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The influence of entrepreneurial intent, (non)linear thinking, mindfulness and neuroticism & conscientiousness on procrastination.

Bachelor Thesis

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Preface

This final thesis has been conducted as conclusion to my Bachelor Business Administration at the University of Twente, which I have started in September 2008. Writing this thesis was a good and interesting learning experience of conducting a research. This research was carried out within the Netherlands Institute for Knowledge Intensive Entrepreneurship and the data was collected in the business development program of VentureLab Twente.

I would like to thank Michel Ehrenhard and Arjan Frederiks for their help and guidance. Their comments and feedback have always been very useful and they encouraged me to work independently and to maintain the right focus.

Furthermore, I would like to thank Anneke, Irene and Wiebke for their constructive advice and support during the past half year, as their help has been a good motivator in this period of research.

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1. Management summary

Procrastination, or postponing intended activities, is a problem which does not only affects people's ordinary life or student's performances, but it can also be hazardous for entrepreneurs. By procrastinating entrepreneurs may create inefficiency within their organisation and miss market opportunities. In this thesis an answer has been given to the question how several constructs, with regard to entrepreneurship, cognitive style, behaviour and personality, affect procrastination. The constructs entrepreneurial intent, linear and non-linear thinking, mindfulness and two of the Big Five personality dimensions were selected on the base of literature and logic. It was expected that increased entrepreneurial intent, non-linear thinking and neuroticism would promote procrastination, while an increasing linear thinking style, mindfulness and conscientiousness were thought to reduce procrastination.

A survey, designed by the Netherlands Institute for Knowledge Intensive Entrepreneurship, has been conducted, which contained several existing and validated scales concerning the chosen constructs. The survey was sent to participants of the business development program VentureLab Twente to complete and a total of 114 respondents filled it out over a period 2.5 years. After screening the dataset, 91 respondents remained for further analysis and a multiple regression analysis was performed. Contrary to the expectations and hypothesis, there was a negative correlation between entrepreneurial intent and procrastination, which means that individuals with increasingly high entrepreneurial intentions procrastinated less than individuals with a low intent. Mindfulness was also found to contribute to less procrastination, as in accordance with the hypothesis a negative relationship between mindfulness and procrastination was established. It therefore appears that individuals, who are often in a state of increased mindfulness, will procrastinate less than individuals who are less mindful. Conscientiousness proved to be, of all constructs, the most important contributor of procrastination. Conscientiousness was negatively related to procrastination, which implicates that an individual with an increasing conscientious personality, or who possesses many traits that are associated with conscientiousness like efficiency, orderliness and discipline, is usually a non-procrastinator.
In this research no relationship was found between thinking style and procrastination. Neither could be established whether neuroticism was a contributor of procrastination.

Although more future research is needed to be able to interpret the results with more certainty, these results do have important implications, not only for stakeholders of VentureLab Twente, but also for entrepreneurs and business coaches in general. With regard to the new government measures against students, who exceed the prescribed study duration with a year, educational institutes might benefit from the current results, as it is known that many students procrastinate problematically. Business coaches can also gain important insight from these results, especially the knowledge that individuals with a high intent to become an entrepreneur will procrastinate less than individuals with a low entrepreneurial intent can give good directions for their counselling methods. But most important, do (nascent) entrepreneurs profit from the current results, as it offers very practical advice on how to be more effective in managing a business by procrastinating less: by having high entrepreneurial intentions, being frequently mindful, and having an orderly, disciplined and efficient working method and overall lifestyle an entrepreneur has found the right tools to stop procrastinating and become a successful entrepreneur.

2. Introduction

2.1 Context

"*You may delay, but time will not.*" - Benjamin Franklin

Why do people put off unpleasant tasks, like studying for a test, making an important decision or paying the bills until the last minute? Postponing tasks, or procrastination, is a problem of all times which affects almost everyone: according to Steel (2007) since around 800 B.C. there have been writings about procrastination. Nowadays, one can find an abundance of books, articles, self-help websites and online courses concerning procrastination only by Googling. Also, a lot of research has been conducted to identify and eliminate the causes of procrastination (Lay, 1986; Steel, 2007; Van Eerde, 2003; Schouwenburg & Lay, 1995). As procrastination is thought to be harmful to people's personal life, it is also considered to be a threat to the success of entrepreneurs. In a business context, procrastination is not only hazardous for decision-making, but by consistently delaying tasks until the deadline effective team-work is inhibited, inefficiency is created within the organisation and managers and entrepreneurs may be less responsive to opportunities from the market place. Therefore it is necessary to gain more insights in the causes of procrastination and the linkage of procrastination to entrepreneurial intent.
This research will include an unique combination of factors that has not been used in previous research before. Aside from entrepreneurial intent, a person's thinking style is thought to be one of the contributors of procrastination as a very rational person might be better in resisting the temptation to procrastinate than an intuitive person. Also, a person's behaviour is considered to be a determinant of procrastination, which in itself is also a type of behaviour. This is because some types of behaviour or states of behaviour, like mindfulness, can stimulate or discourage procrastination. Lastly, personality is thought to be a predictor of procrastination because a person's characteristics influences his or her motivation and behaviour and therefore also procrastination.

2.2 Research objective

The main objective of this research is to find out what factors can cause procrastinating behaviour and if individuals with high entrepreneurial intentions are more inclined to procrastinate than those with low entrepreneurial intentions. Thus, it is examined if entrepreneurial intent is also a cause of procrastination. Aside from entrepreneurial intention other causes of procrastination are thought to be found in several psychological areas, namely cognitive (thinking) styles, behavioural states or the personality of individuals. This research may offer interesting results concerning the procrastinating behaviour and the identification of the causes of procrastination**.**

2.3 Problem Statement

Procrastinating behaviour is often associated with poor performance and can lead to financial set-backs, reduced well-being and delayed decision-making (Steel, 2007). According to Harriott and Ferrari (as cited in Steel, 2007, p. 65) 15%-20% of the adults are chronic procrastinators and over 95% of the procrastinators in general wish to reduce their procrastinating behaviour (O'Brien as cited in Steel, 2007, p. 65) which might be the reason why there are so many books and therapies about stopping procrastination. Procrastination can form a serious problem for chronic procrastinators. Therefore a lot of research has looked into the causes of procrastination and is further research essential in order to counter this phenomenon, which affects the lives of so many people.

Research has shown that 80% to 95% of the college students take part in procrastination (Ellis and Knaus and O'Brien, as cited in Steel, 2007, p.65). According to Gerald Hills, co-founder of the Collegiate Entrepreneurs' Organization, there has been an explosion of interest in entrepreneurship among college students. One of the reasons for this growth is the stagnating economy and its effect on the labour market (Aubuchon, 2009). Research of the Ewing Marion Kauffman Foundation (2009) supports this by claiming that the percentage of interest of first-year college students from the United States in becoming a business owner raised from 2.2% in 1993 to 3.6% in 2005. As a lot of college students are increasingly interested in becoming entrepreneur, it might be interesting and important to explore if entrepreneurial intent is a cause of procrastination and to see how procrastinating behaviour of college students manifests itself when becoming a nascent entrepreneurs: if individuals may already experience serious problems in their daily lives because of procrastination, then the consequences for entrepreneurs and managers, who are inclined to procrastinate, might even be more far-reaching, as not only their own well-being might suffer from it, but the organisation's success as well.

2.4 Research questions

Apart from the component of entrepreneurial intent, three psychological areas were chosen which do not only logically account for procrastination, but in which, according to many researchers, the causes of procrastination might also be found, as will be discussed in the literature review (Diaz-Morales, Cohen and Ferrari, 2008; Howell & Buro, 2010; Johnson & Bloom, 1994; Schouwenburg & Lay, 1995). The psychological areas are cognitive style, behavioural state and personality dimensions. Cognitive style, or the way that people think and reason, might reflect how easily an individual is tempted to procrastinate. A person with a rational thinking style might carefully consider the effects of such behaviour before procrastinating and decide to resist the temptation to procrastinate whereas an intuitive person might only consider the feeling of boredom or stress and procrastinate right away. The same applies to the behaviour and personality of individuals: as procrastination is a type of behaviour, the roots of this behaviour might be found in the character or behaviour of procrastinators. A certain type of behaviour or disposition might reduce procrastination (for example studious behaviour), whereas some individuals with certain types of personality (who are for example very chaotic or anxious) are more prone to procrastinate.

Subsequently, several constructs were selected from the psychological areas cognitive styles, behavioural states and personality dimensions of which research assumed to be likely to affect procrastination. The constructs that were selected for cognitive style are linear and non-linear thinking. These cosntructs were selected because these are the two fundamental types of thinking styles, as will be further explored in the theoretical framework. Mindfulness was chosen as a construct of behavioural state. This is because mindfulness appears to have a beneficial effect on an individual's well-being but also on a person's performance and therefore might affect procrastination. Neuroticism and conscientiousness were selected as these are two of the well-known Big Five dimensions of personality. A further elaboration on the choice of these personality dimensions is given in the theoretical framework.

The following central research question and sub-questions have been formulated:

How do the different selected constructs of cognitive style, behavioural state and personality dimensions and entrepreneurial intent affect procrastination?

Sub questions*:*

- *How is entrepreneurial intent related to procrastination?*
- *How are linear and non-linear thinking related to procrastination?*
- *How is mindfulness related to procrastination?*
- *How are neuroticism and conscientiousness related to procrastination?*

2.5 Contribution of research

Scientifically, these results might be interesting as it attempts to explore the causes of procrastination and whether there is a causal relationship between procrastination and entrepreneurial intent. A lot of research is dedicated to finding the cause or contributors of procrastinating behaviour. This research will contribute to the already existing range of research because of its diversity in predictors namely a linear or non-linear thinking style, mindfulness and the personality dimensions neuroticism and conscientiousness. As this research also includes the aspect of entrepreneurial intent in its model, it will give some interesting insights in the procrastinating behaviour of individuals with the intentions to become entrepreneur, or nascent entrepreneurs.
In societal terms, the results of this study will be interesting, not only for nascent entrepreneurs but also for the entire community as everyone faces the problems that come with procrastinating behaviour. By identifying the causes of procrastination, the results might contribute to a remedy or therapy for procrastination and be beneficial for psychological services and education purposes.

