In addition, for Tanzania, data indicates that entrepreneurship is primarily male dominated (Stevenson & St-Onge,2005). Nonetheless, most regression results show the score of females to be significantly higher. A possible explanation for this result might be the reason why women are involved in entrepreneurship in developing countries. In most cases, in regions where the income per capita is relatively low, this is out of necessity. (Allen et al. 2007 ; Kelly et al. 2011). This means that increasingly both men and women have to start up small businesses to make a living which makes them both more equally involved in entrepreneurship and in this specific study females score higher based on some of the regressions. Nonetheless, based on the t-test, the results are not statistically different between man and women. In addition, trends show that the gender based figures on entrepreneurship are more equal in developing countries(Tundui & Tundui, 2012. Hence, which can be called consistent to the results of this study.

Another important aspect in terms of the gender comparison is the fact that this study finds that women have a higher level of Humanness than men. This is inconsistent with previous findings (Sigger et al. 2010; Scholte, 2012) related to gender differences in relation to Humanness.

Because in all of the humanness dimensions the group/community and brotherly care are more important than individual interests or success (aspects related to a high EO), the study argued that a negative relation would be present between Humanness and EO. The results show however that some of the relations turn out to be positive, others only weak and only one is significantly negative as expected.

First, in terms of correlations, the main correlation between Humanness and EO is significant however the sign is positive instead on of the expected negative. In addition, this means there is no prove to accept H1. This means that a higher score on Humanness does not mean a lower degree of EO. Instead a slightly positive relation actually emerged. *This result indicates that on the general concept level attaching value to the strong cultural belief of Humanness does not seem to have a negative effect on a person's EO. Therefore it is most likely not specifically decreasing competitiveness and success in entrepreneurship.*

The solidarity dimension, which is not negative in sign but positive and significant, is built on the idea that the people believe that only by working solely together as a group things can be accomplished (Broodryk, 2006). This idea clearly conflicts with having a high EO which is more focused on individual success by being proactive and searching for new ideas and market asymmetries. Nonetheless this conflicting element, the empirical findings seem to prove otherwise since the relation is significantly positive. In addition, focusing on the individual relations there is a positive relation between Solidarity and both separate dimensions of EO, nonetheless neither one of them is statistically significant. *despite the insignificance, the negative sign might very well still implicate that only focusing on what is working for the group as a whole has a negative influence or is delaying the entrepreneurial orientation of people working in Tanzania.* This subsequently then probably has negative effects on a firm's competitiveness and success. Henceforth, given that high EO scores are related to increased levels of business performance and success (Rezaei, Ortt & Scholten, 2012).

Another interesting finding is that the regression model predicts that for every one point increase in Survival the degree of Innovativeness/risk taking will significantly increase ( $\beta = .680$  :  $p < 0,01$ ). This means that owner managers who are based on their culture used to share expertise and rely on each other in order to survive are positively influencing their level of being innovative meaning they take initiative and are willing to take more risk. This outcome shows that a developing country, which is built on a basis where there was nothing and people had to rely on each other to survive, builds to some extent a strong level of confidence which makes room for initiative and increased levels of risk-taking.

Given that the individual Humanness dimensions together explain 36% of the variability in EO makes that there are a lot of other factors which influence EO. This means that more research is needed into what influences the entrepreneurial orientation of owner/managers in developing countries such as Tanzania. As it appears culture, as defined by Humanness, does seem to have an influence however culture is far broader than only Humanness. In this regard, other cultural metrics might have to be used and combined with Humanness in order to get an even better insight into how (management) culture influences entrepreneurship.

## 6.2 Implications

This study uses the adopted version of the EO scale for the first time. As no other (known) metrics exist in measuring entrepreneurial orientation in developing countries, this study succeeded in taking a first step. Of course, being only used in just one developing country makes it not yet an instrument which can be compared to the original EO scale measuring the orientation in developed western countries. Nonetheless, the scale can be used as a benchmark and based on the results of this study can be used to also measure the EO in other developing countries. Once multiple studies have been conducted using the same scale the actual reliability of the scale can be confirmed.

In terms of the Humanness scale, it seems to be a good instrument to measure (management) culture in Tanzania (and perhaps other sub-Saharan countries). The results were high indicating that it is really an important aspect of the business culture in Dar es Salaam. What is more, the scale succeeds in measuring culture in Tanzania and is therefore in this respect a better instrument as more renowned conceptualizations of national culture such as Hofstede(1980) and Trompenaars(1994).

As for the role gender plays in EO, some of the results indicate no significant differences exist, yet some of the regressions do find an increased EO of females compared to males. Nonetheless given that the literature argues entrepreneurship to be more male dominated the results of this study emphasize that the role of females, coming from a strong patriarchal culture, is increasingly becoming important in Tanzanian entrepreneurship. Furthermore, women do seem to have a higher level on the Humanness dimensions which is not in accordance with previous studies. This could indicate that women in Tanzania more closely attached to their cultural beliefs than their male counterparts. A possible reason might be in the influence of the Western world and perhaps men are more often than women participating in Western influenced schooling/education. Subsequent, longitudinal, research is necessary to give meaning to the different level of Humanness measured between men and women.

Looking at the actual relation between Humanness and EO the study found that in general there is a slightly positive influence of humanness in relation to EO. Thus where a negative relation made perfect sense on paper, the reality does seem to be different. *Tanzanian business/owner managers are, as it appears, not slowed down or hindered by their strong cultural beliefs into having a high entrepreneurial orientation.*

## **6.2 Limitations and suggestions for further research**

In terms of limitations, this study knows a few. First of all, the individual concepts used in this study both have a western influence to them which might bias the actual representation of both features measured. For the Humanness scale this is only limited given that multiple studies already confirmed its validity and reliability. For the EO scale however, it is based on a typically western list of questions designed to measure EO. To increase the validity and reliability in a Sub Saharan country, the help of local actors has been used to make sure the questions make perfect sense in the cultural setting present at location. In order to improve and fine-tune the instrument however, studies must be repeated in other developing countries to see whether the EO scale is a valid instrument to measure entrepreneurial orientation.

Another, minor, aspect in terms of the actual scales is language. In the case of this study, the local experts advised that the questionnaire as it was written would be clear enough for the language level of the respondents. Nonetheless, during the process in some situations it became noticeable participants having minor difficulties with interpreting the questions. In this respect, future studies might consider to always offer two versions of the questionnaire. One in the English language and one in the mother tongue. This would probably contribute to a lesser degree of response error.

A final limitation is that because the total number of owner/managers of SME's living in Dar es Salaam was difficult to estimate we aimed for a sample of around 200. Despite having distributed 200, the final results delivered 139 questionnaires. This might have resulted in a minor bias. Besides, given that the questionnaires were distributed in only a few networks (and fairly random in the streets) there could be some response bias as people coming from the same networks might not be a good representation of the whole population. In addition, in order to achieve a good representation of all of Tanzania, also other cities should have been approached. Unfortunately however, this study was limited by time and financial constraints.

In terms of future research this study advises to continue to research the possibilities of the adapted EO measurement instrument. With this study being the first to use the scale specifically to measure EO in a developing country, other countries must follow in order to give more meaning to the metric. Next to further developing the EO scale, also the relation (management) culture has to entrepreneurship requires further investigation. As this result shows, there are evidently a lot of other (cultural) factors playing a role in being more or less entrepreneurial and hence having a high EO. Once more knowledge has been gathered in terms of the role of (management) culture plays in entrepreneurship also country comparisons can be made facilitating in-depth understanding into the difference between Western and non-Western business cultures.

## 7 Final Conclusion

This study started with the question of how culture influences Entrepreneurship. After Culture has been defined by the Humanness concept and entrepreneurship by EO, a negative relation has been hypothesized. The study however must conclude no negative significant relation exist between the two main concepts and only 36 % of the variance in EO can be explained by the influence of Humanness. Because the main relation turns out to be positive instead of negative, only one of the hypotheses could be supported. Nonetheless, some of the positive relations are significant meaning that the results can be respectively used to improve the EO scores of Tanzanian owner/managers.

What is more, the study succeeds in concluding that the influence of gender in entrepreneurship is more equal than expected. That is, women, in a developing country such as Tanzania, seem to have the about the same (and in some results even higher) level of entrepreneurial orientation than men do. In terms of the measurement of Humanness, the results show that although the individual Humanness dimensions seem to be very much alike, significant differences do exist when exploring relationships with other constructs.

Finally, the explorative nature of the study and the introduction of a western entrepreneurship metric applied in a developing country setting, makes that future studies can now start using the EO scale in other developing countries in order to improve and fine-tune the instrument. This than builds to the knowledge needed for an even better understanding of entrepreneurship and its relation to culture.

