To what extent do the culture dimensions of tightness/looseness effect the decision making process of entrepreneurs: a study in the Netherlands and Germany

Author: Jamie Lee Tjoonk
University of Twente
P.O. Box 217, 7500AE Enschede
the Netherlands

ABSTRACT

Entrepreneurship is more important than ever, since it is not only important for job creation, but also for productivity and economic growth of national economies. Entrepreneurship is widely researched, because how exactly do entrepreneurs make choices which will be successful and what are the underlying principles used by them? The recent literature proposed two distinct but complementary entrepreneurial decision-making processes: causation and effectuation. The causation process is a goal-driven, deliberate model of decision making which selects mean to create a particular effect. This model mainly focuses on planning, whereas the effectuation model focuses mainly on experimenting. The effectuation process take the means and see which effects they can achieve with that. But how exactly do entrepreneurs choose these decision making models? In this study the influence of culture on this choice will be researched. The tightness/looseness principle will be used, where a tight culture can be explained as a culture with many norms and values, and with a low tolerance of deviant behavior and opposite a loose culture has less norms and values and high tolerance towards deviant behavior. Novice entrepreneurs in the Netherlands and Germany were asked to fill in a questionnaire consisting of questions about causation, effectuation and cultural norms. This research showed that Dutch entrepreneurs perceive their culture as rather loose and German entrepreneurs perceive their culture as rather tight. This also influences the decision-making process, since Dutch entrepreneurs have the tendency to use the effectuation model whereas German entrepreneurs have the tendency to use the causation model. The outcome of this research indicates that novice entrepreneurs are influenced by their nation's culture in doing business. The outcome of this study could help entrepreneurs in their own decision-making processes, but also to help business in different countries to work together more effectively. Next to culture, there are other elements which may influence the decision making process. This can also be an interesting topic for future research.

Supervisors: M.R. Stienstra MSc; Michel Ehrenhard Dr.

Keywords

Entrepreneurs, Novice, Decision-making, Effectuation, Causation, Tightness/looseness, Culture

9th IBA Bachelor Thesis Conference, December 16th , 2016, Enschede, the Netherlands.

1. INTRODUCTION

Entrepreneurship, an economic phenomena widely researched, is a process by which individuals, irrespective of the organizational context, recognize opportunities and create organizations to pursue them (Stevenson & Jarillo Mossi, 1986). Entrepreneurship is important for national economies as it contributes to job creation, productivity and economic growth (Parker, 2009) (van Praag & Versloot, 2007). The entrepreneurs, people who identify and pursue solutions among problems, possibilities among needs and opportunities among challenges (Byers, Dorf, & Nelson, 2010) are involved in making decisions and perform activities every day to move an idea towards a market, also called the entrepreneurial processes (Byers, Dorf, & Nelson, 2010). But how exactly do the entrepreneurs make successful choices? It concerns the crucial question raised by Brinckmann et al. (2010): whether entrepreneurs should plan before embarking on the perilous quest for venture success or if they should just storm the castle.

The predominant entrepreneurial decision model taught in many business schools is a goal-driven, deliberate model of decision making referred to by (Sarasvathy S. D., 2001) as a causation model (Perry, Gaylen, & Markove, 2012). Causation processes take a particular effect as given and focus on selecting between means to create that effect (Sarasvathy S. D., 2001).

A more recent model stresses the ever-changing and uncertain business environment of the entrepreneurs, namely the effectuation processes. These processes take a set of means as given and focus on selecting between possible effects that can be created with that set of means (Sarasvathy S. D., 2001). Thus where the causation model focuses on planning and thereby following an explicit business plan, the effectuation model does not and mainly focuses on the means of the organization.

Hopp & Ute (2012) suggested that culture may have an impact on important individual beliefs, which in turn determine whether or not nascent entrepreneurs succeed in creating operational ventures. But what exactly can be defined as culture? Although there are many definitions for culture, there is wide agreement that culture consists of shared elements that provide the standards for perceiving, believing, evaluating, communicating, and acting among those who share a language, a historic period, and a geographic location (Triandis, 1996).

The existing empirical studies concerning the influence of national culture on entrepreneurial processes used the cultural dimensions of Hofstede solely. There is only limited research done concerning the influence of the model introduced by Gelfand et al. This research will contribute to the existing literature in that it studies to what extent the nation's cultural tightness/looseness will influence the performed activities and decisions made by entrepreneurs daily. Furthermore, the effectuation-model introduced by Sarasvathy in 2001, is currently quite limited in its scope—in describing only part of the story of entrepreneurial activity. The possibility exists that effectuation can become a solid theory, but there is substantial work to be done (Arend, Sarooghi, & Burkemper, 2015). This research will test the model and can contribute to create a more solid theory. Also, the relation between national culture and its influence on entrepreneurial processes has mostly been neglected in research on entrepreneurial processes. (Stienstra, Harms, van der Ham, & Groen, 2012).

The most-well known researcher who studied the effect of culture on organizations is Hofstede. In his work, he tested the organization among four (later five) dimensions, namely power distance, uncertainty avoidance, individualism and masculinity. The main finding is that organizations are culture-bound (Hofstede, 1980). One criticizer is McSweeney, who stated that Hofstede's claims are excessive and unbalanced; excessive because they claim far more in terms of identifiable characteristics and consequences than is justified; unbalanced, because there is too great a desire to 'prove' his a priori convictions rather than evaluate the adequacy of his 'findings'. Doubts about the representativeness of the research sample is the most common criticisms of Hofstede's claims (McSweeney, 2002). Where Hofstede's research is widely criticized, Gelfand et al. introduced in 2011 a new perspective on national culture with her view on cultures in regard to their tightness/looseness. Although the tightness-looseness introduced in the article of Gelfand is related to the cultural dimensions introduced by Hofstede, she indicated that these concepts were not statistically significantly related. Tight cultures, as represented by Gelfand, have many strong norms and a low tolerance of deviant behavior, whereas loose cultures have weak social norms and a high tolerance of deviant behavior. (Gelfand, et al., 2011)

This study will obtain supplementary and more detailed information on how entrepreneurs take their decisions in accordance to their national culture. This will not only help entrepreneurs of different countries to work together more effectively, but also helps the entrepreneurs with improving their decision-making process.

The research question is: **to what extent do the culture dimensions of tightness/looseness effect the decision making process of entrepreneurs?**

This study will test the theory concerning effectuation/causation decision making processes and the culture dimensions tightness/looseness. The theories of different subjects will be combined and will give a 'predetermined' outcome and other potential hypotheses. With this prognosis in mind, entrepreneurs from the Netherlands and Germany will be requested to fill in a questionnaire and the results will be processed and analyzed. With the results, hypotheses will be tested, along with the theory used in this study.

The outline of the paper is as follows: first is the theoretical framework, which will result in the hypotheses of the study. This is followed by the methods of the executed research, the results of the research and the conclusions and discussion. The limitations of the research will finish this research paper.

2. THEORETICAL FRAMEWORK

2.1 Differences between Tight and Loose Cultures – Gelfand et al. 2011

In order to compare the cultures in both countries, the differences between tight (many strong norms and a low tolerance of deviant behavior) and loose (weak social norms and a high tolerance of deviant behavior) are illustrated in the article, which goal was to provide an insight into how tightness-looseness operates in modern countries. They propose that tightness looseness is part of a loosely integrated, but complex, system that involves processes across multiple levels of analysis. The strength of social norms and tolerance of deviant behavior—the core distinction between tight and loose cultures—is afforded by numerous distal ecological and human-made societal threats and societal institutions and practices. (Gelfand, et al., 2011). Ecological and human-made threats increase the need for strong norms and punishment of deviant behavior in order to socially coordinate the nation —whether it is to reduce chaos in nations with high population density, deal with resource scarcity, coordinate in the face of natural disasters, defend against territorial threats, or contain the spread of disease. (Gelfand, et al., 2011). Predicted by Gelfand (2011) is that nations facing these challenges will develop strong norms and have low

tolerance of deviant behavior. By contrast, nations with few ecological and human-made threats have a much lower need for order and social coordination, resulting in weaker social norms and more scope for freedom.

The strength of social norms and tolerance of deviant behavior is further reflected and promoted in the predominance of strong versus weak situations that are recurrent in everyday local worlds, and is reinforced through psychological processes that are attuned to situational requirements. (Gelfand, et al., 2011). In tight nations, the constraint across everyday situations is much higher than the constraint across everyday situations in loose nations. This restricts the range of behavior which is seemed appropriate in the nation's culture, for example behaviors in classrooms, libraries, public parks etc. Logically, loose nations have a much wider range of appropriate behavior across everyday situations. The tightness looseness scale also correlates with higher monitoring (more police per capita), more severe punishments (e.g., the death penalty), and fewer challenges to societal institutions. Convergent validity data also suggest that there are greater pressures toward uniformity in tight as compared to loose nations. (Gelfand, et al., 2011)

Another important view in this research is that there is a close connection between the strength or weakness of everyday situations and the psychological processes of individuals within nations. In this view, individuals' psychological processes become naturally attuned to, and supportive of, the situational demands in the cultural system. Put simply, the higher (or lower) degree of social regulation that exists at the societal level is mirrored in the higher (or lower) amount of self-regulation at the individual level in tight and loose nations, respectively. Such psychological processes simultaneously reflect and support the strength of social norms and tolerance of deviance in the larger cultural context. (Gelfand, et al., 2011)

According to Gelfand et al, the Netherlands have a low tightness score, namely 3.3. Germany is slip up in former East and West Germany, but nowadays, this difference is almost invisible, therefore we can use the average score of both scores, which makes Germany's tightness score a 7. There is a clear difference between these scores, so one can say that the Netherlands is a loose culture, whereas Germany is a tight culture.