2.6 Outline of the thesis

This type of research is qualified as explanatory as it attempts to explain the causes of procrastination and the relationship between procrastination and different psychological constructs and entrepreneurial intentions.
First scientific information about procrastination, entrepreneurial intent, thinking styles, mindfulness and the personality dimensions was analysed in order to create a general understanding of the topics and to construct hypotheses based on the literature review. Then secondly, a survey has been developed and conducted. The respondents, nascent entrepreneurs, had to complete questionnaires concerning for example their behaviour, personality and ambitions. Third, by the means of a statistical analyses the results have been analysed. A multiple regression was performed in order to assess the relationship between the independent and dependent variables and to decide whether the formulated hypotheses should be accepted or rejected. Then lastly, the results are discussed in the last chapter and directions for further research shall be offered.

3. Theoretical Framework

3.1 Theory

3.1.1 Procrastination and its causes

The word procrastination has origins in Latin, with *pro* meaning "forward or in favour of" and *crastinus* meaning "of tomorrow" (Steel, 2007, p. 66) and is defined by Lay (1986, p. 475) as 'the tendency to postpone that which is necessary to reach some goal'.
Many researchers have attempted to identify the causes of procrastination in order to understand it and to find a solution for this phenomenon, which could prove to be quite problematic in not only business or academic environments but also in normal life. According to Burka and Yuen (1983) there are several causes for procrastinating behaviour.

The procrastinator might be afraid for failure or success or the procrastinating behaviour might be the result of a form of rebellion against authority. Procrastination might also arise because an individual is just unwilling to do an unpleasant task. Lay (1986) concludes in his research that procrastinators are chaotic, both on cognitive level as in everyday activities. Furthermore he argues that the procrastinator spends more time on projects which they enjoy, although when these projects are stressful, the chances that the procrastinator actually finishes these projects are reduced. Procrastinators usually want to work as hard as others, but just fail to live up to their intentions and also perform more poorly than non-procrastinators (Steel, Brothen & Wambach, 2001). Van Eerde (2003) concludes in her research that procrastinators are more likely to be young and that procrastinators have low self-esteem and self-efficacy. The conclusions mentioned above are only several examples of the research that has been conducted as to the procrastinator's behaviour and personality.
The current research will expand the assortment of research on procrastination by looking into the relationships of several psychological constructs and procrastination. Also the effect of entrepreneurial intent on procrastination will be examined. In the next few paragraphs the relationship between procrastination and the constructs entrepreneurial intent, (non)linear thinking, mindfulness and the personality dimensions conscientiousness and neuroticism will be addressed.

3.1.2 Entrepreneurial intent and procrastination
Numerous studies have been conducted as to discern the nascent entrepreneur's background, decision-making or his personality as to how an entrepreneur differs from the mere manager. According to Thompson (2009), do many authors think that it is not necessary to define the concept of entrepreneurial intent as they perceive it as a self-evident definition, Thompson (2009, p. 676) however defines entrepreneurial intent as 'a self-acknowledged conviction by a person that they intend to set up a new business venture and consciously plan to do so at some point in the future'. Already existing research indicates that entrepreneurial intent is influenced several factors like parental background, the level of education, the individual's cognition and environmental factors (Thompson, 2009). Thompson (2009, p.676) defines the term nascent entrepreneur as 'someone undertaking advanced actions formally to set up a new firm'.

As was stated in the problem statement, procrastination is a phenomenon that is experienced by many people in the community. Especially college students seem prone to procrastinate as 50% of them consistently and problematically procrastinates (Haycock; Micek; Onwuegbuzie, as cited in Steel, 2007, p.65; Solomon & Rothblum, 1984; Day, Mensink, & O'Sullivan, 2000). Also, a lot of college students seem to become more and more interested in being self-employed. The Survey of Business Owners from the U.S. Census Bureau (2011), which sought for characteristics of business owners, reported that half of the business owners (50.8%) had a college degree. The survey consisted of 1 426 000 respondents and 70.1% of the respondents claimed to have founded their own business, while 15.8 purchased their business and 7.1% acquired their business in another way, which means that 35.6% of the business owners that founded their business has a college degree (U.S. Census Bureau, 2011). Dutch research shows that 35.7% of the entrepreneurs have a college degree (Economisch Instituut voor Midden- en Kleinbedrijf, 2011). Therefore there can be concluded that graduated college students will form a considerable part of the entrepreneurial population. A research from the U.S. Small Business Administration, however, shows that self-employed individuals had slightly lower grade point averages at college than their non-entrepreneur counterparts (Moutray, 2008). Considering the level and frequency at which students procrastinate and the fact that many college students become self-employed, it can be concluded that nascent entrepreneurs might be prone to procrastination. This is also because more procrastinators than non-procrastinators become self-employed and those who performed more poorly in college tend to become entrepreneurs.

Hypothesis 1: Individuals with high entrepreneurial intentions will procrastinate more than individuals with lower entrepreneurial intentions.

3.1.3 (Non)linear thinking and procrastination

Cognitive style or thinking style is defined by Vance and his colleagues (2007, p. 168) as 'as one's preferred manner of using mental abilities to govern daily activities, including understanding and solving problems and challenges'.

Researchers widely agree that a distinction can be made between two, conflicting but interactive, thinking styles. Both thinking styles will be described in the paragraphs below.

Linear, analytical or rational thinking

Although they are not exactly similar, linear, analytical and rational thinking styles generally imply the same. Linear thinking is a concept that contains the idea that individuals depend on analytical methodology and are continually searching for new methods to measure and predict cause-and-effect relationships. They also rely on external data and facts and process this through logic and reason (Vance et al., 2007). Allinson and Hayes (1996) describe those individuals with an analysis orientation as in favour of structured problem-solving, step by step analysis of thoughts and systematic investigation of methods. Rational thinking implies an inferential system that takes a person's understanding of reasoning and evidence into account and enables comprehension of cause-and-effect relationships and complex planning (Epstein, 2003). Attributes of a linear, analytical or rational thinking style are typically logic, reason, analysis, rationality and an active and conscious experience (Vance et al., 2007; Epstein, 2003).

Because these approaches to a rational and linear thinking style are so similar, the term 'linear thinking style' shall from now on be used for this distinct thinking style. Linear thinking is defined by Vance and his colleagues (2007, p. 170) as 'a preference for attending to external data and facts, and processing this information through conscious logic and rational thinking to form knowledge, understanding, or a decision for guiding subsequent action'.

Non-linear, intuitive or experiential thinking

Intuitive thinking is described by Allinson and Hayes (1996) as an orientation which bases judgements on feelings. Intuitive thinkers can be relatively nonconformist and prefer open ended problem solving and random exploration of methods. The experiential system is driven by emotions and is closely linked to experience and affect. It operates in a preconscious, rapid and holistic manner (Epstein, 2003). Non-linear thinking includes a wider range of concepts than intuitive and experiential thinking that covers all alternatives of linear thinking. Non-linear thinkers often rely on internal data like impressions and feelings to process those, both consciously and unconsciously, to form an insight (Vance et al., 2007). Attributes of non-linear, intuitive and experiential thinking are intuition, insight, emotion, creativity, holistic, rapid and a passive experience (Vance et al., 2007; Epstein, 2003).

As non-linear thinking covers a wide range of concepts as alternative to linear thinking, from now on, when referring to the non-linear, intuitive or experiential approach of thinking styles, the term 'non-linear thinking style' shall be used, which is defined by Vance and his colleagues (2007, p. 170) as 'a preference for attending to internal feelings, impressions, intuition, and sensations; and for processing this information (both consciously and subconsciously) to form insight, understanding, or a decision for guiding subsequent action'.

Vance and his colleagues (2007) argue that in complex and dynamic business environments, entrepreneurs are in need of both linear and non-linear thinking styles for adequate decision-making. This is supported by Epstein (2003) who concludes that both thinking styles are highly interactive and that neither is superior. Fillis (2007) claims that a non-linear thinking style (and especially creativity) leads to a competitive advantage.

In another research Groves, Vance and Paik (2008) also found evidence that balanced thinkers, managers who combine a linear with a non-linear thinking style, are more likely to produce sound ethical decisions. In his research Berzonsky (2007) linked cognitive styles to three identity processing styles: informational, normative and diffuse-avoidant. Identity processing styles are 'social-cognitive strategies used to engage or to avoid the tasks of constructing and maintaining a sense of identity' (Berzonsky, 2007, p. 646).

When adopting the last identity style individuals try to avoid personal conflicts and problems. Their behaviour depends on situational demands and is associated with procrastination, task-irrelevant behaviour and depressive reactions (Berzonsky & Kinney, 2008). This last identity style can therefore be associated with procrastinating behaviour. Berzonsky (2007) concluded in his research that the diffuse-avoidance style was negatively related to linear thinking, but positively related to non-linear thinking.
Therefore it can be concluded that the behaviour of individuals with a diffuse-avoidant style is characterized by emotion with limited concern about rational considerations. Diaz-Morales, Cohen and Ferrari (2008) also report that a linear thinking style negatively correlates with avoidant procrastination, while high avoidant procrastinators scored higher on non-linear thinking styles and that the procrastinator's aversion of a linear thinking style may cause the tendency for a creative thinking style. Therefore it is hypothesized that a linear thinking style will reduce procrastination and a non-linear thinking style will promote procrastination.

Hypothesis 2a: an increased linear thinking style will reduce procrastination.
Hypothesis 2b: an increased non-linear thinking style will promote procrastination.

3.1.4 Mindfulness and procrastination

Mindfulness is a state of consciousness, often associated with Zen or meditation (Dane, 2010). Many definitions of mindfulness are used throughout different articles but according to Dane (2010), all those definitions have three components in common. Most authors agree that mindfulness is a state of consciousness, which some people may attain more often than others.
Second, individuals with this state of consciousness concentrate on the present-moment. And third, the individual's attention is focused on internal and external (environmental) stimuli. Dane (2010) concludes that there is a positive relationship between mindfulness and task performance when the individual is engaged in a dynamic environment, instead of a static environment, and when the individual has a high level of task expertise (Dane, 2010). Dane (2010, p.4) defines mindfulness as 'a state of consciousness in which attention is focused on present-moment phenomena occurring both externally and internally'.

A lot of researchers have concentrated on the consequences of mindfulness on the well-being of individuals. Brown and Ryan (2003) conclude that exercising mindfulness reduces mood disturbances and stress, while enhanced mindfulness is also believed to reduce worry, fear and panic (Kim et al., 2010). These results are supported by research of Williams, Stark and Foster (2008) who found that individuals with greater self-kindness and mindfulness (both two sub-components of self-compassion) are better in handling academic worry and therefore are less likely to procrastinate. Research also found that mindfulness promotes achievement related behaviour among students, like self-regulation. According to Howell and Buro (2010) mindfulness has a positive influence on self-control and help-seeking, while it reduces the tendency to procrastinate. The authors also found that mindfulness provided an improved balance of positive and negative emotions. These results suggest that academic performance is also positively affected by mindfulness.
Aside of the direct positive contribution of mindfulness mentioned above, mindfulness may also indirectly contribute to a positive effect on procrastination. Lay (1986) argues in his research that procrastinating behaviour might be caused by worry and fear (of success or failure), anxiety (caused by success) or stress.
As mindfulness is thought to decrease worry, fear and stress, it also might decrease procrastination in an indirect way. Therefore, in conclusion, it is hypothesized that mindfulness will reduce procrastination.