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## Appendix 1 The adopted EO scale

Code	Question	Strongly disagree (NO)	Strongly agree (YES)
Innov1	I think it is important to add new products/services to my business	1	2 3 4 5
Innov2	During the last year I introduced new products/services	1	2 3 4 5
Innov3	I Believe innovations are part of being a successful entrepreneur	1	2 3 4 5
Proac1	In relation to the competition, I am often one the first to use new technology/tools in my business which improve the working process	1	2 3 4 5
Proac2	When I compare my company to the competition, we are often the first to come with new products /services	1	2 3 4 5
Proac3	In relation to the competition, I am highly competitive and usually try to win business from them	1	2 3 4 5
Risk1	In doing business I sometimes take high risks to gain more in the end	1	2 3 4 5
Risk2	I believe taking risks is part of being a successful entrepreneur	1	2 3 4 5
Risk3	In uncertain business situations I usually take a cautious approach	1	2 3 4 5

## Appendix 2 Humanness measurement items

Code	Question	Strongly disagree (NO)	Strongly agree (YES)
COM1	My employees are friendly and helpful	1	2 3 4 5
COM2	I care about the well-being of my employees	1	2 3 4 5
COM3	I respect the customs and beliefs of my employees	1	2 3 4 5
COM4	I respect the religion of my employees	1	2 3 4 5
COM5	All opinions have a fair hearing and consideration within the team	1	2 3 4 5
COM6	Long discussions take place in team meetings	1	2 3 4 5
COM7	When a co-worker gets promotion and I am not, I am happy for him/her	1	2 3 4 5
COM8	I have the freedom to take my own approach in my work	1	2 3 4 5
SOL1	I am willing to give up personal needs for the good of the team/organization	1	2 3 4 5
SOL2	I always put the interest of the whole team before my own interest	1	2 3 4 5
SOL3	I see myself as an active listener towards my employees	1	2 3 4 5
SOL4	I take the time to greet my employees	1	2 3 4 5
SOL5	My employees are people I inform about my personal life	1	2 3 4 5
SOL6	My employees and I get together outside of work time	1	2 3 4 5
SOL7	I have the right to say no to the team	1	2 3 4 5
SUR1	The organization encourages teamwork	1	2 3 4 5
SUR2	I have to work closely with others to do my job well	1	2 3 4 5
SUR3	I have confidence and trust in the team	1	2 3 4 5
SUR4	A crisis in the team will always be solved in a harmonious way	1	2 3 4 5
SUR5	I value sharing what I have with my family	1	2 3 4 5
SUR6	I encourage dialogue during meetings	1	2 3 4 5
SUR7	I feel I am really a part of the team	1	2 3 4 5
SUR8	I enjoy to work as a part of a team	1	2 3 4 5
RED1	Within my team all the employees are equal	1	2 3 4 5
RED2	I encourage diversity in opinions	1	2 3 4 5
RED3	Different ethnic groups work in harmony within the organization	1	2 3 4 5
RED4	There is open communication in the organization	1	2 3 4 5

RED5	The organization provides all employees open access to all information	1 2 3 4 5
RED6	I provide equal opportunities to all within my team	1 2 3 4 5
RED7	In the organization ceremonies and personnel parties are organized	1 2 3 4 5
RED8	I have the well-being of my employees as a major objective	1 2 3 4 5
RED9	The employees and I are like a family	1 2 3 4 5
RED10	My family is always welcome to visit the organization	1 2 3 4 5

## Appendix 3 questionnaire

### Questionnaire



Dear respondent,

Thank you so much for taking the time to fill in this questionnaire. This questionnaire is part of my research project focusing on (management) culture and Entrepreneurship in Tanzania. The questionnaire will take about 6 minutes of your time to complete. Kindly note that the questionnaire will be entirely anonymous and the data will be used for this research only.

I would like to thank you again for your time and participation in my study!

Kind regards,

Erik van der Huizen  
MSc International business & Management  
E.j.j.van.der.huizen@student.rug.nl

#### General

What is your gender ?      What is your ethnicity ?      Is your business registered ?

Male ☐      Tanzanian ☐      Yes ☐

Female ☐      Other..... ☐      No ☐

What is your age ?      Please indicate the highest level of education you have successfully completed

20-30 ☐      Never attended school ☐

31-40 ☐      Primary school ☐

41-50 ☐      secondary school ☐

51 + ☐      1<sup>st</sup> degree (university, bachelor) ☐

   Master's degree / post graduate ☐

How many employees does your firm have ?      When was your firm established

1-5 ☐      1-5 years ago ☐

6-49 ☐      6-10 Years ago ☐

50-100 ☐      11-20 Years ago ☐

   21+ Years ago ☐

**Questions**      Please indicate to what extent you agree or disagree with the given statements

Question	Strongly disagree (no) ← → Strongly agree(yes)				
1. My employees are friendly and helpful	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
2. I am willing to give up personal needs for the good of the team/organization	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>
3. I think it is important to add new products/services to my business	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>	4 <input type="radio"/>	5 <input type="radio"/>

Question	Strongly disagree (no)←————→Strongly agree(yes)
4. The organization encourages teamwork	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
5. Within my team all the employees are equal	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
6. I care about the well-being of my employees	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
7. During the last year I introduced new products/services	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
8. I always put the interest of the whole team before my own interest	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
9. I have to work closely with others to do my job well	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
10. I encourage diversity in opinions	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
11. I Believe innovations are part of being a successful entrepreneur	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
12. I respect the customs and beliefs of my employees	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
13. I see myself as an active listener towards my employees	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
14. I have confidence and trust in the team	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
15. Different ethnic groups work in harmony within the firm	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
16. There is open communication in the organization	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
17. I respect the religion of my employees	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
18. I take the time to greet my employees	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
19. A crisis in the team will always be solved in a harmonious way	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
20. The organization provides all employees open access to all information	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
21. In relation to the competition, I am often one of the first to use new technology/tools in my business which improve the working process	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
22. All opinions have a fair hearing and consideration within the team	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
23. My employees are people I inform about my personal life	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
24. I provide equal opportunities to all within my team	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>
25. When I compare my company to the competition, we are often the first to come with new products /services	1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/>

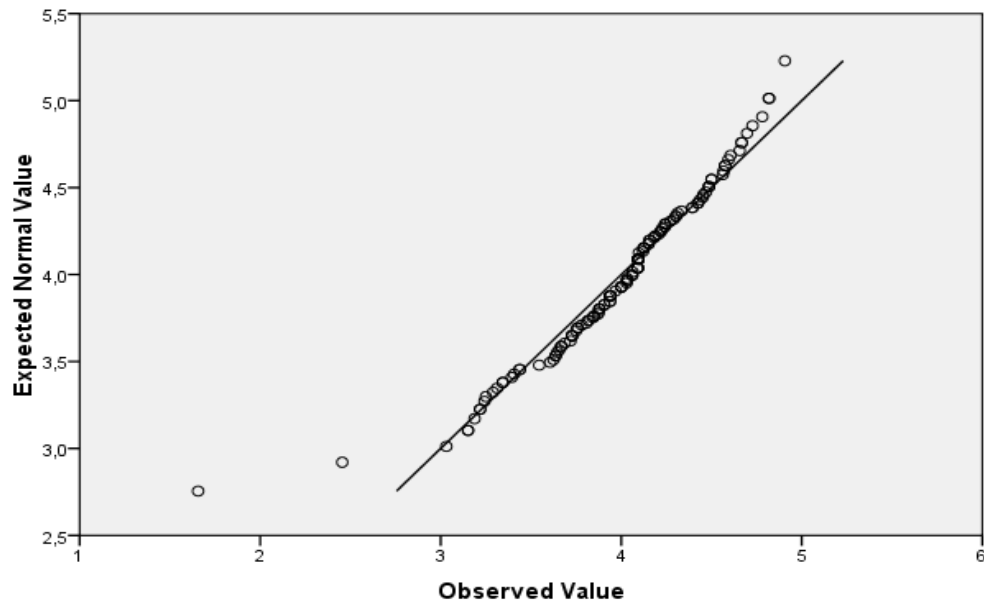


	Strongly disagree (no) ← ————— → Strongly agree (yes)				
26. Long discussions take place in team meetings	1	2	3	4	5
27. My employees and I get together outside of work time	1	2	3	4	5
28. I value sharing what I have with my family	1	2	3	4	5
29. I encourage dialogue during meetings	1	2	3	4	5
30. In the organization ceremonies and personnel parties are organized	1	2	3	4	5
31. In relation to the competition, I am highly competitive and usually try to win business from them	1	2	3	4	5
32. When a co-worker gets promotion and I am not, I am happy for him/her	1	2	3	4	5
33. I have the right to say no to the team	1	2	3	4	5
34. In doing business I sometimes take high risks to gain more in the end	1	2	3	4	5
35. I feel I am really a part of the team	1	2	3	4	5
36. I have the well-being of my employees as a major objective	1	2	3	4	5
37. I believe taking risks is part of being a successful entrepreneur	1	2	3	4	5
38. I enjoy to work as a part of a team	1	2	3	4	5
39. I have the freedom to take my own approach in my work	1	2	3	4	5
40. In uncertain business situations I usually take a cautious approach	1	2	3	4	5
41. The employees and I are like a family	1	2	3	4	5
42. My family is always welcome to visit the organization	1	2	3	4	5