2.2 Causation and effectuation: Sarasvathy, 2011

Sarasvathy argued that experienced entrepreneurs do not approach the entrepreneurial process in the way taught in business schools; i.e. by identifying opportunities, analyzing, planning and then exploiting the opportunity predicted to be profitable. Instead, they use a set of practical principles that together were conceptualized as effectuation (Sarasvathy, Dew, Read, & Wiltbank, 2008). Effectuation is associated with a strategy which emerges during the process, including a selection of alternatives based on loss affordability, committing stakeholders and retaining flexibility. (Chandler, DeTienne, McKelvie, & Mumford, 2011). This research follows an approach called 'problemantization' introduced (Suddaby, Hardy, & Huy, 2011). Here, an existing theory fails to adequately explain observed patterns of behavior. Effectuation is offered as an improvement in depicting a specific phenomenon—that is, where a resource-poor entrepreneur acts to create a new market artifact in an environment characterized by uncertainty (Sarasvathy S. D., 2001) (Arend, Sarooghi, & Burkemper, 2015). Causation processes take a particular effect as given and focus on selecting between means to create that effect (Sarasvathy S. D., 2001). In the effectuation process, the entrepreneur makes decisions based on the possible effects given the available means, thereby taking into account recent contingencies and co-creator involvement and drawing on imagination and any changes in aspiration.

Sarasvathy differentiated between the following five principles shown in table 1.

TABLE 1	CAUSATION	EFFECTUATION
VIEW OF RISK AND RESOURCES	Expected return	Affordable loss
ATTITUDE TOWARDS OTHERS	Competitive analyses	Strategic alliances
ATTITUDE TOWARDS UNEXPECTED EVENTS	Pre-existing knowledge	Exploitation of contingencies
VIEW OF THE FUTURE	Predicting an uncertain future	Controlling an unpredictable future
BASIS FOR TAKING ACTION	Ends orientation	Means

View of risk and resources

Causation models select optimal strategies to implement by focus on maximizing potential return and then raising the required resources to do so. Effectuation models experiment with as many strategies as possible with the given means without investing more resources than stakeholders can afford to lose, also called the affordable loss which is predetermined by the entrepreneur or organization. In this model, options that create more options in the future are preferred.

Attitude towards others

Causation models emphasize detailed competitive analyses. Relationships between companies are driven by competitive analyses and the desire to limit dilution of ownership. Effectuation emphasized strategic alliances and partnerships in order to reduce and/or eliminate uncertainty and erect entry barriers. Relationships drive the shape and route of the new venture.

Attitude towards unexpected events

Causation models might be preferable when the already existing knowledge, for example in a particular technology, forms the source of competitive advantage. In this model, contingencies are seen as obstacles to avoid due to careful planning and accurate predictions which will then be less worthy or worthless. For effectuation models, contingencies are seen as an opportunity for creation that arise unexpectedly over time. Since this model avoids predictions and focuses on rethinking of possibilities and continual transformations, contingencies should be leveraged (Sarasvathy S. D., 2001).

View of the future

Causation processes focus mainly on the predictable aspects of an uncertain organization's future. The logic for using causation processes is: to the extent that we can predict the future, we can control it (Sarasvathy S. D., 2001). These processes see the future as the continuation of the past, although accurate prediction is necessary. Effectuation processes focus mainly on the controllable aspects of an unpredictable future. Here, the logic is: to the extent that we can control the future, we do not need to predict it. This logic is particularly useful in areas where human action (locally or in the aggregate) is the predominant factor

shaping the future (Sarasvathy S. D., 2001). The particular firm created becomes the *residual* of a process of constructing a network of partnerships and pre-commitments (Burt, 1992), and the market itself is an aggregated taxonomy of such sustainable sets of partnerships and commitments. (Sarasvathy S. D., 2001)

Basis for taking action

In the causation process, goals determine sub-goals, even when they are constrained by limited means. Actions are also determined by goals, and so the goals determine the daily decisions made resulting in the actions performed by the firm. Effectuation processes are means-oriented, which means that goals emerge by imagining courses of action based on the given means.

Sarasvathy (2008) and Perry et al. (2012) had an argument that effectuation and causation are not polar opposites, but are representing different approaches that can be used at different times and in different situations. Causation is supposed to be used in situations with low perceived uncertainty (i.e. when future outcomes are perceived as predictable), while effectuation is supposed to be utilized in situation in which perceived uncertainty is high. (Alsos, Clausen, & Solvoll, 2014)

3. HYPOTHESES

Before we test whether the tightness/looseness of a nation's culture is influencing the decision process of entrepreneurs, we have to test both the tightness/looseness concept as well as the causation/effectuation decision-making processes. When these general concepts are tested, we have to take a closer look at the five dimensions for the causation/effectuation decision-making process. The view of the future and the attitude toward others fits best with this research since these concepts will be influenced most by the tightness/looseness of the nation's culture.

To analyze the culture, we look at the scores given by Gelfand. According to Gelfand et al (2011), the Netherlands has a low tightness score, namely 3.3, whereas Germany has an average tightness score of 7. (Gelfand, et al., 2011). There is a clear difference between these scores, thus the Netherlands is a loose culture, whereas Germany is a tight culture. To test the general concept of tightness/looseness, we will use the following hypotheses:

H1: Entrepreneurs in the Netherlands have the propensity to perceive their culture as rather loose than tight.

H2: Entrepreneurs in Germany have the propensity to perceive their culture as rather tight than loose.

Because tightness is characterized by strength of norms and sanctioning for deviance, individuals in tight countries should feel they do not have much freedom of choice and control (Uz, 2015). This is also reflected in the entrepreneurial processes, where entrepreneurs do not have much freedom in their decision process. Comparing these components with the two main decision processes described in this article, the causation process would be the best reflection for the decision processes in the tight nations. There is less freedom in the causation process, since there needs to be a clear end state which the entrepreneurs need to achieve. This process works with the pre-existing knowledge and focuses on the expected return. For the loose nation, the effectuation process will be a better reflection of their entrepreneurial decision processes, since this process identifies and exploits opportunities in new markets with high levels of uncertainty (Fisher, 2012). It involves a high degree of freedom, they focus on the affordable loss and the means, so the end goal can still vary. This leads to two hypotheses about the tight and loose nations, namely:

H3: Entrepreneurs who perceive their culture as tight will tend to use the causation decision-making process.

H4: Entrepreneurs who perceive their culture as loose will tend to use the effectuation decision-making process.

In order to measure to what extend the cultural tightness/looseness will influence the decision-making process, we have to look closer at the five-sub constructs of the effectuation/causation decision-making processes. Since not all the five sub-constructs will be influenced by the tightness/looseness, we will test the general decision-making processes, as given in H2 and H3, by only focusing on the two sub-constructs which relate most to the tightness/looseness concept, namely the attitude towards others and the view of the future. The first one focuses especially on how the individuals in one country interact and treat each other. This is mainly based on culture, so this is a workable sub-construct. The second one focuses on how the organizations functions itself. Uncertainty, planning and also creativity and freedom are important aspects of this constructs, so this fits to the tightness/looseness concept from a multidimensional perspective.

The first sub-construct is the attitude towards others. Sarasvathy (2001) stated causation models emphasize detailed competitive analyses. Decision makers dealing with measurable or predictable future will do systematic information gathering and analysis within certain bounds. (Fisher, 2012). Effectuation emphasized strategic alliances and partnerships. Decision makers dealing with unpredictable phenomena will gather information through experimental and iterative learning techniques aimed at discovering the future (Fisher, 2012). To connect this to the tightness/looseness of a nation's culture, Gelfand (2011) stated that tight nations have a low tolerance of deviant behavior, combined with strong norms and punishment of deviant behavior. In nations with tight cultures, it is less likely that entrepreneurs will act deviant and make decisions that will contradict the norms in the country. Therefore, the entrepreneurs will only need a systematic information gathering and analysis within certain bounds. Also, they operate in a measurable or predictable future, which also makes it unnecessary to spend much time and money in partnerships and alliances. For the nations with a loose culture, deviant behavior is more appropriate and there is a lack of strong norms and punishment. This makes the steps and decisions made by the other entrepreneurs more unpredictable, as more is appropriate in the nation. This combined with the unpredictable future, entrepreneurs in loose nation will gain more benefit from strategic alliances and partnerships than entrepreneurs in tight nations. This will lead to the next hypotheses:

H5: Entrepreneurs who perceive their culture as tight will tend to emphasize detailed competitive analyses.

H6: Entrepreneurs who perceive their culture as loose will tend to emphasize strategic alliances and partnerships.