Hypothesis 3: increased mindfulness will reduce procrastination.

3.1.5 The Big Five personality dimensions and procrastination

The Big Five factor model is a widely accepted model that describes five broad dimensions of human personality. These five dimensions are conscientiousness, agreeableness, extraversion, openness to experience and neuroticism. However, researchers found that only conscientiousness and neuroticism could be associated with procrastination and that there was only a weak or no relation at all between agreeableness, extraversion or openness to experience and procrastination (Johnson & Bloom, 1994; Schouwenburg & Lay, 1995; Watson, 2001; Steel, 2007). In a first analysis of this study no such relationship was found either. Therefore a short overview of only the two included dimensions, neuroticism and conscientiousness, will be provided.

Neuroticism

'Neuroticism represents individual differences in adjustment and emotional stability' (Zhao & Seibert, 2006, p. 260). The dimension describes an individual's tendency to distress, depression, worry, tension or guilt. The scales that were linked to this dimension, by Costa, McCrae and Dye for their NEO- PI-R inventory, are anxiety, hostility, depression, self-consciousness, impulsiveness and vulnerability (McCrae & John, 1992). Individuals scoring low on neuroticism often express calmness, self-confidence and an even temper (Zhao & Seibert, 2006).

Conscientiousness

'Conscientiousness indicates an individual's degree of organization, persistence, hard work, and motivation in the pursuit of goal accomplishment' (Zhao & Seibert, 2006, p. 261). This dimension describes how efficient, well-organized and responsible an individual is and the dimension comprises the scales competence, order, dutifulness, achievement striving, self-discipline and deliberation (McCrae & John, 1992). Conscientiousness is also a consistent personality predictor for job performance in all kind of fields of work (Barrick, Mount, & Judge, 2001).

Neuroticism contains six scales of which some seem to enhance procrastination more than others. As already mentioned, according to Lay (1986) procrastinators tend to procrastinate when experiencing stressful tasks. Therefore it can be expected that experience high levels of stress or anxiety (a scale of neuroticism) will be more prone to procrastinate.

Depression is also thought to promote procrastination as depressed individuals often experience symptoms which impedes task completion such as the inability to take pleasure in activities, lack of energy and concentration problems (Steel, 2007). Impulsiveness, which is defined by Costa and McCrae (1980, as cited in Schouwenburg & Lay, 1995, p. 488) as 'the tendency to give in to temptations and feeling overwhelmed by desires and drives', is also expected to enhance procrastination for if an individual is easily tempted by the choice to switch from a difficult or boring task to a more entertaining one, then without self-control, that individual might easily give in to procrastination.

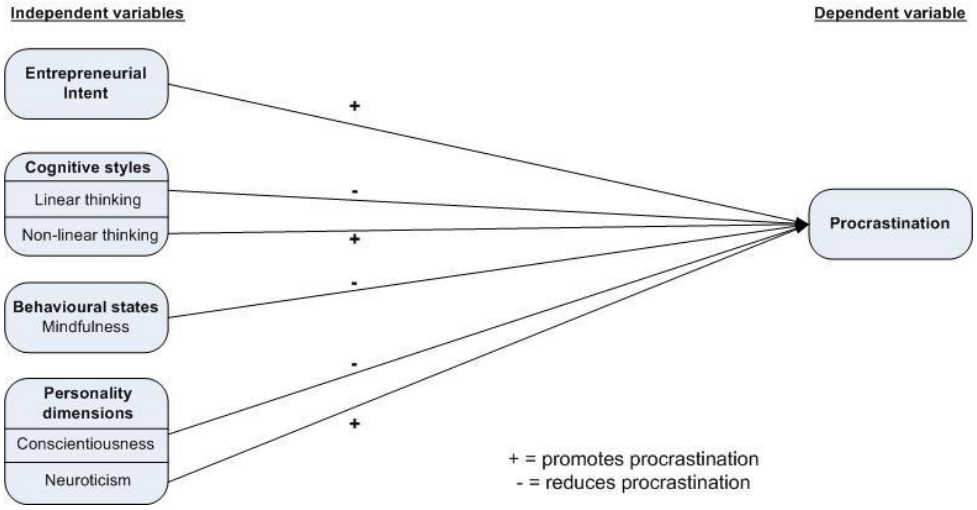
Conscientiousness contains also six scales, which include orderliness, dutifulness and self-discipline. These are all components that can be associated with efficient and structured work behaviour. Johnson and Bloom (1994) found that order and dutifulness were significantly and negatively related to procrastination, which means that procrastinators can be characterized as disorganized, absent-minded and inefficient.

In conclusion it can be said that procrastination is found to have a strongly negative relationship with conscientiousness, with self-discipline as strongest predictor, which implies that procrastinators have very low self-discipline. Neuroticism appeared to be a contributor of procrastination (Johnson & Bloom, 1994; Schouwenburg & Lay, 1995; Watson, 2001; Van Eerde, 2003; Steel, 2007). Milgram and Tenne (2000) concluded in their research that decisional procrastination is strongly related to neuroticism but unrelated to conscientiousness, but conscientiousness is positively related to task avoidant procrastination, whereas neuroticism is not.

Hypothesis 4: increased neuroticism will promote procrastination.
Hypothesis 5: increased conscientiousness will reduce procrastination.

3.2 Research model

The research model below shows a graphic depiction of the five hypotheses that were formulated in the theoretical framework.



4. Methodology

4.1 Procedure

According to Babbie (2007), a survey might be the most suitable data collection tool to use when original data has to be collected for describing a population that is too large to observe directly. This is because of the survey's quality to measure attitudes or orientations in a large population and therefore the respondent's characteristics can reflect those of the larger population. A large survey was designed by the Netherlands Institute for Knowledge Intensive Entrepreneurship (NIKOS) department of the University of Twente, with items concerning the individual's intention of becoming an entrepreneur, behaviour, personality, experience, attitude, environment and capabilities. Questions were also included that deal with how the respondents work (for example improvisation, procrastination and goal attainment) and think (for example decision-making and thinking styles). The survey was developed for nascent entrepreneurs to fill out and sent to individuals who take part in the VentureLab project from the University of Twente. "VentureLab Twente offers business development support for technology-based start-up businesses and is a business growth accelerator for well-established companies" (VentureLab Twente, 2011). The participants received this survey by e-mail, after registering for the VentureLab, to fill it out and they had to mail the survey back before the intake conversation.
The instructions for filling out the survey were included in the survey so there was no personal contact with the respondents. Apart from the questionnaires for this research, questionnaires of other themes have also been added for other scientific purposes. It took two to three hours to fill out the complete survey, but the part of the survey that is applicable on this research took about 20 to 30 minutes.

4.2 Respondents

The respondents of this survey were nascent entrepreneurs. In total 114 respondents filled out the survey over a period of almost 2.5 years (from December 2008 until June 2011). The sample was reduced by eliminating six respondents, who had not filled out more than a third of the survey. Upon noticing that a lot of respondents had failed to fill out the complete the Linear-Nonlinear Thinking Style Profile inventory, another seventeen respondents, who only filled out ten questions –of the thirteen- or less were eliminated.
This was done because these respondents had left out a lot of data which could affect the regression analysis. Therefore the data of 91 respondents remained for further analysis. Background information about the entrepreneurs like age and gender were not available for this study as these questions were not included in the survey. It is, however, known that all the respondents have obtained their college degree and thus have a higher educational level.

4.3 Measurement

4.3.1 Scales

Different scales were selected by NIKOS that have been developed by researchers who specialized in that field. In the paragraph below an elaborate explanation is given about the compilation of the survey and how the different constructs will be measured.

Procrastination

A well-known procrastination inventory was used to measure procrastination, namely the General Procrastination Scale developed by Lay (1986). There are many different procrastination inventories but Lay's General Procrastination inventory is widely used and research has indicated that the inventory is highly reliable and also effective in measuring characteristics of procrastinating behaviour across different situations (Ferrari, 1992; Ferrari, 1989, 1991 as cited in Sirois, 2004, p. 120). The internal consistency of the scale is good (Cronbach's alpha = 0.82; Lay, 1986) and since the inventory is not too long (20-items) it proves to be a suitable inventory for this research. An example of the General Procrastination Scale is given in the table below.

Table 1: Items of the General Procrastination Scale

Question	Measured Construct	Scale
I often find myself performing tasks that I had intended to do days before.	Procrastination	1= Uncharacteristic 5= Characteristic
In preparing for some deadline, I often waste time by doing other things.	Procrastination	1= Uncharacteristic 5= Characteristic

(Lay, 1986)

Entrepreneurial Intent

A combination of inventories was used for this research to measure entrepreneurial intent, as proposed by Kolvereid and Isaksen, (2006), who use the Theory of Planned Behaviour of Ajzen as basis for their research in self-employment intentions. This theory contains that there are three determinants for an individual's intention: the attitude towards the behaviour (personal evaluation of the behaviour), the subjective norms (social pressures to perform the behaviour) and perceived behavioural control (ability to perform the behaviour) (Ajzen, 1991). As many researchers found that there is empirical support for this theory in the area of entrepreneurship (Krueger, Reilly & Carsrud, 2000; Fayolle and Gailly, 2005; Liñán, 2004), shall Kolvereid and Isaksen's proposed combination of inventories, based on these determinants, be used.