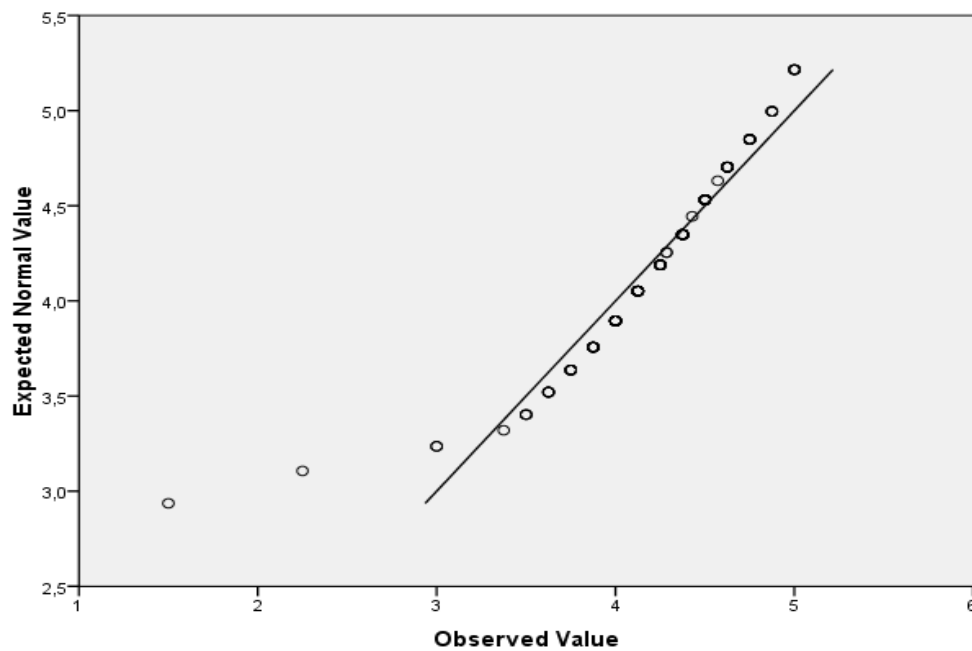
***Asante sana !***

## Appendix 4: Normal q-q plots of both constructs and dimensions

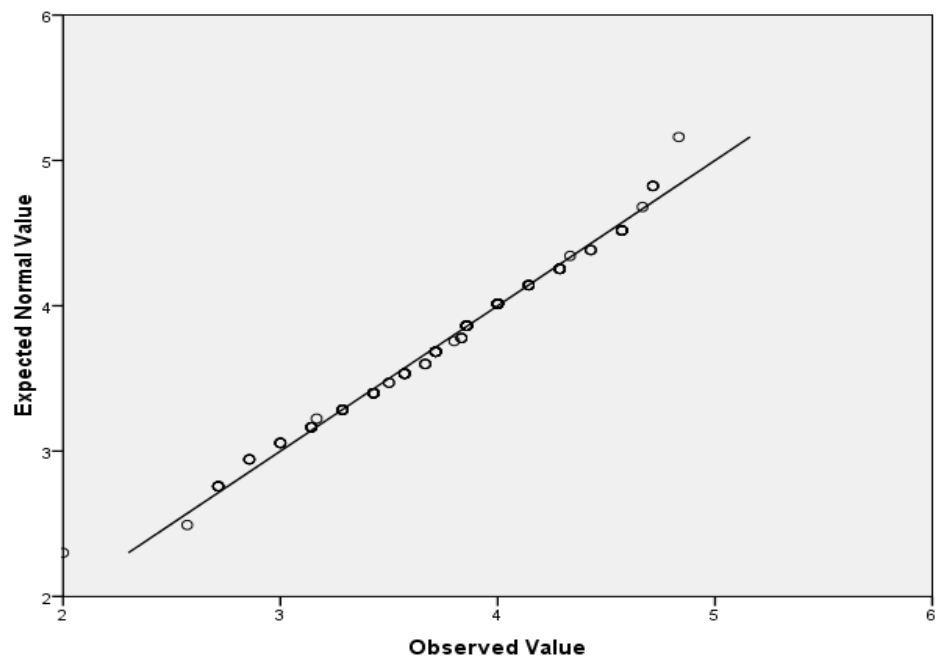
### 4A: Normal q-q plot of Humanness



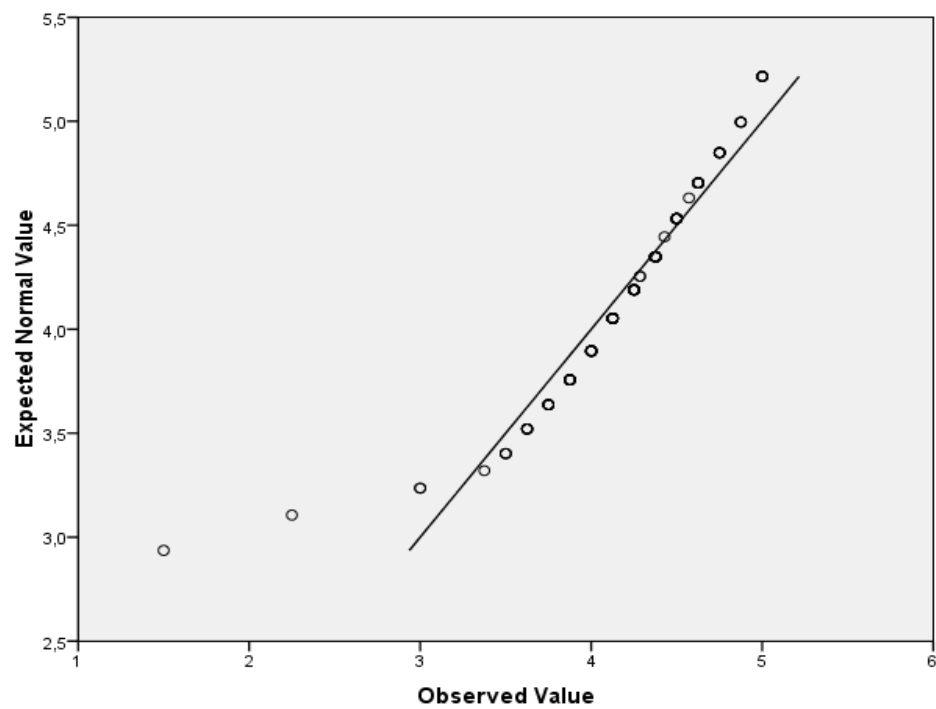