The second sub-construct described in the theoretical framework is the view the future. Causation processes focus mainly on the predictable aspects of an uncertain organization's future, whereas effectuation processes focus mainly on the controllable aspects of an unpredictable future (Sarasvathy S. D., 2001). In nations with tight cultures, individuals experience that their behavioral options are limited, they will be more cautious (concerned with avoiding mistakes) and dutiful (focusing on behaving properly). These individuals also have a higher need for structure (Gelfand, et al., 2011). For the entrepreneurs working in these nations, it is important that they plan as much as possible, in order to avoid as much obstacles as possible. They try to avoid uncertainty as much as possible. Triandis (2004) suggested that uncertainty avoidance dimension of Hofstede's

cultural values resembles cultural tightness. The opposite is true for nations with loose cultures, as they have a broader scope of freedom. They will look for opportunities and think outside the box and creative and focus on their controllable aspects in order to make the unpredictable future as big a success as possible. (Uz, 2015).This leads to the last hypothesis:

H7: Entrepreneurs who perceive their culture as loose will try to control the unpredictable future.

H8: Entrepreneurs who perceive their culture as tight will try to predict the uncertain future.

4. METHODOLOGY

4.1 Sample

The sample exists of two groups: entrepreneurs working in businesses in the Netherlands or in Germany in a company that exist five years or less. Since the company can only exist less than five years, the entrepreneurs referred to in this study are novice entrepreneurs. The reason to use novice entrepreneurs in this study is that these entrepreneurs are facing a lot of freedom since they are new to the business and do not have experience to rely on. The entrepreneurs should also possess a bachelor or master from a HBO or university.

The nationality of the entrepreneurs should be Dutch for the entrepreneurs working in the Netherlands, and German for the entrepreneurs working in Germany, otherwise the cultural tightness/looseness will not be measurable. The survey conducted in the Netherlands has 137 respondents. Here, the respondents should have a Dutch nationality, they should at least possess a bachelor's degree and the company should not exist longer than 5 years, so this will leave us with 90 respondents. The survey conducted in the Netherlands has been created via Google forms. The addresses of entrepreneurs were gathered through databases of the Kamer van Koophandel and personal and social networks have been used to approach entrepreneurs. The survey conducted in Germany was sent to 2000 entrepreneurs in Germany via email, social networks and newsletter2go. 130 entrepreneurs filled in the survey, and after the same restrictions were applied to the German entrepreneurs, there are 69 respondents.

4.2 Research methods

The dependent variable in this research is the causation/effectuation decision-making process. To measure this variable, a 10-item questionnaire developed by Alsos, Clausen & Solvoll, (2014) will be used. This scale includes all the five principles of effectuation and the corresponding five principles of causation. The two constructs are not mutually exclusive, in order to be able to account for the possibility of combining the two strategies and more importantly, to avoid seeing them as opposites but rather as different strategies. In order to relate the principle of effectuation and causation to other aspects, these items can be used. (Alsos, Clausen, & Solvoll, 2014). For the survey, the answers to the scales of effectuation and causation will be measures using a 7-point-Likert scale, where 1 = 'I strongly disagree' and 7= 'I strongly agree'.

The independent variable in this research is the tightness/looseness principle. The validated scale developed by Gelfand, Nishii and Raver (2006) will be used for this research. Here, tightness-looseness, the overall strength of social norms and tolerance of deviance, was measured on a six-item Likert scale that assessed the degree to which social norms are pervasive, clearly defined, and reliably imposed within nations (Gelfand, et al., 2011). In table 2 are the scale items shown, as well as the 6-point-Likert-scale. If in most cases the answers on the questions is a 6 (except for the reverse coded, where a 1 should indicate a tight culture), one could say that the culture is very tight. In appendix 11.1.1, table two shows the culture questions used in the surveys.

The questions were translated to the native language of the entrepreneurs by experts in the native language, so Dutch for the entrepreneurs in the Netherlands and German for the entrepreneurs in Germany. However, the end results of the surveys will be translated to English to fit in this research.

4.3 Method of analysis

The results of both the surveys were analyzed using IBM SPSS Statistics 22.

Exploratory factor analysis is a statistical method and it is used to find the underlying structure of a relatively large set of variables. The goal of this statistical method is to identify the underlying relationships between the variables tested. Here, the five causation and effectuation questions will be tested on construct validity. Construct validity refers to the extent to which an instrument measures the targeted construct (Haynes, Richard, & Kubany, 1995). After this analysis, the Cronbach's alpha is also measured to assure the reliability of the sample. A Cronbach's alpha of equal to or more than 0.7 indicates a reliable sample (Field, 2013). Next to that, we use the Kaiser-Meyer-Olkin Measure of sampling Adequacy (KMO). This method checks the original variables can be factorize efficiently. Since we know that the variables are more or less correlated, we use the partial correlation in order to measure the relationship between two variables by removing the potential influence of the remaining variables. If the KMO index is high (≈ 1), the function analysis can act efficiently but if the KMO is low (≈ 0), the analysis is not relevant. Anything above 0.5 can be interpreted as useful. (Kaiser, 1970). The last thing is the matrix, for the factor analysis, we used the direct Oblimin rotation. Orthogonal rotation produces factors that are statistically uncorrelated, while oblique rotation allows factors to be correlated (Ford, MacCallum, & Tait, 1986). Since both the constructs are related in accordance to Sarasvathy (2001), the oblique rotation fits best with our factors. One of the oblique rotation which is considered to work well is the direct Oblimin (Jenrich & Sampson, 1966). When using this rotating, the most useful matrix to investigate is the pattern matrix, although the component and structure matrix are quite similar. For this analysis, we used no fixed numbers but extracted based on eigenvalue greater than 1, since we use the questionnaire designed by Alsos, Clausen & Solvoll (2014) and they have used Kaiser's criterion (extract all factors with eigenvalues above 1).

After the factor analysis, the hypotheses stated by Gelfand (2011) are tested. When comparing the Gelfand score with the scores obtained by the surveys amongst the Dutch and German entrepreneurs, we look at the given scores in the article written by Gelfand and compare these with the mean scores obtained by the surveys. Important is to note that the scores obtained by this study vary from a 1-6, since the survey measures the entrepreneurs on a six-Likert scale. The scores given in the article written by Gelfand are not measured on this scale, so in order to compare these scores, we use a within-subject standardization. A within-subject standardization requires subtracting the average for each respondent across all items from the score of each item, and dividing the result by the standard deviation of the respondent's answer across all items (Hofstede, 2001). Important here is that the fourth question (people in this country have a great deal of freedom in deciding how they want to behave in most situations) is reverse coded, so it is important to change this in SPSS. Here, the variable corresponding to the fourth question is recoded (where 1= 6, 2 = 5 and so on) and with this new variable, we can calculate the mean of all the six Gelfand

questions. Next to that, the standardized scores of all the Gelfand questions should be calculated. With both the score, we sum up the mean and the standardized scores for all the six Gelfand question apart and this leads us to the standardized scores for all the respondents apart. Last, we use the descriptive statistics to calculate a mean and a standard deviation of the Gelfand question all the respondents in the sample.

The final aspect which is important to assess is whether they are from the same population. This test can be used to determine if the given two sets of data differ significantly from each other. Before we can start a t-test, we have to assure that the data is normally distributed. This can be measured through the use of tests of normality. Since our sample is smaller than 2000 respondents, we use the Shapiro-Wilk test to measure the normality. To test this, we state a null hypothesis and an alternative hypothesis. The null hypothesis is that the data is normally distributed and the alternative hypothesis is that the data is not normally distributed. If the p-value less than the alpha level of 0.05, the null hypothesis is rejected. In other words: there is evidence that the data tested are not from the normally distributed population, thus not normal. The contrary is true for a p-value greater than the alpha level.

When the data is normal, the t-test can be used. The paired sample t-test presumes that both groups are normally distributed and that they have relatively equal variances. When the data is not normally distributed, the Mann Whitney U test is a more suitable too use. With these tests, the data obtained in the Netherlands and in Germany can be compared and this will help to accept or reject the hypotheses stated above.

4.4 Control variables

There are other random independent variables besides the national culture that can possibly influence the dependent variable. Control variables say something about the entrepreneur itself and these variables might have influence on their choice for the decision-making process (Cardon, Gregoire, Stevens, & Patel, 2013). Control variables are variables that will not change throughout the duration of the experiment, which than allows the relationship between the other variables being tested in order to be better understood. In this research there are a few control variables, namely age, gender and study type. Although our sample consists of only higher educated entrepreneurs, we made a distinction between entrepreneurs who finished a business related study and entrepreneurs who did not. To make sure that there will not be any strategically significant relations between these control variables and the dependent variable, their correlation will be measured.

5. RESULTS

5.1 Descriptive statistics

In the Dutch database, we use the age, gender and study background of the entrepreneurs as control variables. In this sample, 55.6% of the entrepreneurs is male and 44.4% is female. The mean age of the respondents is 42 years (σ= 12.7) and 33.3% of the entrepreneurs in the sample possess a bachelor or master in the field of economics, whereas a majority of the entrepreneurs do possess a bachelor or master in another field. The mean of the causation questions is 3.70 (σ=1.11) and the mean of the effectuation questions is 4.31 (σ=1.16). This indicates a slight preference for the effectuation decision-making approach. The mean for the individual effectuation questions range from 4.2 until 4.8, whereas the mean for the causation questions range from 2.9 until 4.6. Remarkable here is that the third causation question has a low mean (2.9), whereas the other questions have a quite higher mean**.**

In the German sample, the same control variables are used. In this sample, 63.8% of the respondents is male, and 36.2% is female. The mean age of the respondents is 32 years (σ =7,5) and 49,3% of the entrepreneurs possess a bachelor or master in the field of economics and 50.7% of the entrepreneurs possess a bachelor or master in any other field. The German sample prefers a causation decision-making approach, with a mean of 4.56 for the causation questions (σ =1.02) and a mean for the effectuation questions of 3.57 (σ =1.33). The means of the individual questions on causation and effectuation indicates that the causation means range from 3.4 to 5.1 and the causation means range from 3.1 to 4.1.