First a scale, salient beliefs concerning self-employment, was developed by Kolvereid and Isaksen (2006). Self-employment is identified by the factors autonomy, authority, economic opportunity and self-realization, which were used as indicators for the different items. All items have a satisfactory internal consistency with a Cronbach's alpha of 0.82, 0.82, 0.70 and 0.76 for autonomy, authority, economic opportunity and self-realization respectively (Kolvereid & Isaksen, 2006). Another self-employment scale, developed by Kolvereid and Isaksen (2006), was added. In this scale self-employment was identified by opportunity recognition, investor relationships, risk-taking and economic management.
A total of 18 items was linked to these factors, which have been developed by DeNoble, Jung and Ehrlich, Chen, Greene and Crick, and Anna, Chandler, Jansen and Mero (Kolvereid & Isaksen, 2006). The attitude towards self-employment was measured Gundry and Welch's scale, which measured the attitude of an individual towards being employed and self-employment by five items (Gundry & Welch, 2001).
Kolvereid's subjective norm has also been used in order to measure the social pressure to self-employment (Kolvereid & Isaksen, 2006).
Finally the actual intent to become self-employed was measured by three questions developed by Kolvereid and Isaksen (2006) concerning the likelihood of being self-employed in the near future.
Together these inventories are expected to give a complete overview of the respondents entrepreneurial intention. Examples of the different inventories, measured constructs and scales are given in the table below.

Table 2: Items of the entrepreneurial intent inventory

Question		Measured Construct	Scale
To what extent are the following factors important for you in considering to start you own business	Freedom Self-realization Have full control	Entrepreneurial intent	1 = Not at all important 5= Very important
To what extent are you confident that you can complete the following tasks successfully?	Take calculated risks Manage Cash Flows	Entrepreneurial intent	1 = Not at all confident 5 = Very confident
To which extent do the following people think you should or should not pursue a career as self-employed	Your closest family Your closest friend	Entrepreneurial intent	1 = Think that I should not 5 = Think that I should
I would rather own my own business than earn a higher salary employed by someone else		Entrepreneurial intent	1 = Strongly disagree 5 = Strongly agree
How likely are you to be working full-time for your new business in one year from now?		Entrepreneurial intent	1 = Very unlikely 5 = Very likely

(Kolvereid & Isaksen, 2006; Gundry & Welch, 2001)

(Non)linear thinking
The measurement instrument for the linear or non-linear thinking styles is the Linear-Nonlinear Thinking Style Profile (LNTSP). This is an inventory developed by Vance and his colleagues (2007) in order to measure the concept of linear and non-linear thinking. As in the current research the definition of linear and non-linear thinking is based on the article of Vance and his colleagues, it is obvious that their inventory for measuring thinking styles will be used.

Vance et al. (2007) also concluded that there was no instrument available to effectively measure an individual's linear or non-linear thinking style according to their definition and therefore the LNTSP seems the most appropriate tool. Table 3 shows a few examples of items of the LNTSP.

Table 3: Items of the Linear-Nonlinear Thinking Style Profile

Question		Measured Construct	Scale
I primary rely on logic when making career decisions.		Linear thinking style	0 = rarely/never 3 = very often
When my analysis and intuition are in conflict, I give precedence to my intuitive insights.		Non-linear thinking style	0 = rarely/never 3 = very often
Divide exactly 3 points according to the influence they have on your behaviour and decision-making.	Concepts vs. Instincts	Linear and Non-linear thinking style	0 = Little/ no influence on how I behave 3 = very strong influence on how I behave
	Facts vs. Feelings	Linear and Non-linear thinking style	0 = Little/ no influence on how I behave 3 = very strong influence on how I behave

(Vance et al., 2007)

Mindfulness

The Mindfulness Attention Awareness Scale (MAAS), constructed by Brown and Ryan (2003), was used in order to measure mindfulness. There are many other questionnaires available for assessing mindfulness namely the revised Cognitive and Affective Mindfulness Scale inventory (CAMS-R, Feldman, Hayes, Kumar, Greeson, & Laurenceau, 2007), the Freiburg Mindfulness Inventory (FMI, Buchheld, Grossman, & Walach, 2001), the Kentucky Inventory of Mindfulness Skills (KIMS, Baer, Smith, & Allen, 2004) and the Toronto Mindfulness Scale (TMS, Lau et al., 2006). Although every inventory has its pros and cons, the MAAS proves to be the most suitable inventory for this research. Both the TMS and the FMI are unsuitable as they are designed for experienced meditators or to be used in meditation settings only (Baer, Smith & Allen, 2004; Feldman et al., 2007). The KIMS is a 39 item-inventory and more than twice as long as both the MAAS (15 items) and the CAMS-R (12 items) and therefore unsuitable for the current research as too long inventories might fatigue the respondent and cause the respondent to lose interest. The MAAS is chosen over the CAMS-R because in the latter's format it is assumed "that mindfulness can be conceptualized as a response tendency that tends to be stable across situations, yet is modifiable by life experience" (Feldman et al., 2007, p. 188). The MAAS is composed so as to measure qualities of mindfulness during a specific period of time but also assumes that mindfulness varies both between as within persons (Feldman et al., 2007; Brown & Ryan, 2003). As in this research mindfulness is defined as a 'state of mind' and therefore a flexible state of mind, the CAMS-R is rejected. In table 4 a few examples of the MAAS are shown.

Table 4: Items of the Mindfulness Attention Awareness Scale

Question	Measured Construct	Scale
I could be experiencing some emotion and not be conscious of it until some time later.	Mindfulness	1= Almost never 5= Almost always
I find myself preoccupied with the future or the past.	Mindfulness	1= Almost never 5= Almost always

(Brown & Ryan, 2003)

Neuroticism & Conscientiousness

In order to measure the personality dimensions Thompson's International English Big Five Mini-Markers (2008) were used, which have been based on Saucier's Big Five Mini Markers (1994). This is a set of 40 adjectives which measure the different personality factors. Saucier's Big Five Mini Markers inventory is based on the TDA inventory of Goldberg, who had created a 20-item scale for every dimension. Saucier has abbreviated this inventory and made it into his Big Five Mini Marker inventory (Saucier, 1994). Thompson, however, found that this inventory was sub-optimal for non-native speakers and developed a renewed mini marker set, appropriate for international use (Thompson, 2008). Although the one-word adjectives might be ambiguous, the International English Mini-Markers is an exceptionally brief inventory, compared with Costa and McCrae's 240-item NEO- Personality Inventory-Revised, which is essential when warranting the respondent's attention-span and alertness. According to John, Naumann and Soto (2008) Saucier's Big Five Mini Marker is at least as efficient and easily understood as Costa and McCrae's briefer inventory the NEO-FFI or Goldberg's TDA inventory.

Therefore the English International Big Five Mini-Markers proves to be an adequate instrument for measuring the Big Five personality dimensions. In the table below a few examples are given of the questions, the measured constructs and the scales.

Table 5: Items of the International English Big Five Mini-Markers

Question		Measured Construct	Scale
Use the list below of common human traits to describe yourself as accurately as possible.	Anxious	Neuroticism	1 = Inaccurate 5 = Accurate
	Envious	Neuroticism	1 = Inaccurate 5 = Accurate
	Organised	Conscientiousness	1 = Inaccurate 5 = Accurate
	Systematic	Conscientiousness	1 = Inaccurate 5 = Accurate

(Thompson, 2008)

4.3.2 Reliability of scales

In order to measure the reliability of the scales the Cronbach's Alpha measure was used. This is the most common measure of scale reliability (Field, 2009). Cronbach's Alpha measures the internal consistency between items to decide whether the different items in a questionnaire consistently reflect the construct that it is measuring (Field, 2009).

Lay reports a Cronbach Alpha of 0.82 for his Procrastination inventory. In this research a Cronbach Alpha of 0.88 was found for the procrastination inventory.

Kolvereid and Isaksen (2006) reported Cronbach Alpha coefficients for several parts of their composed Entrepreneurial Intent inventory, except for the 'intention to become entrepreneur' items. These alphas ranged from 0.7 to 0.94. In the current research the Cronbach Alpha for the entire Entrepreneurial Intent inventory is 0.91.

Vance et al. (2008) measured the reliability coefficient for the different dimensions in the Linear-Nonlinear Thinking Style Profile and were reported to range between 0.7 and 0.87. In the current study the Cronbach Alpha coefficient was 0.9 for the complete LNTS. According to Brown and Ryan (2003) the Cronbach Alpha for the Mindfulness Attention Awareness Scale was 0.82 for their student sample and 0.87 for their adult sample. In this research, the MAAS had an alpha of 0.82.
For the International English Big Five Mini Markers, Thompson (2008) reported for different samples a Cronbach Alpha ranging from 0.79 to 0.87.
In this current study an alpha of 0.73 was found for the total Big Five inventory and an alpha of 0.88 and 0.75 for the separate conscientiousness and neuroticism scales respectively.
In the table below the findings for the reliability analysis are summarized.

Table 6: Reliability coefficient of each construct in this research

Construct	Cronbach's Alpha (α)	Nr. of items	Nr. of items removed
Procrastination	0.88	20	0
Entrepreneurial intent	0.91	53	0
Linear thinking style	0.9	13	0
Mindfulness	0.82	15	0
Big-Five Personality Dimensions	0.73	40	0
-Conscientiousness	0.88	8	0
-Neuroticism	0.75	8	0

4.4 Statistical Analysis
As this research's central research question contains the question of how the independent variables affect the dependent variables, a standard multiple regression analyses was conducted on the data in SPSS. The multiple regression analyses attempts to find out whether independent variables are able to predict the dependent variable and which of those independent variables is the strongest predictor of the dependent variable, in this case procrastination, and is therefore the most suitable analysis tool for the current research (Pallant, 2005).

4.5 Preliminary data analysis
As part of a preliminary analysis, negatively worded items were reversed. This was necessary for the mindfulness, which scale was completely negatively worded, procrastination and the Big Five inventory.
Then the total scale scores of all the different constructs were computed for every respondent by taking the mean of the different items. By taking the mean, the total scale scores are easier to interpret as the scores are back in the original scales (Pallant, 2005).
The thinking style construct was named 'Linear thinking style' as a high score on this scale means that an individual's thinking style is linear and a low score indicates a non-linear thinking style. As mentioned in the literature review, only the dimensions of neuroticism and conscientiousness will be used in the analysis. When computing the total scale score for the Big Five dimensions therefore two separate total scores were calculated, namely for those two dimensions. The inventory consisted of eight items for every dimension, which made it easy to compute these different total scale scores.
In the table below the implications of the different scales are summarized.

Table 7: Implications of different scales

Construct	Score	Meaning
Procrastination	1	Individual has a low procrastinating tendency
	5	Individual has a high procrastinating tendency
Entrepreneurial intent	1	Individual has low entrepreneurial intent
	5	Individual has high entrepreneurial intent
Linear thinking style	1	Individual has a non-linear thinking style
	3	Individual has linear thinking style
Mindfulness	1	Individual is not a very mindful person
	5	Individual is a very mindful person
Neuroticism	1	Individual scores low on neuroticism
	5	Individual scores high on neuroticism
Conscientiousness	1	Individual scores low on conscientiousness
	5	Individual scores high on conscientiousness

4.6 Assumptions of multiple regression

In this research a standard multiple regression analysis has been performed. In a standard multiple regression all independent variables are entered all at once in the regression equation and every independent variable is assessed on its unique predictability of the dependant variable (Tabachnick & Fidell, 1996). In order to carry out this analysis certain assumption have to be met. In the next few paragraphs, each assumption of the multiple regression analysis is described and evaluated for the current data.