### 4A1: Normal q-q plot of Survival



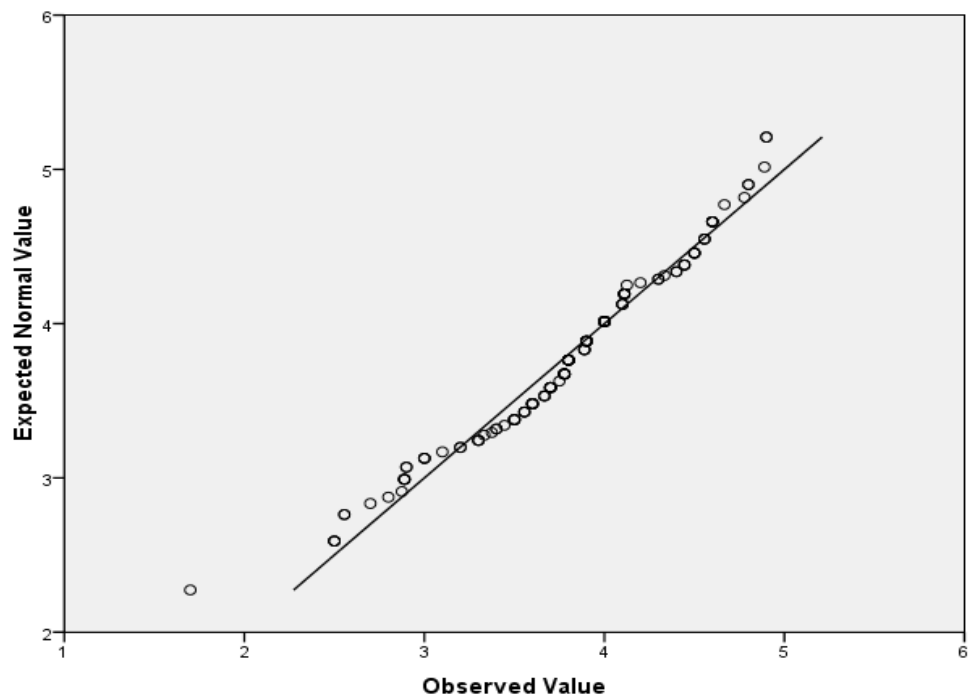
#### 4A2: Normal q-q plot of Solidarity



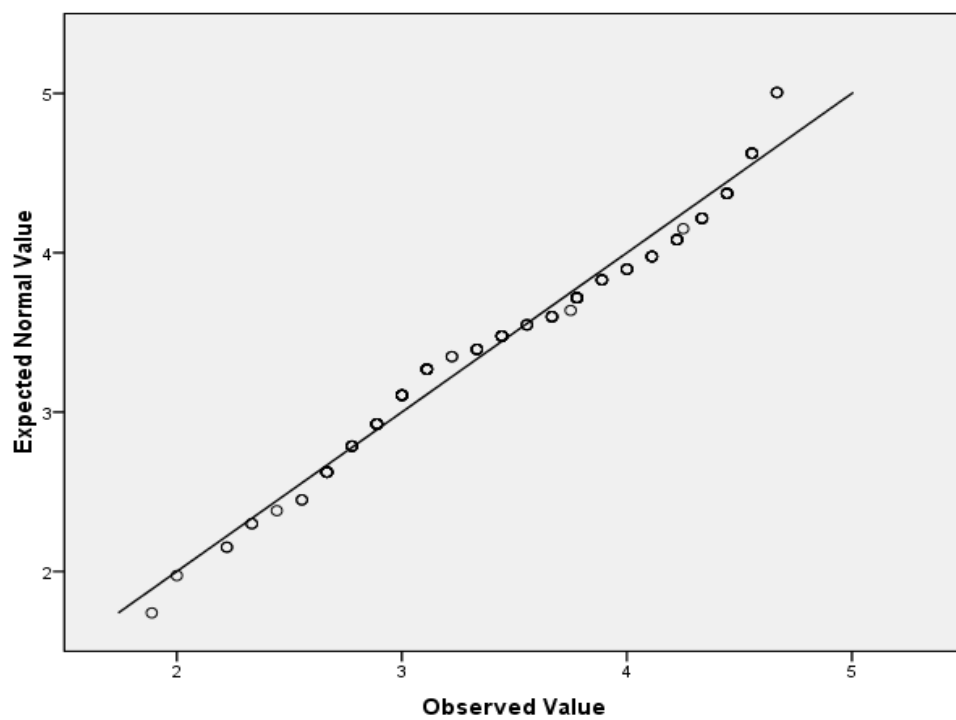
#### 4A3: Normal q-q plot of Compassion



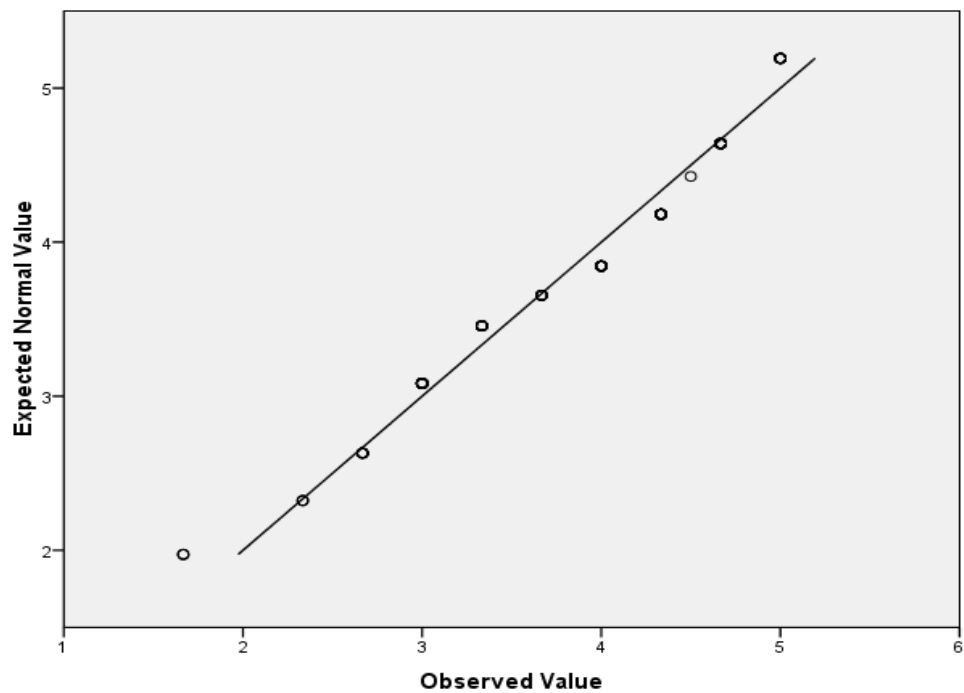
**4A4: Normal q-q plot of Respect & Dignity**