Looking at the correlations, there is no statistically significant influence between the three control variables and the causation, effectuation and culture items for both samples. The correlation between the causation and effectuation approach is in both samples negatively correlated, which indicates that when a respondent scores high on one construct, is scores low on the other. (Netherlands: r=-.512, p=0.000) (Germany: r=-0.344, p=0.004). Following Sarasvathy (2001, 2008), effectuation and causation are seen as representing contrasting and different approaches, implying that it is not likely to find positive correlations between the two approaches.

There is a small and barely significant correlation between entrepreneurs who possess a bachelor or master in the field of economics/business and the causation decision-making approach in both samples (Netherlands: education- causation: r=0.140, p=0.252, education- effectuation: r=-0.152, p=0.211) (Germany: education- causation: r=0.176, p=0.097, education- effectuation: (r=-0.066, p=0.539).

5.2 Factor analysis

5.2.1 Correlation matrix

To determine if the causation and effectuation questions actually measure the construct they are expected to measure, the factor analysis is conducted. Since the correlation is wanted, we analyze the correlation matrix. Both databases consist of questions which are translated from English into their native language, German and Dutch. It is therefore important that both the databases including their question will undergo the factor analysis. The first table to investigate is the correlation matrix. In this matrix, the determinant is important. The determined has to be greater than 0.00001, below this number, the items are too unrelated and therefore the factor analysis cannot be executed properly. The determinant for the German sample is 0.035 and the determinant for the Dutch sample is 0.079. Both are greater than 0.00001 and so they are reliable and good for use. If two items have a really high score, more than 0.8, than it is very likely they are asking the same question but in a different way. This is also a problem, because it will make the factor analysis less reliable. There is no such thing in both correlation tables.

5.2.2 KMO

The second thing to take a closer look at is the Kaiser-Meyer-Olkin Measure of sampling Adequacy (KMO). For the questions in the German sample, the KMO is 0.760, whereas the KMO in the Dutch sample is 0.770, both with a Sig < 0.001. The KMO is in both samples higher than 0.05, thus both samples can be factorized efficiently.

5.2.3 Matrix

Then the final aspect, is the matrix. For the German sample, the factor analysis resulted in only two components. Which is actually a good sign, since we only have the causation and effectuation question and the effectuation questions loaded on one factor, and the causation question loaded on the other. For the Dutch sample however, there were three factors instead of

two. The causation questions did not load on one and the same factor, neither did the effectuation questions. See appendix 11.2.4 and appendix 11.3.4 for the pattern matrix.

For this factor analysis, the Kaiser Criterion is used as described in the method of analysis. A problem with this rule is its arbitrary nature. Inflexible adherence to the rule can lead to underestimation or overestimation of the number of factors to retain (Tucker, Koopman, & Linn, 1969), which can severely distort the factor solution. (Ford, MacCallum, & Tait, 1986)

A good strategy is to use a number of decision rules and to examine a number of solutions prior to coming to a final conclusion on the retention issue (Comrey, 1987) (Hakistan, Rogers, & Cattell, 1982) (Harris, 1967).

Therefore, we ran the factor analysis again, but not on the eigenvalue of 1, but on a limited number of factors, namely two. This resulted in the desirable pattern matrix, where all the causation questions loaded on one factor and all the effectuation questions loaded on the other.

The last factor analysis we ran was without a rotation and with an orthogonal rotation. Although we do not assume that both the constructs are not correlated, it is interesting to see how the last one work out. Especially since both the orthogonal and no-rotation showed the same matrix. In table 2 the factor loading are shown.

Table 2: Factor loading – Dutch sample

Oblimin Rotation

	Component		
	1	2	3
Caus1			X
Caus2			X
Caus3		X	
Caus4			X
Caus5			X
Eff1	X		
Eff2		X	
Eff3	X		
Eff4		X	
Eff5	X		

2-Factor Restriction

	Component	
	1	2
Caus1		X
Caus2		X
Caus3		X
Caus4		X
Caus5		X
Eff1	X	
Eff2	X	
Eff3	X	
Eff4	X	
Eff5	X	

No/orthogonal Rotation

	Component		
	1	2	3
Caus1		X	
Caus2		X	
Caus3		X	
Caus4		X	
Caus5			X
Eff1	X		
Eff2		X	
Eff3	X		
Eff4	X		
Eff5	X		

5.3 Cronbach's alpha

The Cronbach's alpha of the Dutch sample for the causation questions is α=0.681 and for the effectuation questions it is α=0.719, so both are reliable.

The Cronbach's alpha of the German sample for the causation questions is α=0.744 and for the effectuation questions it is α=0.808, so both are reliable.

5.4 Tightness/looseness

The calculated score for the culture questions resulted in a mean Gelfand score of 3.8 with a standard deviation of 4.2 for the Dutch sample and a mean of 4.8 and a standard deviation of 4.1 for the German sample.

5.5 Shapiro-Wilk

In order to investigate if we can assume that the data in the samples is normally distributed, we calculate the Shapiro-Wilk score. In the Dutch sample, the Shapiro-Wilk test indicates that there is no statistically significant deviation from normality for the Causation items (SW (90) = 0.989, p= 0.646), but there is for the effectuation (SW (90) = 0.972, p=0.048) and for the Cultural items (SW (90) = 0.969, p=0.030). The values for skewness and kurtosis between -2 and +2 are considered acceptable in order to prove normal univariate distribution (George & Mallery, 2010). The skewness of the effectuation items is -0.330 (SE=0.254) and the skewness of the cultural items are -0.670 (SE=0.254). Both are between the considerable range so can be seen as normal distributed. When observing the histograms, it is clear that for both concepts the data is normally distributed. See appendix 11.2.10 and 11.2.11 for the histograms

The Shapiro Wilk tests indicates that there is no statistically significant deviation from normality in the German sample for the effectuation (SW (69) = 0.975, p = 0.171) nor for culture items (SW (69) = 0.983, p = 0.484). However, it indicates that there is a statistically significant deviation for the causation items (SW (69) = 0.96, p = 0.027). The skewness of the causation items is -0.717 (SE=0.289). This skewness level lies in the considerable range of skewness and thus this sample can also be assumed to be normally distributed. By observing the histogram, we see that the data is normally distributed. See appendix 11.3.9 for the histogram.

5.6 Paired Sample T-test

Now we have assumed the data to be normally distributed, we can say something about the tendency to choose for a certain decision making process. Since we compare effectuation and causation of the same sample (and thus population), we use a paired samples t-test. What is basically tested is whether these means are statistically significantly different from each other.

In the Netherlands, the causation has a mean of 3.7044 with a standard deviation of 1.11223 and the effectuation has a mean of 4.3067 with a standard deviation of 1.15620 (t (89) = 2.896, p =0.005). The correlation between these two factors is -0.512, where the negative means that when someone scores high in the one tends to score low in the other.

The mean of the forth causation question is 3.511 with a standard deviation of 1.7879 and the mean of the forth effectuation question is 4.067 with a standard deviation of 1.6201. (t (89) = -2.093, p=0.039). The correlation between these questions is -0.089.

The mean of the third causation question is 2.978 with a standard deviation of 1.4914 and the mean of the third effectuation question is 4.756 with a standard deviation of 1.5745. (t (89) = -7.035, p=0.000). The correlation between these questions is -0.222

In Germany, the causation has a mean of 4.5565 with a standard deviation of 1.01915 and the effectuation has a mean of 3.5681 with a standard deviation of 1.32560. (t (68) = 4.254, p =0.000). The correlation between these two factors is -0.344.

The mean of the forth causation question is 4.739 with a standard deviation of 1.4618 and the mean of the forth effectuation question is 3.739 with a standard deviation of 1.6947. (t (68) = 3.514, p=0.001). The correlation between these questions is -0.117.

The mean of the third causation question is 3.348 with a standard deviation of 1.3914 and the mean of the third effectuation question is 3.435 with a standard deviation of 1.8746. (t (68) = -0.312, p=0.756). The correlation between these questions is 0.020.

5.7 Partial correlation

The last thing to test is whether the control variables statistically significantly influence the entrepreneurs in their decision-making process. To test this, we use the partial correlation test and use the three control variables mentioned above (age, gender and educational background). The test in the Dutch sample indicates that there are no significant changes when controlling for age, gender and educational background. (Culture/Causation: without: r=0.091, with: r=0.082)(Culture/Effectuation: without: r=0.114, with: r=0.088). Both have high significance levels,

which indicates that there is no statistically significance difference (p=0. 451, p=0.419).

6. HYPOTHESES TESTING

To test whether the stated hypotheses can be rejected or approved, we use the results which are given in the previous section.

H1: Entrepreneurs in the Netherlands have the propensity to perceive their culture as rather loose than tight.