4.6.1 Sample size

In order to preserve the generalisability of the results the sample size should have a certain size (Pallant, 2005). Tabachnick and Fidell (1996) offer a simple formulae to calculate whether the sample size is the required size: $N \geq 50 + 8m$ for testing the multiple correlation and $N \geq 104 + m$ for testing individual predictors (with m as the number of independent variables). However, Fields (2009) argues that these thumb rules are 'a rough and ready guide' but for a more precise estimate he recommends to use a power analysis. Cohen (1992) provides a clear table from which the precise sample size can be derived. For the power analysis the level of power, the effect size, the significance criterion and the number of independent variables should be known. Cohen used a power level of 0.80 and a significance criterion of 0.05, which are both generally used values in a power analysis, and a medium effect level is chosen, as it is the average size of observed effects in many areas of research (Cohen, 1992). According to Cohen (1992) the required sample size for a multiple regression, corresponding to five independent variables, is 91.

With a sample size of 91 respondents, the requirement for generalisability is met.

4.6.2 Multicollinearity and singularity

Multicollinearity results from two independent variables that are highly correlated (Pallant, 2005). When multicollinearity is present the regression coefficient might become insignificant because of the large size of standard errors (Tabachnick & Fidell, 1996). Singularity is caused when an independent variable is a combination of other independent variables (Pallant, 2005). 'Statistical problems created by singularity and multicollinearity occur at much higher correlations (0.9 and higher)' (Tabachnick & Fidell, 1996, p.86).

Below a table is shown with the Pearson Correlations between the different independent variables.

According to Tabachnick and Fidell (1996), one should hesitate to include two independent variables with a correlation of 0.7 or more. As all the intercorrelations are well below 0.7, all the independent variables can be retained.

Table 8: Pearson Correlations

Construct	Entrepreneurial intent	Linear thinking	Mindful-ness	Neuroticism	Conscientiou-sness
Entrepreneurial intent	-				
Linear thinking	-0.01	-			
Mindfulness	0.28**	0.13	-		
Neuroticism	-0.35***	0.12	-0.42***	-	
Conscientious-ness	0.15	0.07	0.36***	-0.24*	-

* p < 0.05 ** p < 0.01 *** p < 0.001

Another measure for multicollinearity is the squared multiple correlation of a variable (SMC). The squared measure of multiple correlation serves as dependent variable, with the other variables as independent variables. A high SMC means a high correlation between the independent variables and therefore results in multicollinearity. Often, the SMC is computed to a tolerance for multicollinearity (1-SMC) (Tabachnick & Fidell, 1996). The Variance inflation factor (VIF) is the inverse of the tolerance value and therefore also a measure of multicollinearity. If either the tolerance value falls below 0.10 or the VIF exceeds 10, there can be a concern of multicollinearity (Pallant, 2005).
As shown in table 9 this not the case for any of the independent variables, it can be concluded that there is no multicollinearity or singularity present in this dataset.

Table 9: Collinearity Statistics

Construct	Tolerance	VIF
Entrepreneurial intent	0.85	1.17
Linear thinking	0.94	1.06
Mindfulness	0.71	1.41
Neuroticism	0.73	1.38
Conscientiousness	0.86	1.16

4.6.3 Outliers

Multiple regression is very sensitive to outliers, which are either very high or very low scores (Pallant, 2005, p. 143). Outliers are known to distort statistics. In order to find the presence of outliers the residual scatterplot will be assessed. Any cases with standardized residuals that exceed -3.3 or 3.3 are defined as outliers (Tabachnick & Fidell, 1996). For the current data no case was found to exceed either -3.3 or 3.3. Additionally the Mahalanobis distance was computed to find potential outliers, following Tabachnick and Fidell's alpha level of 0.001. Having five independent variables, the critical value is 20.52. As no cases with a Mahalanobi distance exceeded the critical value, no extreme values were found. Therefore it can be concluded that no outliers are present within these data.

4.6.4 Normality, linearity, homoscedasticity, independence of residuals

Other assumptions for the multiple regression analysis are that the variables are normally distributed, that the relationship between two variables is a straight linear relationship, that the variability of scores of one variable is roughly the same for all the variables other predicted variables and that the residuals of variables are independent (Tabachnick & Fidell, 1996). Homoscedasticity is related to the assumption of normality: Tabachnick and Fidell argue that when the latter assumption is met, that the relationship between variables are homoscedastic.

In the normal probability plot of regression standardized residuals, the normality of the variables is assessed. As no points extremely deviate from the straight, diagonal line, it is assumed that there are no major deviations from normality (Pallant, 2005). In order to check this, two components of normality will be evaluated, namely skewness and kurtosis. Skewness concerns the symmetry of the distribution, whereas kurtosis refers to the peakedness of a distribution (Tabachnick & Fidell, 1996). If a variable's value for skewness or kurtosis falls within the range from minus twice the standard error of either skewness or kurtosis, to plus twice the standard error of either skewness or kurtosis, than the variable is not significantly non-normal (University of New England, 2000). As all values fall within these ranges, there can be concluded that all variables are normally distributed.

Table 10: Normality components

Construct	Skew-ness	Std. Error	Range of twice Std. Error	Kurtos-is	Std. Error	Range of twice Std. Error
Procrastination	0.19	0.25	-0.51 to 0.51	-0.09	0.50	-1.00 to 1.00
Entrepreneurial intent	-0.01	0.25	-0.51 to 0.51	-0.79	0.50	-1.00 to 1.00
Linear thinking	-0.51	0.25	-0.51 to 0.51	0.97	0.50	-1.00 to 1.00
Mindfulness	-0.36	0.25	-0.51 to 0.51	0.19	0.50	-1.00 to 1.00
Neuroticism	0.4	0.25	-0.51 to 0.51	0.25	0.50	-1.00 to 1.00
Conscientious-ness	-0.27	0.25	-0.51 to 0.51	-0.53	0.50	-1.01 to 1.01

Linearity and homoscedasticity is checked by assessing the Residual Scatterplot. The overall shape of the scatterplot is from importance when checking for normality, linearity and homoscedasticity (Tabbachnick & Fidell, 1996). As the scatterplot roughly has a rectangular shape and most scores are concentrated around the centre, it can be concluded that the data is not non-linear or heteroscedastic. As all variables were found to be normally distributed, homoscedasticity could already be assumed.

The independence of residuals is associated with the order of cases and occurs when there is a systematic change over time in the nature of respondents or the research procedure (Tabachnick & Fidell, 1996; Cohen, Cohen, West & Aiken, 2003). As this is not the case in this research, it is not probable that the residuals are dependent.
This is checked by assessing the Durbin-Watson statistic, which searches for serial correlation between errors. The possible values can range between zero and four, with the value of two indicating that the residuals are uncorrelated (Field, 2009). For the current data the Durbin-Watson statistic is 2.066, which indicates that the residuals are independent.

In conclusion it can be said that the assumptions of normality, linearity, homoscedasticity and the independence of residuals are met.

5. Results

5.1 Multiple regression analysis

5.1.1 Evaluating the model

When evaluating whether the model, in which all constructs were added, is successful in predicting procrastination, the Model Summary has been assessed. The R square is an important measure which indicates how much of the variance in the dependent variable is accounted for by the different predictors in the model. The adjusted R square indicates how well the model can be generalised in a population (Fields, 2009). The R square in the data analysis is 0.504, which means that 50.4% of the variance in procrastination is explained by the combination of independent variables. According to Pallant (2005) a value around the 0.45 for the R square is a respectable result. The adjusted R square is quite lower than the squared R with a value of 0.475.

The F-ratio measures whether the model as a whole has statistically significant predictive capability and is therefore another useful measure when assessing the model's predictive power (Dallal, 2000). The null hypothesis, which tests that the model has no predictive capacity, is rejected when the F-ratio is large (Dallal, 2000). As $p < 0.001$ the null hypothesis can be rejected. Therefore it can be concluded that the model has considerable predictive capabilities in predicting procrastination.

Table 11: Model measures

R Square	Adjusted R Square	F	p
0.50	0.48	17.09	0.00

5.1.2 Evaluating the independent variables

First the Correlation Matrix was assessed with Pearson Correlation. As the correlations are actually the basis of the multiple regression analysis, this will give a good preliminary indication of the relationship between the predictors and the outcome.
The Pearson Correlations are summarized in the table below.

Table 12: Correlation between the independent constructs and procrastination

Constructs	Pearson Correlation
Entrepreneurial Intent	-0.36***
Linear Thinking	0.00
Mindfulness	-0.49***
Neuroticism	0.24*
Conscientious	-0.60***

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

From the table can be derived that conscientiousness is most strongly, but also negatively related to procrastination. Both entrepreneurial intent and mindfulness are moderately, negatively related to procrastination and there is only a small correlation between neuroticism and procrastination. Remarkably, linear thinking does not seem to be significant correlated with procrastination ($r= 0.003$ $p= 0.49$)(Pallant, 2005).

The standardized beta-value indicates which independent variable accounts for the strongest, unique contribution to explaining the dependent variable, when the variance explained by the other independent variables in the model is controlled for (Pallant, 2005).
The standardized betas are interpreted in a similar fashion as correlation and are directly comparable, which makes them a better measure to provide insight in the importance of the different predictors (Field, 2009; Acock, 2008). More importantly is the question whether a predictor makes a statistically significant unique contribution to the dependent variable. This was assessed by checking whether the p-values are smaller than the significance criterion 0.05.

The semi partial correlations, or part correlations, is another useful measure for assessing the relationship between the independent and dependent variables, for when this part correlation is squared it gives in indication of how much of the total variance is explained by the predictor and how much the R square would drop if that predictor would be left out the model (Pallant, 2005). The results from the multiple regression are given in the table below.