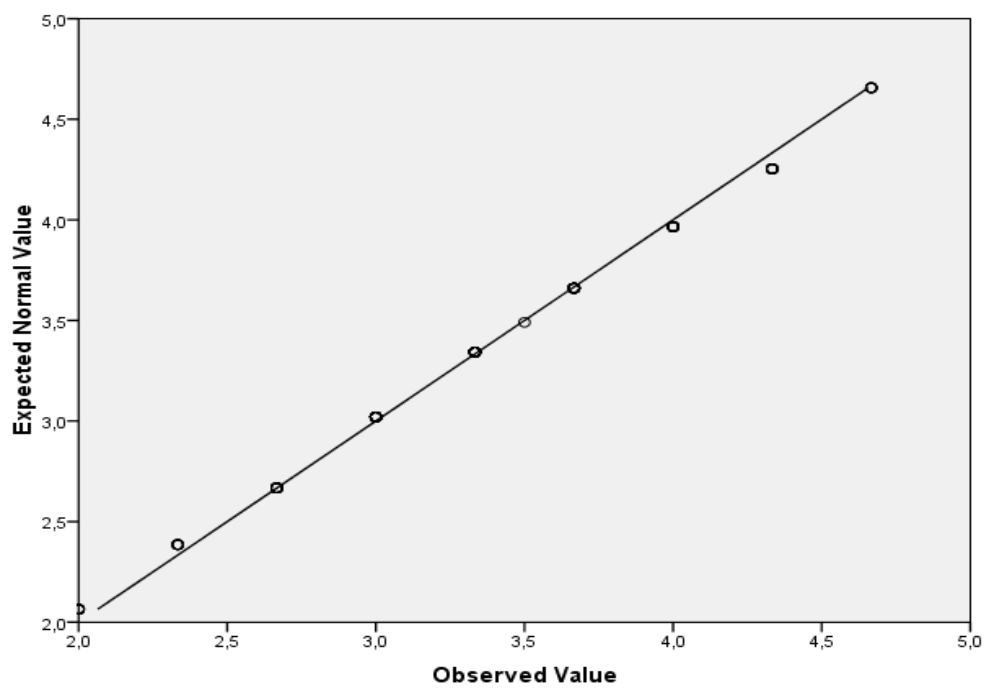
**4B: Normal q-q plot of EO**



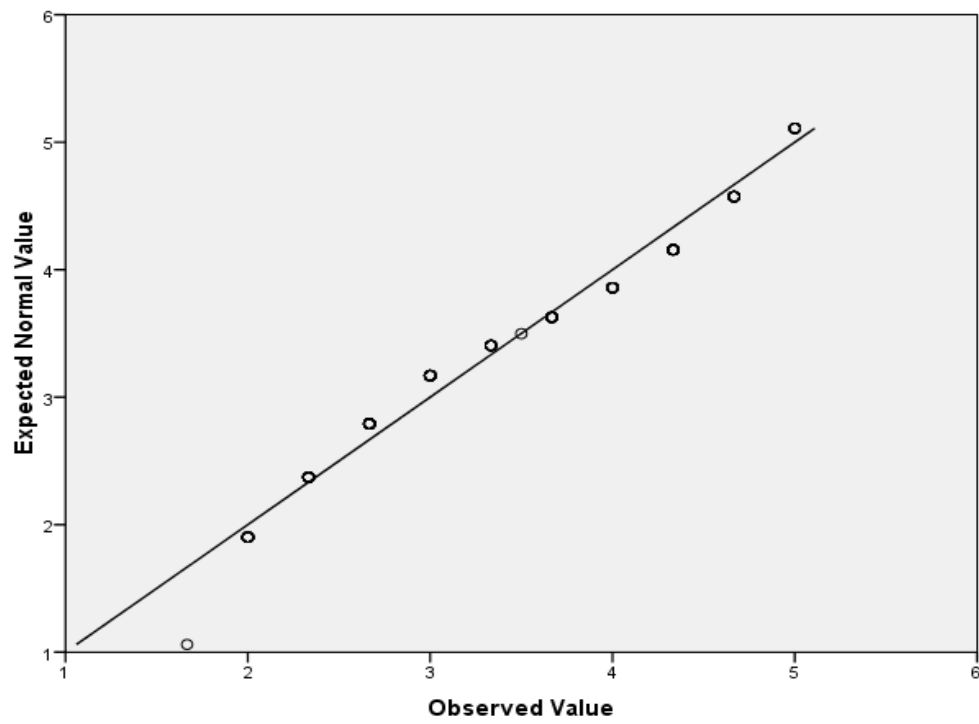
#### 4B1: Normal q-q plot of Innovativeness



#### 4B2: Normal q-q plot of Risk-Taking



#### 4B3: Normal q-q plot of Proactiveness



**Appendix 5:**  
**Cronbach's**  
**Alphas if item**  
**deleted**

**5A: Cronbach's alpha if**  
**item deleted**  
**Humanness.**

	Scale mean if item deleted	Scale variance if item deleted	Corrected item- total correlation	Cronbach's alpha if item deleted
SUR1	129,28	196,964	,412	,908
SUR2	129,28	193,327	,551	,906
SUR3	129,43	191,643	,626	,905
SUR4	129,22	197,873	,379	,909
SUR5	129,01	198,773	,335	,909
SUR6	129,45	192,221	,639	,905
SUR7	129,04	194,256	,563	,906
SUR8	128,96	192,983	,621	,905
SOL1	129,33	194,497	,500	,907
SOL2	129,43	192,340	,609	,905
SOL3	129,30	193,849	,592	,906
SOL4	129,31	194,370	,573	,906
SOL5	130,78	201,116	,135	,914
SOL6	130,24	191,851	,400	,909
SOL7	129,27	197,109	,372	,909
COM1	129,24	196,154	,491	,907
COM2	129,06	195,209	,612	,906
COM3	129,12	196,319	,394	,908
COM4	128,69	205,703	,061	,911
COM5	129,42	191,035	,632	,905
COM6	129,78	192,207	,497	,907
COM7	129,15	198,008	,352	,909
COM8	129,30	199,122	,308	,910
RED1	129,63	193,995	,460	,907
RED2	129,30	197,970	,486	,907
RED3	129,45	194,130	,465	,907
RED4	129,30	193,425	,580	,906
RED5	129,96	191,740	,504	,907
RED6	129,39	194,756	,552	,906
RED7	130,22	191,267	,432	,909
RED8	129,46	194,737	,576	,906
RED9	129,54	189,071	,662	,904
RED10	129,48	197,041	,274	,911

**5A1: Cronbach's alpha survival if item deleted survival**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SUR1	29,76	9,989	,276	,688
SUR2	29,84	9,236	,401	,661
SUR3	29,88	8,944	,477	,643
SUR4	29,95	9,375	,341	,676
SUR5	29,49	10,367	,159	,715
SUR6	30,07	9,150	,388	,665
SUR7	29,52	9,202	,505	,641
SUR8	29,50	8,875	,580	,624

**5A2: Cronbach's alpha solidarity if item deleted solidarity**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SOL1	21,92	12,189	,443	,682
SOL2	22,09	12,220	,428	,685
SOL3	21,90	11,939	,456	,678
SOL4	22,02	11,813	,510	,667
SOL5	23,30	11,043	,391	,699
SOL6	22,86	10,479	,488	,669
SOL7	21,96	12,702	,321	,708



**5A3: Cronbach's alpha compassion if item deleted compassion**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
COM1	29,39	13,239	,374	,741
COM2	29,27	12,277	,594	,705
COM3	29,21	12,264	,516	,716
COM4	28,86	14,107	,348	,746
COM5	29,69	12,202	,521	,715
COM6	29,97	11,793	,444	,732
COM7	29,40	12,195	,474	,724
COM8	29,63	12,441	,379	,744

**5A4: Cronbach's alpha respect & dignity if item deleted respect & dignity**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
RED1	34,38	29,621	,453	,797
RED2	34,07	31,846	,407	,803
RED3	34,21	28,907	,507	,791
RED4	34,09	29,264	,580	,785
RED5	34,79	27,845	,536	,788
RED6	34,21	29,154	,600	,784
RED7	35,10	28,040	,414	,807
RED8	34,26	29,798	,489	,794
RED9	34,32	27,355	,663	,773
RED10	34,34	29,067	,367	,811

**5B: Cronbach's alpha EO if item deleted EO**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Innov1	27,32	29,203	,614	,820
Innov2	28,16	28,648	,546	,829
Innov3	27,13	30,615	,575	,825
Proac1	28,12	28,291	,632	,818
Proac2	28,04	28,616	,703	,811
Proac3	27,73	28,762	,641	,817
Risk1	27,46	30,016	,583	,824
Risk2	27,06	31,637	,546	,829
Recoded risk 3	29,41	33,244	,229	,861

**5B1: Cronbach's alpha Innovativeness if item deleted innovativeness**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Innov1	7,32	2,887	,545	,458
Innov2	8,16	2,803	,403	,679
Innov3	7,13	3,432	,487	,554

**5B2: Cronbach's alpha proactiveness if item deleted proactiveness**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Proac1	6,86	3,227	,649	,704
Proac2	6,79	3,462	,715	,637
Proac3	6,47	3,744	,550	,804

### 5B3: Cronbach's alpha risk-taking if item deleted risk-taking

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Risk1	6,15	1,710	,430	,242	-,009
Risk2	5,76	2,432	,276	,211	,330
Recoded risk 3	8,11	2,241	,126	,050	,612

## Appendix 6 Factor analysis

### 6A KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,849
Bartlett's Test of Sphericity	Approx. Chi-Square	1204,703
	df	528
	Sig.	,000

### 6A1 Eigenvalues for Humanness scale

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10,397	31,506	31,506	10,397	31,506	31,506
2	2,322	7,036	38,542	2,322	7,036	38,542
3	1,935	5,863	44,405	1,935	5,863	44,405
4	1,577	4,780	49,185	1,577	4,780	49,185
5	1,447	4,384	53,569	1,447	4,384	53,569
6	1,252	3,793	57,361	1,252	3,793	57,361
7	1,150	3,484	60,846	1,150	3,484	60,846
8	1,102	3,340	64,186	1,102	3,340	64,186
9	,968	2,934	67,120			
10	,932	2,824	69,945			
11	,915	2,773	72,718			
12	,864	2,617	75,335			
13	,704	2,132	77,467			
14	,648	1,965	79,432			
15	,642	1,946	81,377			
16	,586	1,777	83,154			
17	,553	1,676	84,830			
18	,538	1,630	86,460			
19	,462	1,400	87,860			
20	,448	1,359	89,219			
21	,437	1,323	90,542			
22	,400	1,211	91,754			
23	,389	1,178	92,932			
24	,340	1,032	93,964			
25	,317	,960	94,923			
26	,268	,813	95,736			
27	,265	,804	96,540			
28	,253	,766	97,306			
29	,224	,678	97,984			
30	,209	,635	98,618			
31	,168	,508	99,126			
32	,155	,469	99,595			
33	,134	,405	100,000			

Extraction Method: Principal Component Analysis.

## 6A2 Rotated component matrix Humanness with 8 components

	Component							
	1	2	3	4	5	6	7	8
RED4	,691							
COM5	,647					,332		
SUR3	,618							
COM2	,528	,422						
COM6	,452			,428				
SOL2	,371							
SOL1		,753						
COM1	,432	,626						
RED2		,623				,309		
SOL3		,570						
SUR1		,558					,388	
SUR4			,731					
SOL7			,654					
RED10			,626	,340				
SOL4			,540			,451		
SUR6	,463		,512					
SOL5				,845				
SOL6				,711				
RED7		,408	,419	,507				
COM4					,725			
RED3	,324				,583			
SUR7	,409				,510	,460		
SUR8	,474				,482	,383		
SUR2		,309				,649		
RED8						,511		,429
RED9	,430		,318			,498		
RED5							,671	
RED6		,310			,317		,515	
COM7					,397		,504	,352
RED1	,476	,317					,496	
SUR5								,847
COM3		,407			,384			,518
COM8			,359				,323	,441

-Extraction Method: Principal Component Analysis.