The score computed by Gelfand in her article (2011) for the Netherlands is 3.3, whereas the mean standardized score given in this research is 3.8019. The mean score of the culture component based on the six-Likert scale is 3.8, so both these scores are the same. Gelfand used a tightness/looseness score which ranged from 1.6 to 12.3 with a mean of 6.5. In her article there is not stated when a nation's culture is actually seen as tight or loose. Since the mean of the sample of the Netherlands is 3.3 and well under the mean of 6.5, we see this culture as a loose culture and therefore we fail to reject this hypothesis.

H2: Entrepreneurs in Germany have the propensity to perceive their culture as rather tight than loose.

The second hypothesis is more difficult to assess. In this study, Germany scores a 4.4782 (σ =4.054), whereas Germany scored a 7 in the study conducted by Gelfand et al (2011). A tightness/looseness score of 7 indicates a rather tight culture, since the mean score is 6.5. This study scored Germany a 4.8, which indicates more of a loose nation than a tight nation in accordance to the mean score given by Gelfand.

Looking at the mean scores instead of the standardized scores, another perspective is shown. When we consider the six-Likert-scale used, we indicate that a score of 6 will be seen as a tight culture, whereas the score of 1 can be seen as a loose culture. Here, we get the same score of 4.8 (σ =0.575), only based on a scale from 1 to 6 we say that they see their culture as tight.

We can state that the German entrepreneurs perceive their culture as more tight than the Dutch entrepreneurs do and say that the entrepreneurs in Germany have the propensity to perceive their culture as rather tight than loose, so we fail to reject this hypothesis.

H3: Entrepreneurs who perceive their culture as tight will tend to use the causation decision-making process

In Germany, the causation has a mean of 4.5565 with a standard deviation of 1.01915 and the effectuation has a mean of 3.5681 with a standard deviation of 1.32560. (t (68) = 4.254, p =0.000). The correlation between these two factors is -0.344. Since the p-value is smaller or equal to 0.005, there can be said that these means differ statistically significant. This shows that we fail to reject the hypothesis.

H4: Entrepreneurs who perceive their culture as loose will tend to use the effectuation decision-making process.

In the Netherlands, the causation has a mean of 3.7044 with a standard deviation of 1.11223 and the effectuation has a mean of 4.3067 with a standard deviation of 1.15620 (t (89) = 2.896, p =0.005). The correlation between these two factors is -0.512, where the negative means that when someone scores high in the one tends to score low in the other. Since the p-value is smaller or equal to 0.005, there can be said that these two means differ statistically significantly and we fail to reject the hypothesis.

H5: Entrepreneurs who perceive their culture as tight will tend to emphasize detailed competitive analyses

The mean of the forth causation question is 4.739 with a standard deviation of 1.4618 and the mean of the forth effectuation question is 3.739 with a standard deviation of 1.6947. (t (68) = 3.514, p=0.001). The correlation between these questions is -0.117. Since the p-value is smaller or equal to 0.005, we fail to reject the hypothesis.

H6: Entrepreneurs who perceive their culture as loose will tend to emphasize strategic alliances and partnerships

The mean of the forth causation question is 3.511 with a standard deviation of 1.7879 and the mean of the forth effectuation question is 4.067 with a standard deviation of 1.6201. (t (89) = -2.093, p=0.039). The correlation between these questions is -0.089. Since the p-value is larger than 0.005 (p=0.039), we reject the hypothesis.

H7: Entrepreneurs who perceive their culture as loose will try to control the unpredictable future

The mean of the third causation question is 2.978 with a standard deviation of 1.4914 and the mean of the third effectuation question is 4.756 with a standard deviation of 1.5745. (t (89) = -7.035, p=0.000). The correlation between these questions is -0.222. Since the p-value is smaller or equal to 0.005, we fail to reject the hypothesis.

H8: Entrepreneurs who perceive their culture as tight will try to predict the uncertain future

The mean of the third causation question is 3.348 with a standard deviation of 1.3914 and the mean of the third effectuation question is 3.435 with a standard deviation of 1.8746. (t (68) = -0.312, p=0.756). The correlation between these questions is 0.020. First of all, gives the correlation us a bad sign: since the two question tend to opposite, the correlation should be negative. When it is positive, it means that a participant who answered high on the first one, also tends to answer high on the second one. The p-value is larger than 0.005 (p=0.756), so we reject the hypothesis.

7. DISCUSSION

One remarkable thing about the study was the factor analysis. Where the causation and effectuation were divided into two factors in the German sample, were the same questions in the Dutch sample divided into three different factors based on the eigenvalue of 1. Sarasvathy's (2001) proposal that causation and effectuation are two different approaches to new venture creation suggests a two-factor solution in which causation items should load on one-factor and effectuation items should load on another. (Chandler, DeTienne, McKelvie, & Mumford, 2011). Since evidence suggest that is it is better to overestimate than to underestimate the number of factors, it is suggested that researchers examine the highest to the lowest number of factors until the most interpretable solution is found. (Hakistan, Rogers, & Cattell, 1982). When the factor analysis was ran the second time but now based on a restriction of two factors, all the causation questions did load on one factor and the effectuation questions on the other. The third time, using other rotation options, the second effectuation question loaded on one factor together with the other causation items and the fifth causation question loaded solely on a third factor. One reason for this can be the translation. Since the same questions for asked for the German sample as for the Dutch sample, differences in translations can cause this difference. Another reason for the difference can be the sample size. The Dutch sample size (N=90) is larger than the German (N=69). A study by Arrindell and van der Ende (1985) suggest that stability can be achieved with smaller samples than previously acknowledged. The three different factor analyses which were ran in this study all give other outcomes, which indicates that there is not enough evidence to suggest that some questions should be changed. The Oblimin factor analysis indicated that the third causation

question did not fit with the other causation question, as well as the second and fourth effectuation question did not fit with the other effectuation questions. The orthogonal rotation factor analysis indicated that the fifth causation question and the second effectuation were the 'outliers'. These questions are lower-level indicators and are defining characteristics of the construct, when changed or deleted, the upper-level construct (in this case causation or effectuation) might be substantially altered (MacKenzie, Podsakoff, & Jarvis, 2005). These are the factor labels which imply hypotheses that require further investigation (Comrey, 1987).

Whereas the hypotheses which stated that loose cultures prefer effectuation decision-making processes and tight cultures prefer causation decision-making processes were not rejected, two out of four hypotheses which compared the two individual dimensions (H6 and H8) were. Thus although overall there can be stated that entrepreneurs in tight-culture nations will tend to use the causation decision-making process and entrepreneurs in loose-culture nations tend to use the effectuation process, they do not tend to use all the dimensions which are regarded as characteristics of the aforementioned decision-making processes.

The sample in Germany consisted of almost a 50% score on entrepreneurs who possess a bachelor or master diploma in the fields of economics. In the Dutch sample, only 33.3% of the entrepreneurs possess a bachelor or master diploma in this field. There is also a small correlation between entrepreneurs who possess a bachelor or master in the field of economics/business and the causation decision-making approach in both samples as stated in the result section. Although this correlation is not quite significant, it is interesting to see that this agrees with the current literature. This could also possibly influence the higher tendency for causation processes in Germany, since entrepreneurship and similar courses focuses on business planning: understanding market research techniques, competitive analysis based on receives wisdom in strategic management and financial valuation methods (Dew, Read, Sarasvathy, & Wiltbank, 2009).

8. CONCLUSION

This study investigated the influence of the nation's tightness/looseness on the decision-making process of entrepreneurs. This has been done to answer the following research question: To what extent do the culture dimensions of tightness/looseness effect the decision making process of entrepreneurs?

We can conclude that the Dutch entrepreneurs perceive their culture as rather loose than tight. The German entrepreneurs do perceive their culture as rather tight than loose, and they perceive their culture tighter than the Dutch entrepreneurs do. Moreover, this study also indicated that tightness/looseness of the nation's culture does influence the entrepreneurs in choosing their decision-making process. This is actually logical, since entrepreneurs who experience a lot of freedom concerning their business, tend to look for solutions and ideas out of the box. Entrepreneurs who do not experience a lot of freedom, first have to check available resources etc., thus formulating a business plan.

This study found that the entrepreneurs in Germany tend to use the causation decision-making process more, whereas the entrepreneurs in the Netherlands tend to use the effectuation decision-making process more. The sub constructs of causation and effectuation measured do not indicate a significant difference between the two decision-making processes.

The control variables including age, sex and educational background do not influence the tendency for a certain decision-making process. Although the entrepreneurs who possess a diploma in the field of business and economics do have a tendency to use a causation decision-making process over an effectuation decision-making process since educational background in both samples is negatively related with effectuation and positively related to causation.

9. LIMITATIONS AND FURTHER RESEARCH

9.1 Limitations

This research knows some limitations. The first one is the limited validity. The sample of the Dutch entrepreneurs consisted of 90 respondents and the sample of the German entrepreneurs of 69. With this small number, conclusions about the measured concepts can be drawn, but it cannot significantly be generalized over all the entrepreneurs in the specific country. When research is done with a bigger scale, conclusions can be generalized and will be more reliable.

Another limitation of the research is that the theory proposed by Gelfand tested culture in a lot of different countries. If you really want to measure the strength of the model made by Gelfand, you should not only focus on two countries, but try to test this model on more than two countries. Generalized conclusions cannot be drawn when only testing 2 out of 33 countries.