Table 13: Summary of multiple regression

Construct	B	SE B	β	p	sr	sr^2
Entrepreneurial intent	-0.37	0.13	-0.23	0.006	-0.22	0.05
Linear thinking	0.11	0.10	0.09	0.268	0.09	0.01
Mindfulness	-0.35	0.11	-0.31	0.001	-0.26	0.07
Neuroticism	-0.10	0.09	-0.10	0.276	-0.08	0.01
Conscientiousness	-0.43	0.07	-0.49	0.000	-0.45	0.21

Hypothesis 1: Entrepreneurial intent and procrastination
Entrepreneurial intent was found to correlate statistically significant with procrastination, with a negative relationship of medium strength ($r= -0.36$ $p< 0.001$). This would mean that individuals with increased entrepreneurial intent are less likely to procrastinate than individuals with less or no entrepreneurial intent. Judging from the standardized beta-values entrepreneurial intent has the third most strongest unique contribution to explaining procrastination. Considering that the beta coefficient can interpreted as correlation, it can be concluded that entrepreneurial intention has a statically significant moderate effect on procrastination with $\beta = -0.37$ and $p < 0.01$ (Acock, 2008). Furthermore from table 13 can be derived that entrepreneurial intent uniquely accounts for 5% of the variance in procrastination and that R square would fall with 5% if it was left out of the model. In conclusion it can be said that, as entrepreneurial intent is moderately negatively related to procrastination, these findings are not in accordance with the first hypothesis which contained that nascent entrepreneurs with a high entrepreneurial intent are prone to procrastinate. Instead of a positive relation, a negative relationship was found between entrepreneurial intent and procrastination. Therefore will the first hypothesis be rejected.

Hypothesis 2: (Non)linear thinking and procrastination
Strikingly and contrary to the hypothesis, thinking style seemed to have almost no correlation at all with procrastination ($r= 0.003$ $p= 0.49$). This can also be derived from the results from the multiple regression: linear thinking uniquely contributed the least of all other predictors to procrastination ($\beta= 0.09$ $p=0.268$). Overall this effect is very weak and the relationship with procrastination is considered as statically insignificant, which means that thinking styles cannot be regarded as a contributor to procrastination. This is also the case when assessing the squared partial correlation value.

Thinking style contributes uniquely only for 0.7% in the variance, which is of course very low and obviously this effect is not statistically significant. Therefore it seems that a linear or non-linear thinking style does not seem to have any effect on procrastination. This means that the second hypothesis, that a linear thinking style reduces and a non-linear thinking style promotes procrastination, should be rejected.

Hypothesis 3: Mindfulness and procrastination
As can be interpreted from the Pearson Correlations table, mindfulness has the second strongest correlation with procrastination. This is a moderate, negative relationship of statistical significance ($r= -0.49$ $p< 0.001$). This implies that an individual will procrastinate less if the individual is increasingly mindful. The standardized beta-coefficient for mindfulness is $\beta= -0.31$, the second strongest effect of all predictors in the model. The contribution in the variance is also statistical significant with a value of $p < 0.01$. So mindfulness made both a significant and a unique contribution to procrastination.
The squared partial correlation for mindfulness is 7%, which indicates that the unique contribution mindfulness made is reasonable. These results are conform to the third hypothesis, which states that increased mindfulness will reduce procrastination. Therefore it can be concluded that the third hypothesis will be accepted.

Hypothesis 4 and 5: Neuroticism & conscientiousness and procrastination
Contrary to neuroticism, which only appears to have a small statistical significant correlation ($r= 0.24$ $p < 0.05$), conscientiousness proves to have the largest and statistical significant correlation with procrastination with a value of $r= -0.60$ and $p< 0.001$. The relationship between conscientiousness and procrastination is negative, whereas the relationship between neuroticism and procrastination is positive, which implies that increased neuroticism would promote procrastination and increased conscientiousness would reduce procrastinating behaviour. The same relationships with procrastination could also be derived from the standardized beta-values, as conscientiousness proved to be the most strongest contributor to procrastination ($\beta= -0.49$) and neuroticism shows a much weaker contribution with a beta-coefficient of $\beta= -0.10$.
Remarkably enough, the contribution of neuroticism to the dependent variable seems not statistically significant ($p= 0.276$), which implies that despite that the attributes of neuroticism could be associated with increased procrastination, neuroticism cannot be regarded as a contributor variable to procrastination. The value of the squared part correlation offers the same result: neuroticism uniquely contributes only for exactly 0.07% to procrastination. Conscientiousness, however, proves to have the highest unique contribution of all predictors. Conscientiousness accounts for 21% of the variance in procrastination.
Therefore it can be concluded that when assessing the results, the fourth hypothesis, with regard to neuroticism's ability to promote procrastination, should be rejected. The fifth hypotheses, with regard to conscientiousness reducing procrastinating behaviour, will be accepted.

6. Discussion and conclusion

In this thesis a multiple regression analysis was conducted in order to determine the relationship between entrepreneurial intent and procrastination. Also, the effect of the constructs from different psychological areas were considered, with the focus of this research on the constructs linear or non-linear thinking style, mindfulness and the Big Five personality dimensions neuroticism and conscientiousness. A total of 114 participants of VentureLab Twente have filled out a survey and the data of 91 participants remained for the statistical analysis. By the means of the multiple regression it was assessed whether these constructs can predict procrastination and which construct was the most important predictor in the model.

6.1 Results and conclusions

From the results of the multiple regression, it can be concluded that entrepreneurial intent was significantly negatively correlated to procrastination and that it made a considerable contribution to the variance in procrastination. The implication of this conclusion is that individuals with high entrepreneurial intentions are less likely to procrastinate than individuals with a lower degree such intentions.

Contrary to the assumptions, thinking style was not significantly correlated to procrastination, nor did it significantly contribute to the variance in procrastination. Therefore it seems that an individual's cognitive style is not a determinant of procrastination.

It was found that mindfulness was the second strongest contributor to procrastination in this model. Mindfulness had a significant moderate correlation and made a significant moderate contribution to procrastination. This implies that individuals who are often in a state of increased mindfulness tend to procrastinate less than people who are less mindful.

Of the two personality dimensions, conscientiousness proved to have the strongest statistical significant correlation with procrastination and also contributed most strongly to the variance of all independent variables in the model, which implicates that individuals who possess many attributes that are associated with conscientiousness, like order and efficiency, procrastinate less than those who do not possess these attributes. Neuroticism, on the contrary, only showed a small significant correlation with procrastination and made a weak and statically insignificant contribution to the variance in procrastination. Therefore it seems that neuroticism is not a predictor of procrastination.

Entrepreneurial intent and procrastination (H1)

The negative relationship between procrastination and entrepreneurial intent is a renewing insight as not many researchers have looked into this relationship. The result, that individuals with increased entrepreneurial intent are less likely to procrastinate, is indeed an interesting one as this was not hypothesized.

An explanation for this result could be the fact that nascent entrepreneurs with high entrepreneurial intentions often have a clear vision of what they want to achieve and how this can be achieved (normally in the form of a business plan). The majority of the entrepreneurs usually found their own firm, so therefore they already possess the motivation and perhaps the pressure of performing well and these entrepreneurs might therefore not be tempted to procrastinate. Individuals with great intentions to become an entrepreneur apparently possess certain qualities that prohibit or reduce procrastination. In order to identify the causes of procrastination and finding a remedy for it, it seems to be very useful to look into these qualities of the nascent entrepreneur. A clear vision or goal, a well-structured plan and the motivation to execute it accurately seem important aspects, which keeps a nascent entrepreneur from procrastinating and focused. These aspects, however, seem to resemble the underlying qualities of the conscientiousness personality dimension: being a planner, organised, efficient and thorough. Research confirms that individuals with an increasingly conscientious personality are attracted to entrepreneurship, form strong entrepreneurial intentions and are also more likely to become successful entrepreneurs (Zhao, Seibert & Lumpkin, 2010; Brice, 2004; Zhao & Seibert, 2006). This might therefore explain the negative correlation between entrepreneurial intent and procrastination. As conscientiousness appears to be a strong predictor of entrepreneurial intent, this might be a confounding factor, influencing the relationship between entrepreneurial intent and procrastination. Whether nascent entrepreneurs are indeed individuals who are increasingly conscientious and if entrepreneurs in general are indeed less inclined to procrastinate when having a conscious personality is an interesting subject of future research.

(Non)linear thinking and procrastination (H2)

Contrary to previous research and this research's hypothesis, thinking style was not found to be a predictor of procrastination. This implies that the cognitive style of an individual is not related to an individual's inclination to procrastinate.

As was mentioned in the theoretical framework, Diaz-Morales and his colleagues (2008) did find that linear thinking negatively predicted procrastination and that non-linear thinking was associated with procrastination. Berzonsky (2007) found similar results in his research. It should, however, be noted that both authors used different inventories in order to measure thinking style and that Berzonsky (2007) found correlation between thinking style and a diffuse-avoidant identity style, which was not only associated with procrastination, but also with task-irrelevant behaviour and depressive reactions. Since the constructs in these researches were differently defined and measured, this could be the reason why no similar results were found in the current research.
The fact that at least seventeen respondents failed to fill out the Linear-Nonlinear Thinking Style Profile properly might also provide a reason for these results. Although the reliability of the scale after eliminating those cases was satisfactory ($\alpha = 0.9$), it still could have been the case that the other respondents did not quite understand the survey or that the sudden change of format, where the respondents had to distribute points over two statements, while all the other inventories used a 5-point scale, confused the respondents. According to Babbie (2007), the format of a survey is essential to a survey and can an improperly laid out questionnaire confuse or even discourage the respondent to finish the survey.

Mindfulness and procrastination (H3)
In accordance with the hypothesis, mindfulness was indeed found to reduce procrastination. This would mean that individuals who are increasingly in a state of mindfulness, focusing on the present-moment and on internal and external stimuli are less inclined to procrastinate than those who are less mindful. These results are conform to results from other research of Williams and his colleagues (2008), Howell and Buro (2010) and Brown and Ryan (2003). The last two of the mentioned researches used the Mindfulness Attention Awareness Scale to measure mindfulness. However, conclusions should be drawn with caution as it is possible that a third, confounding variable is present. This is because the correlation between mindfulness and procrastination might be explained by the ability of mindfulness to reduce anxiety, depression and worry (Brown & Ryan, 2003; Kim et al., 2010), which in turn are, according to Lay (1986), potential causes of procrastination and might therefore confound the correlation between mindfulness and procrastination. Hence, the possibility that the relationship between mindfulness and procrastination is influenced by a third variable must be taken in consideration.