-Rotation Method: Varimax with Kaiser Normalization.

-Rotation converged in 22 iterations.

-For reasons of simplification all scores below 0.3 have been omitted.

### 6A3 Parallel analysis

Component	Initial Eigenvalue	Random Eigenvalue
1	10,397	1,869
2	2,322	1,743
3	1,935	1,649
4	1,577	1,572
5	1,447	1,511
6	1,252	1,445
7	1,150	1,391
8	1,102	1,337

#### 6A4 Rotated component matrix Humanness with 4 components

	Component			
	1	2	3	4
COM1	,760			
SOL1	,723			
COM2	,630		,372	
SUR8	,611	,313	,326	
RED2	,596			
RED3	,568			
SUR1	,567			
SOL3	,564			
COM5	,553			,301
SUR2	,540	,439		
RED9	,533		,333	,323
SUR3	,507			
RED4	,489		,459	
RED6	,485	,360		
RED1	,445		,323	
SOL2	,407			
COM8		,637	,392	
COM7		,629		
SUR5		,561		
SUR7	,467	,547		
RED8	,433	,522		
COM3	,502	,506		
RED5		,491	,326	
COM4		,347		-,318
SOL7			,721	
SUR4			,679	
SUR6	,420		,593	
RED10			,542	,339
SOL4		,365	,437	,334
SOL6				,763
SOL5				,733
RED7			,319	,644
COM6				,447

-Extraction Method: Principal Component Analysis.

-Rotation Method: Varimax with Kaiser Normalization.

-Rotation converged in 9 iterations.

-For reasons of simplification all scores below 0.3 have been omitted.

## 6B KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,863
Bartlett's Test of Sphericity	Approx. Chi-Square	410,747
	df	28
	Sig.	,000

## 6B1 Eigenvalues EO

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,081	51,012	51,012	4,081	51,012	51,012
2	1,050	13,125	64,137	1,050	13,125	64,137
3	,690	8,624	72,762			
4	,575	7,183	79,945			
5	,494	6,173	86,118			
6	,423	5,290	91,408			
7	,381	4,765	96,173			
8	,306	3,827	100,000			

## 6B2 Rotated component matrix EO scale

	Component	
	1	2
Innov1	,664	,399
Innov2		,769
Innov3	,816	
Proac1		,766
Proac2		,833
Proac3	,502	,570
Risk1	,607	,378
Risk2	,845	

-Extraction Method: Principal Component Analysis.

-Rotation Method: Varimax with Kaiser Normalization.

-For reasons of simplification all scores below 0.3 have been omitted.



### 6B3 Parallel analysis

Component	Initial Eigenvalue	Random Eigenvalue
1	4,081	1,307
2	1,050	1,023
3	0,690	0,958
4	0,575	0,888
5	0,494	0,809
6	0,432	0,729

### 6B3 New rotated component matrix E0

	Component	
	1	2
Innov1	,664	,399
Innov3	,816	
Risk1	,607	,378
Risk2	,845	
Innov2		,769
Proac1		,766
Proac2		,833
Proac3	,502	,570

-Extraction Method: Principal Component Analysis.

-Rotation Method: Varimax with Kaiser Normalization.

-For reasons of simplification all scores below 0.3 have been omitted.

#### 6B4 New arrangement of items EO

Code	
	<b>Innovativeness &amp; Risk-Taking</b> Cronbach's alpha: <b>,797</b>
Innov1	I think it is important to add new products/services to my business
Innov3	I Believe innovations are part of being a successful entrepreneur
Risk1	In doing business I sometimes take high risks to gain more in the end
Risk2	I believe taking risks is part of being a successful entrepreneur
	<b>Proactiveness</b> Cronbach's alpha: <b>,805</b>
Innov2	During the last year I introduced new products/services
Proac1	In relation to the competition, I am often one the first to use new technology/tools in my business which improve the working process
Proac2	When I compare my company to the competition, we are often the first to come with new products /services
Proac3	In relation to the competition, I am highly competitive and usually try to win business from them

#### 6C1 New Cronbach's alpha EO if item deleted EO

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Innov2	26,26	25,539	,517	,328	,857
Proac1	26,22	24,894	,632	,504	,841
Proac2	26,15	25,283	,696	,578	,834
Proac3	25,84	25,231	,654	,459	,838
Innov1	25,43	25,434	,649	,455	,839
Innov3	25,24	26,965	,590	,480	,846
Risk1	25,57	26,560	,579	,398	,847
Risk2	25,17	27,768	,584	,477	,848

**6C2 New Cronbach's alpha Innovativeness & Risk-taking if item deleted Innovativeness& Risk-taking**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Innov1	12,28	4,667	,617	,383	,744
Innov3	12,08	5,070	,644	,458	,729
Risk1	12,41	5,174	,536	,288	,783
Risk2	12,02	5,411	,662	,470	,728

**6C3 New Cronbach's alpha Proactiveness if item deleted Proactiveness**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Innov2	10,06	7,089	,553	,314	,792
Proac1	10,02	6,961	,647	,482	,742
Proac2	9,95	7,159	,733	,559	,707
Proac3	9,63	7,634	,567	,334	,780

## Appendix 7 t-test on gender

### 7A1: independent samples t-test: Humanness

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
total mean humanness	Male	75	3,8413	,45517	,05256
	Female	57	4,1903	,43252	,05729
Survissomm	Male	75	4,1090	,46220	,05337
	Female	57	4,3885	,49036	,06495
Solidsomm	Male	75	3,5959	,54832	,06331
	Female	57	3,9079	,50692	,06714
Compasomm	Male	75	4,1029	,47135	,05443
	Female	57	4,3462	,48353	,06405
Resdigsomm	Male	75	3,5779	,56478	,06522
	Female	57	4,0992	,48352	,06404

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
total mean Humanness	EVA*	,007	,932	-4,458	130	,000	-,34900	,07829	-,50389	-,19411
	EVNA**			-4,489	123,650	,000	-,34900	,07775	-,50289	-,19512
Survival	EVA	1,045	,309	-3,351	130	,001	-,27942	,08338	-,44439	-,11446
	EVNA			-3,324	116,843	,001	-,27942	,08406	-,44591	-,11294
Solidarity	EVA	,331	,566	-3,345	130	,001	-,31206	,09329	-,49662	-,12751
	EVNA			-3,381	125,047	,001	-,31206	,09229	-,49471	-,12942
Compassion	EVA	,127	,722	-2,905	130	,004	-,24332	,08375	-,40902	-,07762
	EVNA			-2,895	119,089	,005	-,24332	,08405	-,40974	-,07690
Respect&dignity	EVA	1,018	,315	-5,584	130	,000	-,52132	,09336	-,70602	-,33662
	EVNA			-5,704	128,109	,000	-,52132	,09140	-,70218	-,34046

\* Equal variances assumed

\*\* Equal variances not assumed

## 7A2: independent samples t-test: EO

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
newEOTotal	Male	75	3,6050	,71484	,08254
	Female	57	3,7961	,71120	,09420
newEOinnovRisktsom	Male	75	3,9667	,69789	,08059
	Female	57	4,2047	,74019	,09804
newEOProactsom	Male	75	3,2433	,87473	,10101
	Female	57	3,3874	,85035	,11263

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
										95% Confidence Interval of the Difference
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Total mean Humanness	EVA*	,278	,599	-1,524	130	,130	-,19105	,12534	-,43902	,05691
	EVNA**			-1,525	121,018	,130	-,19105	,12525	-,43901	,05691
Innovativeness/Risk-Taking	EVA	,142	,707	-1,891	130	,061	-,23801	,12589	-,48707	,01104
	EVNA			-1,875	116,863	,063	-,23801	,12691	-,48935	,01333
Proactiveness	EVA	,365	,547	-,949	130	,345	-,14409	,15188	-,44456	,15638
	EVNA			-,952	122,389	,343	-,14409	,15129	-,44357	,15539