Moreover, all the information contained from the entrepreneurs is self-reported and there is no other way to find out the information given. The entrepreneur can state that they do not use a strict plan or goal, but the possibility still exists that they do use some goal planning. Possibly does the entrepreneur not think that the instrument their using can be factored under the term 'plan' or 'goal' or does the entrepreneur not want to give away that information due to any reason.

The last thing that possibly limited the study was that the survey lacked examples. Some respondents indicated that the questions about causation and effectuation differed depending on the context and/or situation. And this is not new, since literature on this subject assumed that there is not one best decision-making process, but it depends on the situation (Allinson & Hayes, 1996) (Mintzberg, 1994). The correlation between effectuation and causation and the thought experiments are important tests of construct validity (Carter, Gartner, & Reynolds, 1996). Therefore, there a chance that the data obtained by this study would differ when there were situation sketches or examples used.

9.2 Further research

As stated in the discussion section, the factor analysis did have more optional outcomes. To test whether the questions measuring each construct are validate, further research can be done regarding these items. Since the survey is translated, the possibility exists that this made the concepts more ambiguous and related. This research can also test these questions in more ways and with more different samples to discover the exact reason for the differences in the factor analysis.

A similar study can be conducted in countries other than the Netherlands and Germany to compare if the conclusions drawn from this study will be the same as the conclusions drawn from the similar studies.

Moreover, this study was conducted amongst entrepreneurs, whereas the study originated by Gelfand conducted their study amongst people working in all kind of sectors having all kinds of jobs. Researchers can choose to do this research with different samples. This will also give an interesting image of how the perception of culture is related to other jobs.

It is also interesting to study not only what the entrepreneurs themselves think they do and how they think that the culture influences their job, but to really go into depth and finding out how it actually does. In this study, only surveys were used and it only showed the superficial influence of culture. In further research, it would be interesting to study the entrepreneurs through interviews to measure the real extent of the cultural influence.

Lastly, there was no significant correlation between the control variables and the dependent variable. Although there was a correlation between the entrepreneurs who possess a bachelor or master in the field of economics/business and the causation decision-making approach in both samples as stated in the result section. Since the correlation is not quite statistically significant, it could be interested to do more research on the influence of the study background of entrepreneurs on their choice for a certain decision-making process.

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11. APPENDIX

11.1 Table 2: items for culture

Table 2: items for culture

	Item	Coding
	1. There are many social norms that people are supposed to abide in this country.	1 = very loose culture; 6= very tight culture
	2. In this country, there are very clear expectations for how people should act in most situations.	
	3. People agree upon what behaviors are appropriate versus inappropriate in most situations in this country.	1 = very tight culture; 6= very loose culture **(reverse coded)**
	4.People in this country have a great deal of freedom in deciding how they want to behave in most situations **(reverse coded)**	
	5. In this country, if someone acts in an inappropriate way, others will strongly disapprove.	
	6. People in this country almost always comply with social norms.	

1 = strongly disagree, 2 = moderately disagree, 3 = slightly disagree, 4= slightly agree, 5= moderately agree, 6= strongly agree.

11.2 Appendix B: SPSS output the Netherlands

11.2.1 Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Wat is uw leeftijd?	90	3,0	70,0	42,211	12,6700
Geslacht	90	,0	1,0	,444	,4997
Wat is uw hoogst genoten onderwijs?	90	,0	1,0	,333	,4740
Valid N (listwise)	90				

Wat is uw hoogst genoten onderwijs?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,0	60	66,7	66,7	66,7
	1,0	30	33,3	33,3	100,0
	Total	90	100,0	100,0	

Geslacht

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,0	50	55,6	55,6	55,6
	1,0	40	44,4	44,4	100,0
	Total	90	100,0	100,0	

Descriptive Statistics

	N	Mean	Std. Deviation
Causation	90	3,7044	1,11223
Effectuation	90	4,3067	1,15620
Culture	90	3,8019	,69144
Valid N (listwise)	90		

Descriptive Statistics

	N	Mean	Std. Deviation
Caus1	90	4,589	1,6820
Caus2	90	4,100	1,6561
Caus3	90	2,978	1,4914
Caus4	90	3,511	1,7879
Caus5	90	3,344	1,7556
Eff1	90	4,211	1,6926
Eff2	90	4,211	1,7255
Eff3	90	4,756	1,5745
Eff4	90	4,067	1,6201
Eff5	90	4,289	1,8066
Gelfand_1	90	4,622	1,1571
Gelfand_2	90	3,744	1,3621
Gelfand_3	90	4,233	1,0918
Gelfand_4	90	2,544	1,0930
Gelfand_5	90	4,011	1,1367
Gelfand_6	90	3,656	1,1234
Valid N (listwise)	90		

11.2.2 Correlation Matrix

Correlation Matrix[a]

		Caus1	Caus2	Caus3	Caus4	Caus5	Eff1	Eff2	Eff3	Eff4	Eff5
Correlation	Caus1	1,000	,483	,216	,272	,300	-,257	-,159	-,221	-,237	-,426
	Caus2	,483	1,000	,269	,260	,398	-,048	-,121	-,206	-,237	-,325
	Caus3	,216	,269	1,000	,228	,132	-,127	,072	-,222	-,004	-,202
	Caus4	,272	,260	,228	1,000	,412	-,389	-,316	-,298	-,089	-,391
	Caus5	,300	,398	,132	,412	1,000	-,305	-,340	-,242	-,257	-,333
	Eff1	-,257	-,048	-,127	-,389	-,305	1,000	,489	,285	,306	,413
	Eff2	-,159	-,121	,072	-,316	-,340	,489	1,000	,172	,292	,269
	Eff3	-,221	-,206	-,222	-,298	-,242	,285	,172	1,000	,280	,586
	Eff4	-,237	-,237	-,004	-,089	-,257	,306	,292	,280	1,000	,277
	Eff5	-,426	-,325	-,202	-,391	-,333	,413	,269	,586	,277	1,000
Sig. (1-tailed)	Caus1		,000	,021	,005	,002	,007	,067	,018	,012	,000
	Caus2	,000		,005	,007	,000	,328	,127	,026	,012	,001
	Caus3	,021	,005		,015	,108	,116	,251	,018	,485	,028
	Caus4	,005	,007	,015		,000	,000	,001	,002	,201	,000
	Caus5	,002	,000	,108	,000		,002	,001	,011	,007	,001
	Eff1	,007	,328	,116	,000	,002		,000	,003	,002	,000
	Eff2	,067	,127	,251	,001	,001	,000		,052	,003	,005
	Eff3	,018	,026	,018	,002	,011	,003	,052		,004	,000
	Eff4	,012	,012	,485	,201	,007	,002	,003	,004		,004
	Eff5	,000	,001	,028	,000	,001	,000	,005	,000	,004	

a. Determinant = ,079

11.2.3 KMO

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,770
Bartlett's Test of Sphericity	Approx. Chi-Square	215,571
	df	45
	Sig.	,000

11.2.4 Pattern Matrix Oblimin Rotation

Pattern Matrix[a]

	Component		
	1	2	3
Caus1	-,102	,017	,716
Caus2	,094	,107	,918
Caus3	-,504	,602	,178
Caus4	-,626	-,063	,092
Caus5	-,170	-,298	,517
Eff1	,645	,455	,145
Eff2	,273	,719	-,021
Eff3	,772	-,099	,030
Eff4	,019	,502	-,381
Eff5	,702	,018	-,180

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 13 iterations.

11.2.5 Pattern Matrix 2 factor restriction

Pattern Matrix[a]

	Component	
	1	2
Caus1	-,175	,627
Caus2	-,005	,750
Caus3	,214	,709
Caus4	-,465	,320
Caus5	-,475	,321
Eff1	,799	,080
Eff2	,842	,264
Eff3	,383	-,381
Eff4	,547	-,030
Eff5	,486	-,451

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 14 iterations.

11.2.6 Pattern Matrix other rotation

Component Matrix[a]

	Component	
	1	2
Caus1	-,614	,333
Caus2	-,559	,502
Caus3	-,339	,586
Caus4	-,638	-,020
Caus5	-,647	-,024
Eff1	,630	,459
Eff2	,531	,605
Eff3	,611	-,062
Eff4	,494	,257
Eff5	,752	-,058

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

11.2.7 Cronbach's Alpha Causation

Reliability Statistics

Cronbach's Alpha	N of Items
,681	5

11.2.8 Cronbach's Alpha Effectuation

Reliability Statistics

Cronbach's Alpha	N of Items
,719	5

11.2.9 Descriptive statistics/Z-score

Descriptive Statistics

	N	Mean	Std. Deviation
Gelfand_1	90	4,622	1,1571
Gelfand_2	90	3,744	1,3621
Gelfand_3	90	4,233	1,0918
Gelfand_4	90	2,544	1,0930
Gelfand_5	90	4,011	1,1367
Gelfand_6	90	3,656	1,1234
Valid N (listwise)	90		

Descriptive Statistics

	N	Mean	Std. Deviation
ST_SCORE	90	3,8019	4,23630
Valid N (listwise)	90		

11.2.10 Test of Normality (Causation/ Effectuation)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Causation	90	100,0%	0	0,0%	90	100,0%
Effectuation	90	100,0%	0	0,0%	90	100,0%