Neuroticism & conscientiousness and procrastination (H4 & H5)
The personality dimension conscientiousness is the strongest predictor of procrastination. This implies that the attributes associated with conscientiousness (orderliness, efficiency, discipline) are obviously attributes which procrastinators lack and procrastinators may therefore be described as chaotic, inefficient and undisciplined. This is in accordance with previous research. Neuroticism, however, did not appear to be a contributor to procrastination, contrary to the assumptions that certain attributes of neuroticism, like depression, anxiety and impulsiveness were associated with procrastination. It should be noted that neuroticism is significantly correlated with conscientiousness ($r = -0.24$ $p < 0.05$), which could account for the absence of neuroticism's unique contribution in the variance in procrastination. Johnson and Bloom (1994) reported comparable results of neuroticism being significantly correlated with procrastination, yet it was not entered in their stepwise regression. Johnson and Bloom (1994) argue that despite the correlation between neuroticism and procrastination, that the shared variance between conscientiousness and neuroticism diminished the influence of neuroticism when all the independent variables were considered together.
The correlation between neuroticism and conscientiousness in the current results could therefore reduce the variance of neuroticism in procrastination.

6.2 Limitations of current research

Naturally, this research has its shortcomings which influences the analysis of the data. One limitation of this research concerned the dataset, namely the fact that there was no information available concerning the respondent's age, gender or background, except for the education level of the respondent. Some basic information about the respondent sample is essential: not only does this information give a clear overview about the demography of the respondents, but it is also an important tool for comparing the results of the analyses across the respondent sample. In this research no distinction could be made between, for example, the degree of procrastination among males or females. Aside from this, all nascent entrepreneurs from in the sample obtain did a college degree. This makes it difficult to draw any conclusions about the entrepreneurial population in general, as no entrepreneurs with a vocational education or just a high school diploma were included in the current research. Also, in order to increase the ability to generalise the results, it would have been better if the sample size had been greater.

A theoretical limitation of this research is that the first hypothesis, concerning entrepreneurship and procrastination, has not been based on any primary studies. That is because no primary studies concerning this topic were found and perhaps do not exist. However, more future research should be conducted in order to interpret the results of this test with more certainty. Another limitation is that the Linear-Nonlinear Thinking Style Profile was filled out inaccurately by seventeen respondents (with three missing answers or more) after already six respondents were eliminated for not filling out more than half of the survey. The Linear-Nonlinear Thinking Style Profile was the only scale within the complete survey with so much missing data, which is detrimental to the quality and results of the scale and the results. So therefore, in future research, special attention should be paid to the response rate of the LNTSP or another thinking style inventory can be used to compare the data.

6.3 Future Research

Future research could focus on a more extensive exploration of the current results in order to accurately interpret the hypothesis and their implications. Since no primary studies were found which examined the influence of entrepreneurial intent on procrastination, it appears that hardly any research focused on these two constructs and therefore future research is necessary in order to expand the foundation of this theoretical framework. As the current research appears to be one of the first to explore the relationship between entrepreneurial intent and procrastination while also adding constructs from other psychological areas, the model in the current research remained fairly simple. In response to these results, future research could also alter the research model to explore the moderating and mediating effects on procrastination, of for example conscientiousness, as to rule out or accept the possibility of the moderating influence of conscientiousness on entrepreneurial intent and procrastination.

Future research would do well to include other scales for thinking style, as mentioned in paragraph 6.2, so the response rates and results can be compared. The Cognitive Style Index of Allinson and Hayes, based on analytical and intuitive thinking, is an example of a suitable scale that can be used, as it proved valid in differentiating entrepreneurs from general managers (Vance et al., 2007). Given the results that a linear or nonlinear thinking style does not influence procrastination, it could be particularly interesting for future research to focus on a balanced thinking style, which is, according to Vance and his colleagues (2007), beneficial for adequate decision-making and professional performance and might therefore have the ability to reduce procrastination.

In the current research, the scope of the mindfulness construct was not very broad, as it was conceptualized as a flexible state of mind over a specific period. This scope could be broadened by including other scales for mindfulness: for example, the revised Cognitive and Affective Mindfulness Scale inventory. The CAMS-R assumes that mindfulness is a response tendency that tends to be stable across situations, yet can be altered by life experience. This scale views the concept of mindfulness from another perspective, namely that mindfulness is a stable state of mind, which can offer some interesting results for future research.

Given the limited scope of the respondent sample, future research could also gain extra insights into the entire entrepreneurial population by including entrepreneurs with a different education level and from different cultures and nationalities.
A better insight in the different facets of the personality dimensions could also prove to be interesting: as some facets might contribute or reduce procrastination more than others, the knowledge of which specific facets could help to reduce procrastination could be very useful in expanding the current theoretical framework.

6.4 Practical implications

This research has been conducted in cooperation with NIKOS and VentureLab Twente. Its central question comprises how the constructs entrepreneurial intent, linear or non-linear thinking style, mindfulness and the personality dimensions neuroticism and conscientiousness influence procrastination. The selected sample of respondents are those individuals who applied to participate in the VentureLab Twente.

The results have shown that none of the proposed constructs are actual contributors of procrastination. On the contrary, entrepreneurial intent, mindfulness and the personality dimension of conscientiousness all seemed to be reducers of procrastination. Both thinking style and neuroticism did not seem to have a significant influence on procrastination at all. The theoretical implications of this study holds that an important connection was made between entrepreneurial intent and procrastination. No attempt has yet been made to link these two constructs. This implicates that these results have to be interpreted with care and more future research has to be conducted. Also, the combination of constructs in the current study has emphasized the important influence of both behaviour and personality on procrastination and proved that thinking style did not seem to be related to procrastination.
More practically will this research have some important implications for the stakeholders of VentureLab Twente and entrepreneurs and managers in general:

- The results of this research will be very beneficial for the participants of the VentureLab and entrepreneurs in general. The knowledge of which aspects of behaviour and personality might reduce procrastination offers some very practical tools for entrepreneurs to improve their management and to evade the pitfalls which threaten successful entrepreneurship.

  #1: Be conscientious
  Conscientiousness appeared to be the most important contributor of procrastination and conscientiousness has proved to be effective in reducing procrastination. (Nascent) entrepreneurs, who are soon inclined to procrastinate, could make structural changes in their behaviour and disposition to become more organised and systematic in their work methods and in their overall lifestyle to improve their management. Typical traits that are associated with this type of personality are following norms and rules, planning,
  organizing, and prioritizing tasks, thinking before acting, and delaying enjoyment (John & Srivastava, 2000). (Nascent) entrepreneurs can apply this by keeping a tight planning when possible and entrusting tasks to others when necessary. By planning how to achieve goals, carrying these plans out in a methodical fashion and controlling impulses, which may distract, the long-term business goals might be successfully accomplished by the entrepreneur.
  The entrepreneur should be careful, however, not to become too inflexible and focused on the planning, especially when quick responsiveness and flexibility is required in dynamic and turbulent environments.

When in such rapidly changing circumstances decisions have to be made under pressure, entrepreneurs need to be creative and dare to take risks (Davis, Morris & Allen, 1991).
As conscientiousness is associated with attributes that are thought to counteract creativity, entrepreneurs need to avoid being too inflexible to respond in such situations (Feist 1998; George & Zhou, 2001 as cited in Cantner, Silbereisen & Wilfling, 2011)

#2: Mindfulness helps
As mindfulness was also found to lessen procrastination and promote well-being and achievement, being frequently in a state of increased mindfulness would be salutary to the process of running a business.
Being able to focus on the present only, will enable the entrepreneur to make sound decisions without the fear for the future or burdens of the past affecting judgement. In order to accomplish this, the mind should be undistracted so it can focus on internal and external stimuli. To acquire such mindfulness skills, therapies or practise sessions could prove to be a very practical solution to reduce procrastination and improve management.

#3: It does not matter *how* you think
An individual's thinking style was not a contributor to procrastination and it can therefore be concluded that the cognitive style of an entrepreneur, whether it is a rational or an intuitive style, does not influence the extent to which he or she procrastinates.

- The results from this research will also be of great use to the coaches of VentureLab and business coaches and consultants in general as the results give a good indication of the aspects to which business coaches should pay attention. The practical tools for entrepreneurs are just as important for coaches as for entrepreneurs. Especially the outcome that individuals with strong entrepreneurial intention procrastinate less than those with weaker intentions could give direction to their counselling methods. The nascent entrepreneurs could be asked to fill out a Big Five inventory (Costa and McCrae's NEO-PI-R or a briefer inventory) in order to assess their personality so that a counselling plan can be set out, based on the outcome of the inventory. If a nascent entrepreneur scores low on conscientiousness in the inventory than a business coach can focus on conscientiousness traits in the counselling sessions and eventually an evaluation can be made on the entrepreneur's progress in management, working methods and behaviour.

- The investors of VentureLab include the University of Twente and Saxion, the University of Applied Sciences. These institutes do not only gain valuable research data from this research, but also some very practical information concerning procrastination. With the current government measures to limit the amount of 'langstudeerders' (students who are exceeding the prescribed study duration with one year or more), it is also the intention of universities to prohibit students from studying longer than the prescribed study duration. As it is known that almost all students procrastinate and many procrastinate problematically and that procrastination is often associated with poor performance, knowledge about which factors might be able to reduce procrastination is essential for the development of student counselling methods of educational institutes in order to discourage procrastination among students.

- The results can also be beneficial for the community as a whole, as many individuals tend to postpone all sorts of activities in daily life, sometimes with grave consequences. Although more future research still has to be conducted, these results will contribute to a remedy or therapy for procrastination, which in turn will be available for the community.

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Appendix

A –VentureLab Twente Participant Profile Survey

Procrastination

People may use the following statements to describe themselves. For each statement, decide whether the statement is uncharacteristic or characteristic of you using the following 5-point scale.

	Uncharacteristic				**Characteristic**
	1	**2**	**3**	**4**	**5**
01. I often find myself performing tasks that I had intended to do days before.	0	0	0	0	0
02. I often miss concerts, sporting events, or the like because I don't around to buying tickets on time.	0	0	0	0	0
03. When planning a party, I make the necessary arrangements well in advance.	0	0	0	0	0
04. When it is time to get up in the morning, I most often get right out of bed.	0	0	0	0	0
05. A letter may sit for days after I write it before mailing it.	0	0	0	0	0
06. I generally return phone calls promptly.	0	0	0	0	0
07. Even with jobs that require little else except sitting down and doing them, I find they seldom get done for days.	0	0	0	0	0
08. I usually make decisions as soon as possible.	0	0	0	0	0
09. I generally delay before starting on work I have to do.	0	0	0	0	0
10. When traveling, I usually have to rush in preparing to arrive at the airport or station at the appropriate time.	0	0	0	0	0
11. When preparing to go out, I am seldom caught having to do something at the last minute.	0	0	0	0	0
12. In preparing for some deadline, I often waste time by doing other things.	0	0	0	0	0
13. If a bill for a small amount comes, I pay it right away.	0	0	0	0	0
14. I usually respond to an invitation shortly after receiving it	0	0	0	0	0
15. I often have a task finished sooner than necessary.	0	0	0	0	0
16. I always seem to end up shopping for birthday or Christmas gifts at the last minute.	0	0	0	0	0
17. I usually buy even an essential item at the last minute.	0	0	0	0	0
18. I usually accomplish all the things I plan to do in a day.	0	0	0	0	0
19. I am continually saying 'I'll do it tomorrow'.	0	0	0	0	0
20. I usually take care of all the tasks I have to do before I settle down and relax for the evening.	0	0	0	0	0

Entrepreneurial Intent

Below you find a list of factors that persons may take into account in their choice to start up a business. To what extent are the following factors important for you in considering to start your own business?