\* Equal variances assumed    \*\* Equal variances not assumed

## Appendix 8 Pearson Correlation Results

### 8A1: Correlations between Humanness and the EO dimensions

		newEOTotal	total mean humanness	newEOProacts om	newEOinnovRi sktsom
newEOTotal	Pearson Correlation	1	-,088	,920**	,883**
	Sig. (2-tailed)		,317	,000	,000
	N	132	132	132	132
total mean humanness	Pearson Correlation	-,088	1	-,162	,020
	Sig. (2-tailed)	,317		,063	,821
	N	132	132	132	132
newEOProactsom	Pearson Correlation	,920**	-,162	1	,629**
	Sig. (2-tailed)	,000	,063		,000
	N	132	132	132	132
newEOinnovRisktsom	Pearson Correlation	,883**	,020	,629**	1
	Sig. (2-tailed)	,000	,821	,000	
	N	132	132	132	132

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### 8A2: Correlations between EO and the Humanness dimensions.

		newEOTotal	total mean humanness	Compasomm	Solidsomm	Resdigsomm	Survissomm
newEOTotal	Pearson Correlation	1	-,088	-,005	-,204*	-,139	,055
	Sig. (2-tailed)		,317	,952	,019	,111	,529
	N	132	132	132	132	132	132
total mean humanness	Pearson Correlation	-,088	1	,888**	,851**	,936**	,886**
	Sig. (2-tailed)	,317		,000	,000	,000	,000
	N	132	132	132	132	132	132
Compasomm	Pearson Correlation	-,005	,888**	1	,651**	,746**	,799**
	Sig. (2-tailed)	,952	,000		,000	,000	,000
	N	132	132	132	132	132	132
Solidsomm	Pearson Correlation	-,204*	,851**	,651**	1	,772**	,629**
	Sig. (2-tailed)	,019	,000	,000		,000	,000
	N	132	132	132	132	132	132
Resdigsomm	Pearson Correlation	-,139	,936**	,746**	,772**	1	,757**
	Sig. (2-tailed)	,111	,000	,000	,000		,000
	N	132	132	132	132	132	132
Survissomm	Pearson Correlation	,055	,886**	,799**	,629**	,757**	1
	Sig. (2-tailed)	,529	,000	,000	,000	,000	
	N	132	132	132	132	132	132

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## Appendix 9: Control variables

### 9.1: Gender (humanness)

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,364 <sup>a</sup>	,133	,126	,44556	1,984

a. Predictors: (Constant), Gender

b. Dependent Variable: total mean humanness

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3,945	1	3,945	19,871	,000 <sup>a</sup>
	Residual	25,808	130	,199		
	Total	29,752	131			

a. Predictors: (Constant), Gender

b. Dependent Variable: total mean humanness

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,841	,051		74,663	,000
	Gender	,349	,078	,364	4,458	,000

a. Dependent Variable: total mean humanness

### 9.2 Gender (EO)

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,133 <sup>a</sup>	,018	,010	,71328	1,982

a. Predictors: (Constant), Gender

b. Dependent Variable: newEOTotal

ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1,182	1	1,182	2,324	,130 <sup>a</sup>
	Residual	66,139	130	,509		
	Total	67,321	131			

a. Predictors: (Constant), Gender

b. Dependent Variable: newEOTotal

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,605	,082		43,770	,000
	Gender	,191	,125	,133	1,524	,130

a. Dependent Variable: newEOTotal

### 9.3 Registered / unregistered

Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,354 <sup>a</sup>	,125	,118	,67414	1,890

a. Predictors: (Constant), Registered business or not

b. Dependent Variable: newEOTotal

ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8,376	1	8,376	18,431	,000 <sup>a</sup>
	Residual	58,626	129	,454		
	Total	67,002	130			

a. Predictors: (Constant), Registered business or not

b. Dependent Variable: newEOTotal



Coefficients <sup>a</sup>					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	3,791	,064		,000
	Registered business or not	-,703	,164	-,354	,000

a. Dependent Variable: newEOTotal

## 9.4: Age groups

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,114 <sup>a</sup>	,013	-,010	,72049	1,910

a. Predictors: (Constant), 31-40, 51+, 41-50

b. Dependent Variable: newEOTotal

ANOVA <sup>b</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,876	3	,292	,562	,641 <sup>a</sup>
	Residual	66,445	128	,519		
	Total	67,321	131			

a. Predictors: (Constant), 31-40, 51+, 41-50

b. Dependent Variable: newEOTotal

Coefficients <sup>a</sup>					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	3,484	,180		,000
	41-50	,198	,214	,127	,356
	51+	,203	,237	,106	,392
	31-40	,266	,205	,183	,197

a. Dependent Variable: newEOTotal

## 9.5: Level of education

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,486 <sup>a</sup>	,237	,219	,63369	1,908

a. Predictors: (Constant), Masters degree post gradu, 1st degree Univ bachelor, Secondary School

b. Dependent Variable: newEOTotal

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15,922	3	5,307	13,216	,000 <sup>a</sup>
	Residual	51,400	128	,402		
	Total	67,321	131			

a. Predictors: (Constant), Masters degree post gradu, 1st degree Univ bachelor, Secondary School

b. Dependent Variable: newEOTotal

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,225	,164		19,711	,000
	Secondary School	,219	,184	,152	1,190	,236
	1st degree Univ bachelor	,659	,191	,427	3,447	,001
	Masters degree post gradu	1,088	,216	,546	5,024	,000

a. Dependent Variable: newEOTotal

## Appendix 10 Regression analyses

### 10.1: one-on-one regression Humanness and EO

Model Summary<sup>c</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,554 <sup>a</sup>	,307	,279	,60954	,307	11,067	5	125	,000	
2	,568 <sup>b</sup>	,322	,290	,60513	,015	2,830	1	124	,095	2,025

a. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not

b. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not, total mean humanness

c. Dependent Variable: newEOTotal

ANOVA<sup>c</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20,560	5	4,112	11,067	,000 <sup>a</sup>
	Residual	46,442	125	,372		
	Total	67,002	130			
2	Regression	21,596	6	3,599	9,830	,000 <sup>b</sup>
	Residual	45,406	124	,366		
	Total	67,002	130			

a. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not

b. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not, total mean humanness

c. Dependent Variable: newEOTotal

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3,401	,097		35,213	,000		
	Gender	,258	,112	,179	2,305	,023	,923	1,084
	Registered business or not	-,536	,184	-,269	-2,905	,004	,644	1,552
	Primary School	,045	,211	,020	,216	,830	,631	1,585
	1st degree Univ bachelor	,430	,128	,277	3,361	,001	,816	1,225
	Masters degree post gradu	,757	,162	,381	4,681	,000	,838	1,193
2	(Constant)	2,438	,580		4,203	,000		
	Gender	,195	,117	,135	1,669	,098	,830	1,205
	Registered business or not	-,581	,185	-,292	-3,139	,002	,631	1,586
	Primary School	,026	,209	,012	,124	,901	,629	1,590
	1st degree Univ bachelor	,539	,142	,347	3,781	,000	,649	1,540
	Masters degree post gradu	,826	,166	,415	4,984	,000	,787	1,271
	total mean humanness	,239	,142	,159	1,682	,095	,609	1,642

a. Dependent Variable: newEOTotal

## 10.2: multiple regression Humanness and EO

**Model Summary<sup>c</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,554 <sup>a</sup>	,307	,279	,60954	,307	11,067	5	125	,000	
2	,600 <sup>b</sup>	,360	,313	,59517	,053	2,527	4	121	,044	2,025

a. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not

b. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not, Survisomm, Solidsomm, Compasomm, Resdigsomm

c. Dependent Variable: newEOTotal

**ANOVA<sup>c</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20,560	5	4,112	11,067	,000 <sup>a</sup>
	Residual	46,442	125	,372		
	Total	67,002	130			
2	Regression	24,140	9	2,682	7,572	,000 <sup>b</sup>
	Residual	42,862	121	,354		
	Total	67,002	130			

a. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not

b. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not, Survisomm, Solidsomm, Compasomm, Resdigsomm

c. Dependent Variable: newEOTotal

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3,401	,097		35,213	,000		
	Gender	,258	,112	,179	2,305	,023	,923	1,084
	Registered business or not	-,536	,184	-,269	-2,905	,004	,644	1,552
	Primary School	,045	,211	,020	,216	,830	,631	1,585
	1st degree Univ bachelor	,430	,128	,277	3,361	,001	,816	1,225
	Masters degree post gradu	,757	,162	,381	4,681	,000	,838	1,193
2	(Constant)	2,182	,591		3,690	,000		
	Gender	,273	,122	,189	2,240	,027	,741	1,350
	Registered business or not	-,530	,184	-,266	-2,887	,005	,621	1,611
	Primary School	,066	,208	,029	,315	,754	,615	1,626
	1st degree Univ bachelor	,502	,144	,323	3,492	,001	,616	1,622
	Masters degree post gradu	,705	,169	,355	4,174	,000	,732	1,367
	Survisomm	,365	,194	,252	1,881	,062	,295	3,390
	Solidsomm	-,107	,166	-,082	-,645	,520	,324	3,083
	Compasomm	,223	,201	,153	1,112	,269	,279	3,578
	Resdigsomm	-,234	,193	-,192	-1,214	,227	,211	4,728