Descriptives

			Statistic	Std. Error
Causation	Mean		3,7044	,11724
	95% Confidence Interval for Mean	Lower Bound	3,4715	
		Upper Bound	3,9374	
	5% Trimmed Mean		3,7136	
	Median		3,8000	
	Variance		1,237	
	Std. Deviation		1,11223	
	Minimum		1,00	
	Maximum		6,20	
	Range		5,20	
	Interquartile Range		1,40	
	Skewness		-,151	,254
	Kurtosis		-,081	,503
Effectuation	Mean		4,3067	,12187
	95% Confidence Interval for Mean	Lower Bound	4,0645	
		Upper Bound	4,5488	
	5% Trimmed Mean		4,3296	
	Median		4,4000	
	Variance		1,337	
	Std. Deviation		1,15620	
	Minimum		1,00	
	Maximum		6,60	
	Range		5,60	
	Interquartile Range		1,85	
	Skewness		-,330	,254
	Kurtosis		-,546	,503

Extreme Values

			Case Number	Value
Causation	Highest	1	85	6,20
		2	31	6,00
		3	59	6,00
		4	73	5,80
		5	55	5,40[a]
	Lowest	1	37	1,00
		2	33	1,00
		3	14	1,40
		4	47	1,60
		5	39	1,80
Effectuation	Highest	1	90	6,60
		2	69	6,20
		3	27	6,00
		4	37	6,00
		5	42	6,00
	Lowest	1	21	1,00
		2	40	2,00
		3	55	2,40
		4	13	2,40
		5	75	2,60[b]

a. Only a partial list of cases with the value 5,40 are shown in the table of upper extremes.

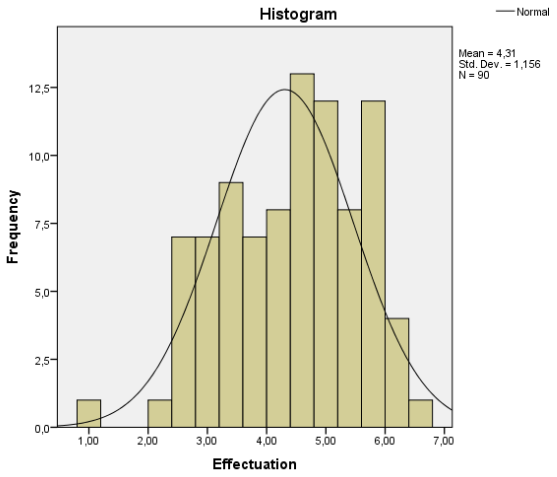
b. Only a partial list of cases with the value 2,60 are shown in the table of lower extremes.

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Causation	,068	90	,200*	,989	90	,646
Effectuation	,088	90	,084	,972	90	,048

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction



Statistics

		Effectuation	Culture
N	Valid	90	90
	Missing	0	0
Skewness		-,330	-,670
Std. Error of Skewness		,254	,254

11.2.11 Test of Normality (culture)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Culture	90	100,0%	0	0,0%	90	100,0%

Descriptives

			Statistic	Std. Error
Culture	Mean		3,8019	,07288
	95% Confidence Interval for Mean	Lower Bound	3,6570	
		Upper Bound	3,9467	
	5% Trimmed Mean		3,8292	
	Median		3,8333	
	Variance		,478	
	Std. Deviation		,69144	
	Minimum		1,50	
	Maximum		5,17	
	Range		3,67	
	Interquartile Range		1,00	
	Skewness		-,670	,254
	Kurtosis		,818	,503

Extreme Values

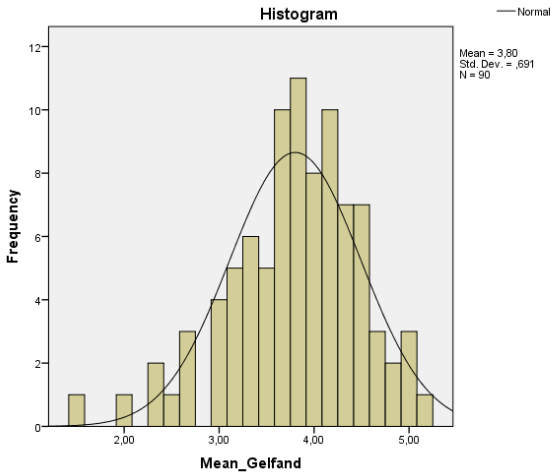
			Case Number	Value
Culture	Highest	1	88	5,17
		2	41	5,00
		3	44	5,00
		4	49	5,00
		5	51	4,83[a]
	Lowest	1	27	1,50
		2	87	2,00
		3	30	2,33
		4	15	2,33
		5	34	2,50

a. Only a partial list of cases with the value 4,83 are shown in the table of upper extremes.

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Culture	,111	90	,008	,969	90	,030

a. Lilliefors Significance Correction



11.2.12 Paired-sample T-test (Causation/Effectuation)

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Effectuation	4,3067	90	1,15620	,12187
	Causation	3,7044	90	1,11223	,11724

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Effectuation & Causation	90	-,512	,000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Effectuation - Causation	,60222	1,97251	,20792	,18909	1,01536	2,896	89	,005

11.2.13 Paired-sample T-test (Caus4/Eff4)

Descriptive Statistics

	N	Mean	Std. Deviation
CAUS_4	90	3,511	1,7879
EFF_4	90	4,067	1,6201
Valid N (listwise)	90		

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	CAUS_4 & EFF_4	90	-,089	,402

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	CAUS_4 - EFF_4	-,5556	2,5179	,2654	-1,0829	-,0282	-2,093	89	,039

11.2.14 Paired-sample T-test (Caus3/Eff3)

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	CAUS_3	2,978	90	1,4914	,1572
	EFF_3	4,756	90	1,5745	,1660

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	CAUS_3 & EFF_3	90	-,222	,035

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	CAUS_3 - EFF_3	-1,7778	2,3975	,2527	-2,2799	-1,2756	-7,035	89	,000

11.2.15 Partial correlation control variables

Correlations

		Wat is uw hoogst genoten onderwijs?	Geslacht	Wat is uw leeftijd?	Causation	Effectuation	Culture
Wat is uw hoogst genoten onderwijs?	Pearson Correlation	1	-,016	-,141	,176	-,066	,107
	Sig. (2-tailed)		,882	,185	,097	,539	,317
	N	90	90	90	90	90	90
Geslacht	Pearson Correlation	-,016	1	,269*	,053	-,184	-,198
	Sig. (2-tailed)	,882		,010	,620	,082	,062
	N	90	90	90	90	90	90
Wat is uw leeftijd?	Pearson Correlation	-,141	,269*	1	-,055	-,055	-,176
	Sig. (2-tailed)	,185	,010		,606	,608	,098
	N	90	90	90	90	90	90
Causation	Pearson Correlation	,176	,053	-,055	1	-,512**	,091
	Sig. (2-tailed)	,097	,620	,606		,000	,394
	N	90	90	90	90	90	90
Effectuation	Pearson Correlation	-,066	-,184	-,055	-,512**	1	,114
	Sig. (2-tailed)	,539	,082	,608	,000		,283
	N	90	90	90	90	90	90
Culture	Pearson Correlation	,107	-,198	-,176	,091	,114	1
	Sig. (2-tailed)	,317	,062	,098	,394	,283	
	N	90	90	90	90	90	90

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

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

Correlations

Control Variables			Causation	Effectuation	Culture
Geslacht & Wat is uw leeftijd? & Wat is uw hoogst genoten onderwijs?	Causation	Correlation	1,000	-,510	,082
		Significance (2-tailed)	.	,000	,451
		df	0	85	85
	Effectuation	Correlation	-,510	1,000	,088
		Significance (2-tailed)	,000	.	,419
		df	85	0	85
	Culture	Correlation	,082	,088	1,000
		Significance (2-tailed)	,451	,419	.
		df	85	85	0

11.3 Appendix C: SPSS output Germany

11.3.1 Descriptive statistics

Descriptive Statistics

	N	Mean	Std. Deviation
Sex	69	,36	,484
Age	69	31,580	7,5135
Edu	69	1,67	,816
Valid N (listwise)	69		

Sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	44	63,8	63,8	63,8
	male	25	36,2	36,2	100,0
	Total	69	100,0	100,0	

Educational background

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	35	50,7	50,7	50,7
	1,00	34	49,3	49,3	100,0
	Total	69	100,0	100,0	

Descriptive Statistics

	N	Mean	Std. Deviation
CAUS	69	4,5565	1,01915
EFF	69	3,5681	1,32560
Meangelfand	69	4,4783	,57516
Valid N (listwise)	69		

11.3.2 Correlation Matrix

Correlation Matrix[a]