	Not at all important				**Very important**		**Not at all important**				**Very important**
	1	**2**	**3**	**4**	**5**		**1**	**2**	**3**	**4**	**5**
1. Freedom	0	0	0	0	0	11. Self-realization	0	0	0	0	0
2. Independence	0	0	0	0	0	12. To realize your dreams	0	0	0	0	0
3. To be your own boss	0	0	0	0	0	13. To create something	0	0	0	0	0
4. To be able to choose your own work tasks	0	0	0	0	0	14. To take advantage of your creative needs	0	0	0	0	0
5. Have authority	0	0	0	0	0	15. To have a challenging job	0	0	0	0	0
6. Have power to make decisions	0	0	0	0	0	16. To have an exciting job	0	0	0	0	0
7. Have full control	0	0	0	0	0	17. To have an interesting job	0	0	0	0	0
8. Economic opportunity	0	0	0	0	0	18. To have a motivating job	0	0	0	0	0
9. To receive compensation based on merit	0	0	0	0	0	19. To participate in the whole process	0	0	0	0	0
10. To keep a large proportion of the result	0	0	0	0	0	20. To follow work-tasks from a to z	0	0	0	0	0

Please indicate the extent to which of the following people think you should or should not pursue a career as self-employed. To what extent do you care about the opinion of the following people in your choice of employment status?

	Think that I should not				**Think that I should**		**Not at all**				**Very much**
	1	**2**	**3**	**4**	**5**		**1**	**2**	**3**	**4**	**5**
1. Your closest family	0	0	0	0	0	1. Your closest family	0	0	0	0	0
2. Your closest friends	0	0	0	0	0	2. Your closest friends	0	0	0	0	0
3. Your closest colleagues	0	0	0	0	0	3. Your closest colleagues	0	0	0	0	0
4. Other people who are important to you	0	0	0	0	0	4. Other people who are important to you	0	0	0	0	0

To what extent are you confident that you can perform the following tasks successfully?

	Not at all confident				**Very confident**
	1	**2**	**3**	**4**	**5**
01. See new market opportunities for new products/services	0	0	0	0	0
02. Discover new ways to improve existing products/services	0	0	0	0	0
03. Identify new areas for potential growth	0	0	0	0	0
04. Design product/services that solve current problems	0	0	0	0	0

05. Create product/services that fulfil unmet customer needs	0	0	0	0	0
06. Bring a product concept to a market in a timely manner	0	0	0	0	0
07. Be able to obtain sufficient funds for future growth	0	0	0	0	0
08. Develop and maintain favourable relationships with potential investors	0	0	0	0	0
09. Develop relationships with key people who are connected to capital sources	0	0	0	0	0
10. Identify potential sources of funding for investments	0	0	0	0	0
11. Work productively under continuous stress, pressure and conflict	0	0	0	0	0
12. Tolerate unexpected changes in business conditions	0	0	0	0	0
13. Persist in the face of adversity	0	0	0	0	0
14. Take calculated risks	0	0	0	0	0
15. Make decisions under uncertainty and risk	0	0	0	0	0
16. Manage expenses	0	0	0	0	0
17. Control business costs	0	0	0	0	0
18. Manage cash flows	0	0	0	0	0

Please indicate the extent to which you agree or disagree with the following statements

	Strongly disagree				**Strongly agree**
	1	**2**	**3**	**4**	**5**
1. I would rather own my own business than earn a higher salary employed by someone else	0	0	0	0	0
2. I would rather own my own business than pursue another promising career	0	0	0	0	0
3. I am willing to make significant personal sacrifices in order to stay in my own business	0	0	0	0	0
4. I would work somewhere else only long enough to make another attempt to establish my business	0	0	0	0	0
5. I am willing to work more with the same salary in my business, than as employed in an organization	0	0	0	0	0

How likely are you to be working full-time for your new business in one year from now?

Very unlikely 0 0 0 0 0 Very likely

If you were to put this on a scale from 0 to 100%, how likely is it that you will be working full-time for the new business in one year from now?

…….. Percent

One year from now you intend to be….

Only employed by someone else 0 0 0 0 0 Only self-employed

(Non)linear thinking

For the following 5 pairs of items, divide exactly 3 points according to how frequently you perform such behaviors: 3 = very often, 2 = moderately often, 1 = occasionally, 0 = rarely or never. Please make sure that your numbers add up to 3 for each pair of items.

	Points
1a. I primarily rely on logic when making career decisions	
1b. I primarily rely on my feelings when making career decisions	

	Points
2a. I primarily weigh quantitative factors when making a decision about a large purchase or investment, such as my age, budget needs, or future earnings	
2b. I primarily weigh qualitative factors when making a decision about a large purchase or investment, such as my gut feelings or a sense that the decision is right for me	

	Points
3a. When making important decisions, I pay close attention to when a number of people with well-justified expertise give me the same advice	
3b. When making important decisions, I pay close attention when I experience a "knowing in my bones," chills, tingling or other physical sensations	

	Points
4a. The most important factor in making life-altering changes is knowing that the change is based on objective, verifiable facts	
4b. The most important factor in making life-altering changes (such as a career change, marriage, or major relocation) is feeling it is right for me	

	Points
5a. When my analysis and intuition are in conflict, I give precedence to my analytical reasoning	
5c. When my analysis and intuition are in conflict, I give precedence to my intuitive insights	

For the following 8 pairs of items, divide exactly 3 points according to the influence they have on your behavior and decision making: 3= very strong influence on how I behave, 2= strong influence on how I behave, 1= moderate influence on how I behave, 0= little or no influence on how I behave. *Please make sure that your numbers add up to 3 for each pair of items.*

	Points		Points		Points		Points
1a. Concepts		2a. Rationality		3a. Reason		4a. Logic	
1b. Instincts		2b. Empathy		3b. Felt sense		4b. Inner knowing	

	Points		Points		Points		Points
5a. Facts		6a. Proof		7a. Data		8a. Deduction	
5b. Feelings		6b. Heartfelt		7b. Hunch		8b. Intuition	

Mindfulness

Below is a collection of statements about everyday experience. Please indicate how frequently or infrequently you currently have each experience. Please answer according to what really reflects your experience rather than what you think your experience should be. Please treat each item separately from every other item.

	Almost never				**Almost always**
	1	**2**	**3**	**4**	**5**
01. I could be experiencing some emotion and not be conscious of it until some time later.	0	0	0	0	0
02. I break or spill things because of carelessness, not paying attention, or thinking of something else.	0	0	0	0	0
03. I find it difficult to stay focused on what's happening in the present.	0	0	0	0	0
04. I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.	0	0	0	0	0
05. I tend not to notice feelings of physical tension or discomfort until they really grab my attention.	0	0	0	0	0
06. I forget a person's name almost as soon as I've been told it for the first time.	0	0	0	0	0
07. It seems I am "running on automatic," without much awareness of what I'm doing.	0	0	0	0	0
08. I rush through activities without being really attentive to them.	0	0	0	0	0
09. I get so focused on the goal I want to achieve that I lose touch with what I'm doing right now to get there.	0	0	0	0	0
10. I do jobs or tasks automatically, without being aware of what I'm doing.	0	0	0	0	0
11. I find myself listening to someone with one ear, doing something else at the same time.	0	0	0	0	0
12. I drive places on 'automatic pilot' and then wonder why I went there.	0	0	0	0	0
13. I find myself preoccupied with the future or the past.	0	0	0	0	0
14. I find myself doing things without paying attention.	0	0	0	0	0
15. I snack without being aware that I'm eating.	0	0	0	0	0

The Big five personality dimensions: neuroticism & conscientiousness

Please use the below list of common human traits to describe yourself as accurately as possible. Describe yourself as you really are compared to other people you know of the same age and sex, not as you wish to be. So, generally, is it accurate or inaccurate that you are:

Uncharacteristic					**Characteristic**	**Uncharacteristic**					**Characteristic**
	1	**2**	**3**	**4**	**5**		**1**	**2**	**3**	**4**	**5**
1. Shy	0	0	0	0	0	21. Jealous	0	0	0	0	0
2. Talkative	0	0	0	0	0	22. Unenvious	0	0	0	0	0
3. Energetic	0	0	0	0	0	23. Moody	0	0	0	0	0
4. Quiet	0	0	0	0	0	24. Unanxious	0	0	0	0	0
5. Extraverted	0	0	0	0	0	25. Efficient	0	0	0	0	0
6. Outgoing	0	0	0	0	0	26. Disorganized	0	0	0	0	0
7. Reserved	0	0	0	0	0	27. Careless	0	0	0	0	0
8. Untalkative	0	0	0	0	0	28. Untidy	0	0	0	0	0
9. Creative	0	0	0	0	0	29. Neat	0	0	0	0	0
10. Intellectual	0	0	0	0	0	30. Inefficient	0	0	0	0	0
11. Unimaginative	0	0	0	0	0	31. Systematic	0	0	0	0	0
12. Artistic	0	0	0	0	0	32. Organized	0	0	0	0	0
13. Intelligent	0	0	0	0	0	33. Kind	0	0	0	0	0
14. Philosophical	0	0	0	0	0	34. Sympathetic	0	0	0	0	0
15. Deep	0	0	0	0	0	35. Harsh	0	0	0	0	0
16. Uncreative	0	0	0	0	0	36. Cooperative	0	0	0	0	0
17. Envious	0	0	0	0	0	37. Unkind	0	0	0	0	0
18. Emotional	0	0	0	0	0	38. Warm	0	0	0	0	0
19. Anxious	0	0	0	0	0	39. Rude	0	0	0	0	0
20. Unworried	0	0	0	0	0	40. Inconsiderate	0	0	0	0	0