a. Dependent Variable: newEOTotal

### 10.3: one-on-one regression Humanness and Innovativeness/Risk-Taking

**Model Summary<sup>c</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,529 <sup>a</sup>	,279	,251	,62783	,279	9,691	5	125	,000	
2	,573 <sup>b</sup>	,328	,296	,60851	,049	9,062	1	124	,003	2,036

a. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not

b. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not, total mean humanness

c. Dependent Variable: newEOinnovRisktsom

**ANOVA<sup>c</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19,100	5	3,820	9,691	,000 <sup>a</sup>
	Residual	49,271	125	,394		
	Total	68,371	130			
2	Regression	22,456	6	3,743	10,107	,000 <sup>b</sup>
	Residual	45,915	124	,370		
	Total	68,371	130			

a. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not

b. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not, total mean humanness

c. Dependent Variable: newEOinnovRisktsom

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3,700	,099		37,199	,000		
	Gender	,275	,115	,189	2,385	,019	,923	1,084
	Registered business or not	-,151	,190	-,075	-,795	,428	,644	1,552
	Primary School	-,089	,217	-,039	-,412	,681	,631	1,585
	1st degree Univ bachelor	,476	,132	,303	3,607	,000	,816	1,225
	Masters degree post gradu	,881	,167	,438	5,286	,000	,838	1,193
2	(Constant)	1,968	,583		3,375	,001		
	Gender	,162	,118	,111	1,379	,170	,830	1,205
	Registered business or not	-,232	,186	-,116	-1,247	,215	,631	1,586
	Primary School	-,124	,211	-,055	-,590	,556	,629	1,590
	1st degree Univ bachelor	,671	,143	,428	4,681	,000	,649	1,540
	Masters degree post gradu	1,004	,167	,500	6,028	,000	,787	1,271
	total mean humanness	,430	,143	,284	3,010	,003	,609	1,642

a. Dependent Variable: newEOinnovRisktsom

## 10.4: multiple regression Humanness and Innovativeness/Risk-Taking

Model Summary<sup>c</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,529 <sup>a</sup>	,279	,251	,62783	,279	9,691	5	125	,000	
2	,655 <sup>b</sup>	,429	,387	,56781	,150	7,956	4	121	,000	1,995

a. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not

b. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not, Survisomm, Solidsomm, Compasomm, Resdigsomm

c. Dependent Variable: newEOinnovRisiktsom

ANOVA<sup>c</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19,100	5	3,820	9,691	,000 <sup>a</sup>
	Residual	49,271	125	,394		
	Total	68,371	130			
2	Regression	29,360	9	3,262	10,118	,000 <sup>b</sup>
	Residual	39,011	121	,322		
	Total	68,371	130			

a. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not

b. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not, Survisomm, Solidsomm, Compasomm, Resdigsomm

c. Dependent Variable: newEOinnovRisiktsom

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3,700	,099		37,199	,000		
	Gender	,275	,115	,189	2,385	,019	,923	1,084
	Registered business or not	-,151	,190	-,075	-,795	,428	,644	1,552
	Primary School	-,089	,217	-,039	-,412	,681	,631	1,585
	1st degree Univ bachelor	,476	,132	,303	3,607	,000	,816	1,225
	Masters degree post gradu	,881	,167	,438	5,286	,000	,838	1,193
2	(Constant)	1,527	,564		2,706	,008		
	Gender	,297	,116	,204	2,554	,012	,741	1,350
	Registered business or not	-,156	,175	-,078	-,890	,375	,621	1,611
	Primary School	-,076	,199	-,034	-,383	,702	,615	1,626
	1st degree Univ bachelor	,597	,137	,380	4,348	,000	,616	1,622
	Masters degree post gradu	,813	,161	,405	5,044	,000	,732	1,367
	Survissomm	,680	,185	,463	3,666	,000	,295	3,390
	Solidsomm	-,075	,159	-,057	-,473	,637	,324	3,083
	Compasomm	,295	,192	,200	1,539	,126	,279	3,578
	Resdigsomm	-,446	,184	-,363	-2,428	,017	,211	4,728

a. Dependent Variable: newEOinnovRisiktsom

## 10.5: one-on-one regression Humanness and Proactiveness

**Model Summary<sup>c</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,514 <sup>a</sup>	,264	,235	,75690	,264	8,968	5	125	,000	
2	,514 <sup>b</sup>	,264	,229	,75973	,000	,072	1	124	,788	2,039

a. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not

b. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not, total mean humanness

c. Dependent Variable: newEOProactsom

**ANOVA<sup>c</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25,688	5	5,138	8,968	,000 <sup>a</sup>
	Residual	71,613	125	,573		
	Total	97,301	130			
2	Regression	25,730	6	4,288	7,430	,000 <sup>b</sup>
	Residual	71,571	124	,577		
	Total	97,301	130			

a. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not

b. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not, total mean humanness

c. Dependent Variable: newEOProactsom

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3,101	,120		25,859	,000		
	Gender	,241	,139	,139	1,735	,085	,923	1,084
	Registered business or not	-,921	,229	-,384	-4,019	,000	,644	1,552
	Primary School	,180	,261	,067	,689	,492	,631	1,585
	1st degree Univ bachelor	,385	,159	,206	2,422	,017	,816	1,225
	Masters degree post gradu	,633	,201	,264	3,154	,002	,838	1,193
2	(Constant)	2,908	,728		3,993	,000		
	Gender	,228	,147	,131	1,554	,123	,830	1,205
	Registered business or not	-,930	,232	-,388	-4,001	,000	,631	1,586
	Primary School	,176	,263	,065	,671	,504	,629	1,590
	1st degree Univ bachelor	,407	,179	,217	2,273	,025	,649	1,540
	Masters degree post gradu	,647	,208	,270	3,112	,002	,787	1,271
	total mean humanness	,048	,179	,027	,269	,788	,609	1,642

a. Dependent Variable: newEOProactsom

## 10.6: Multiple regression Humanness and Proactiveness

Model Summary<sup>c</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,514 <sup>a</sup>	,264	,235	,75690	,264	8,968	5	125	,000	
2	,520 <sup>b</sup>	,270	,216	,76621	,006	,246	4	121	,912	2,050

a. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not

b. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not, Survisomm, Solidsomm, Compasomm, Resdigsomm

c. Dependent Variable: newEOProactsom

ANOVA<sup>c</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25,688	5	5,138	8,968	,000 <sup>a</sup>
	Residual	71,613	125	,573		
	Total	97,301	130			
2	Regression	26,266	9	2,918	4,971	,000 <sup>b</sup>
	Residual	71,035	121	,587		
	Total	97,301	130			

a. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not

b. Predictors: (Constant), Masters degree post gradu, Gender, Primary School, 1st degree Univ bachelor, Registered business or not, Survisomm, Solidsomm, Compasomm, Resdigsomm

c. Dependent Variable: newEOProactsom

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3,101	,120		25,859	,000		
	Gender	,241	,139	,139	1,735	,085	,923	1,084
	Registered business or not	-,921	,229	-,384	-4,019	,000	,644	1,552
	Primary School	,180	,261	,067	,689	,492	,631	1,585
	1st degree Univ bachelor	,385	,159	,206	2,422	,017	,816	1,225
	Masters degree post gradu	,633	,201	,264	3,154	,002	,838	1,193
2	(Constant)	2,838	,761		3,727	,000		
	Gender	,249	,157	,143	1,587	,115	,741	1,350
	Registered business or not	-,904	,236	-,377	-3,825	,000	,621	1,611
	Primary School	,207	,268	,077	,773	,441	,615	1,626
	1st degree Univ bachelor	,408	,185	,218	2,203	,030	,616	1,622
	Masters degree post gradu	,598	,218	,249	2,746	,007	,732	1,367
	Survisomm	,051	,250	,029	,205	,838	,295	3,390
	Solidsomm	-,140	,214	-,089	-,651	,516	,324	3,083
	Compasomm	,152	,258	,086	,586	,559	,279	3,578
	Resdigsomm	-,022	,248	-,015	-,087	,931	,211	4,728

a. Dependent Variable: newEOProactsom