		Caus_1	Caus_2	Caus_3	Caus_4	Caus_5	Eff_1	Eff_2_affloss	Eff_3	Eff_4	Eff_5
Correlation	Caus_1	1,000	,328	,401	,458	,279	-,269	-,162	-,264	-,291	-,318
	Caus_2	,328	1,000	,181	,409	,481	-,186	-,265	-,095	-,156	-,248
	Caus_3	,401	,181	1,000	,356	,202	-,037	,016	,020	,039	-,120
	Caus_4	,458	,409	,356	1,000	,567	-,170	-,150	-,237	-,117	-,301
	Caus_5	,279	,481	,202	,567	1,000	-,237	-,184	-,276	-,116	-,395
	Eff_1	-,269	-,186	-,037	-,170	-,237	1,000	,574	,391	,227	,404
	Eff_2_affloss	-,162	-,265	,016	-,150	-,184	,574	1,000	,496	,358	,487
	Eff_3	-,264	-,095	,020	-,237	-,276	,391	,496	1,000	,476	,616
	Eff_4	-,291	-,156	,039	-,117	-,116	,227	,358	,476	1,000	,558
	Eff_5	-,318	-,248	-,120	-,301	-,395	,404	,487	,616	,558	1,000
Sig. (1-tailed)	Caus_1		,003	,000	,000	,010	,013	,092	,014	,008	,004
	Caus_2	,003		,069	,000	,000	,063	,014	,219	,100	,020
	Caus_3	,000	,069		,001	,048	,382	,448	,435	,375	,164
	Caus_4	,000	,000	,001		,000	,082	,110	,025	,169	,006
	Caus_5	,010	,000	,048	,000		,025	,065	,011	,171	,000
	Eff_1	,013	,063	,382	,082	,025		,000	,000	,030	,000
	Eff_2_affloss	,092	,014	,448	,110	,065	,000		,000	,001	,000
	Eff_3	,014	,219	,435	,025	,011	,000	,000		,000	,000
	Eff_4	,008	,100	,375	,169	,171	,030	,001	,000		,000
	Eff_5	,004	,020	,164	,006	,000	,000	,000	,000	,000	

a. Determinant = ,035

11.3.3 KMO

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,760
Bartlett's Test of Sphericity	Approx. Chi-Square	214,052
	df	45
	Sig.	,000

11.3.4 Pattern Matrix

Pattern Matrix[a]

	Component	
	1	2
Caus_1	-,165	,636
Caus_2	-,091	,633
Caus_3	,256	,694
Caus_4	-,024	,808
Caus_5	-,149	,682
Eff_1	,651	-,061
Eff_2_affloss	,785	,042
Eff_3	,802	,003
Eff_4	,710	,053
Eff_5	,756	-,185

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 5 iterations.

11.3.5 Cronbach's Alpha (Causation)

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,744	,743	5

11.3.6 *Cronbach's Alpha (Effectuation)*

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,808	,809	5

11.3.7 *Culture/Z-score*

Descriptive Statistics

	N	Mean	Std. Deviation
Gelfand_1	69	4,609	1,0602
Gelfand_2	69	4,464	1,1451
Gelfand_3	69	4,319	,9776
Gelfand_4	69	4,609	1,0177
Gelfand_5	69	4,565	,9622
Gelfand_6	69	4,30	,896
Valid N (listwise)	69		

Descriptive Statistics

	N	Mean	Std. Deviation
St_scores	69	4,4782609	4,05437972
Valid N (listwise)	69		

11.3.8 *Test of Normality (Causation/Effectuation)*

Descriptives

			Statistic	Std. Error
CAUS	Mean		4,5565	,12269
	95% Confidence Interval for Mean	Lower Bound	4,3117	
		Upper Bound	4,8013	
	5% Trimmed Mean		4,6061	
	Median		4,6000	
	Variance		1,039	
	Std. Deviation		1,01915	
	Minimum		1,40	
	Maximum		6,40	
	Range		5,00	
	Interquartile Range		1,40	
	Skewness		-,717	,289
	Kurtosis		,517	,570
EFF	Mean		3,5681	,15958
	95% Confidence Interval for Mean	Lower Bound	3,2497	
		Upper Bound	3,8866	
	5% Trimmed Mean		3,5646	
	Median		3,6000	
	Variance		1,757	
	Std. Deviation		1,32560	
	Minimum		1,20	
	Maximum		6,20	
	Range		5,00	
	Interquartile Range		1,90	
	Skewness		,107	,289
	Kurtosis		-,800	,570

Extreme Values

			Case Number	Value
CAUS	Highest	1	31	6,40
		2	15	6,00
		3	20	6,00
		4	69	6,00
		5	21	5,80[a]
	Lowest	1	24	1,40
		2	30	1,80
		3	55	2,80
		4	42	2,80
		5	29	3,00
EFF	Highest	1	32	6,20
		2	38	6,00
		3	11	5,80
		4	30	5,80
		5	47	5,80
	Lowest	1	63	1,20
		2	49	1,20
		3	15	1,20
		4	35	1,40
		5	62	1,60[b]

a. Only a partial list of cases with the value 5,80 are shown in the table of upper extremes.

b. Only a partial list of cases with the value 1,60 are shown in the table of lower extremes.

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
CAUS	,103	69	,067	,960	69	,027
EFF	,070	69	,200*	,975	69	,171

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

11.3.9 *Test of Normality (Culture)*

Descriptives

			Statistic	Std. Error
Meangelfand	Mean		4,4783	,06924
	95% Confidence Interval for Mean	Lower Bound	4,3401	
		Upper Bound	4,6164	
	5% Trimmed Mean		4,4666	
	Median		4,5000	
	Variance		,331	
	Std. Deviation		,57516	
	Minimum		3,17	
	Maximum		6,00	
	Range		2,83	
	Interquartile Range		,83	
	Skewness		,273	,289
	Kurtosis		-,105	,570

Extreme Values

			Case Number	Value
Meangelfand	Highest	1	31	6,00
		2	32	5,67
		3	60	5,67
		4	69	5,50
		5	23	5,33[a]
	Lowest	1	28	3,17
		2	52	3,50
		3	14	3,50
		4	42	3,67
		5	37	3,67[b]

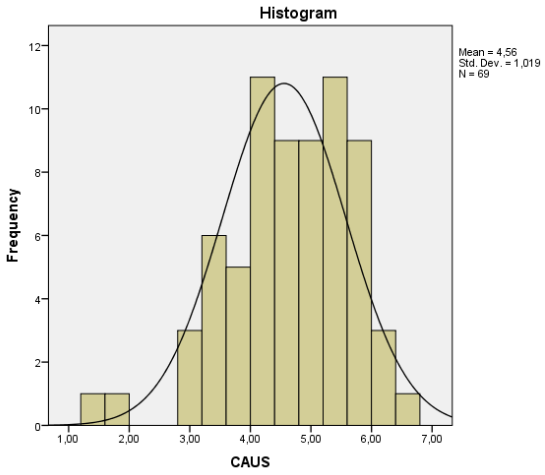
a. Only a partial list of cases with the value 5,33 are shown in the table of upper extremes.

b. Only a partial list of cases with the value 3,67 are shown in the table of lower extremes.

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Meangelfand	,112	69	,032	,983	69	,484

a. Lilliefors Significance Correction



Statistics

CAUS

N	Valid	69
	Missing	0
Skewness		-,717
Std. Error of Skewness		,289

11.3.10 Paired-sample T-test (Causation/Effectuation)

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	CAUS	4,5565	69	1,01915	,12269
	EFF	3,5681	69	1,32560	,15958

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	CAUS & EFF	69	-,344	,004

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	CAUS - EFF	,98841	1,92991	,23233	,52479	1,45202	4,254	68	,000

11.3.11 Paired-sample T-test (Caus4/Eff4)

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Caus_4	4,739	69	1,4618	,1760
	Eff_4	3,739	69	1,6947	,2040

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Caus_4 & Eff_4	69	-,117	,339

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Caus_4 - Eff_4	1,0000	2,3639	,2846	,4321	1,5679	3,514	68	,001

11.3.12 Paired-sample T-test (Caus3/Eff3)

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Caus_3	3,348	69	1,3914	,1675
	Eff_3	3,435	69	1,8746	,2257

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Caus_3 & Eff_3	69	,020	,870

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Caus_3 - Eff_3	-,0870	2,3120	,2783	-,6424	,4684	-,312	68	,756

11.3.13 Partial correlation

Correlations

		Age	CAUS	EFF	Meangelfand	Sex	Educational background
Age	Pearson Correlation	1	-,058	-,096	-,040	-,042	-,022
	Sig. (2-tailed)		,635	,435	,747	,729	,856
	N	69	69	69	69	69	69
CAUS	Pearson Correlation	-,058	1	-,344**	,197	-,009	,140
	Sig. (2-tailed)	,635		,004	,106	,939	,252
	N	69	69	69	69	69	69
EFF	Pearson Correlation	-,096	-,344**	1	,168	-,142	-,152
	Sig. (2-tailed)	,435	,004		,167	,244	,211
	N	69	69	69	69	69	69
Meangelfand	Pearson Correlation	-,040	,197	,168	1	,152	-,115
	Sig. (2-tailed)	,747	,106	,167		,213	,348
	N	69	69	69	69	69	69
Sex	Pearson Correlation	-,042	-,009	-,142	,152	1	-,140
	Sig. (2-tailed)	,729	,939	,244	,213		,252
	N	69	69	69	69	69	69
Educational background	Pearson Correlation	-,022	,140	-,152	-,115	-,140	1
	Sig. (2-tailed)	,856	,252	,211	,348	,252	
	N	69	69	69	69	69	69

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

Correlations

Control Variables			CAUS	EFF	Meangelfand
Sex & Age & Educational background	CAUS	Correlation	1,000	-,341	,215
		Significance (2-tailed)	.	,005	,083
		df	0	64	64
	EFF	Correlation	-,341	1,000	,178
		Significance (2-tailed)	,005	.	,153
		df	64	0	64
	Meangelfand	Correlation	,215	,178	1,000
		Significance (2-tailed)	,083	,153	.
		df	64	64	0