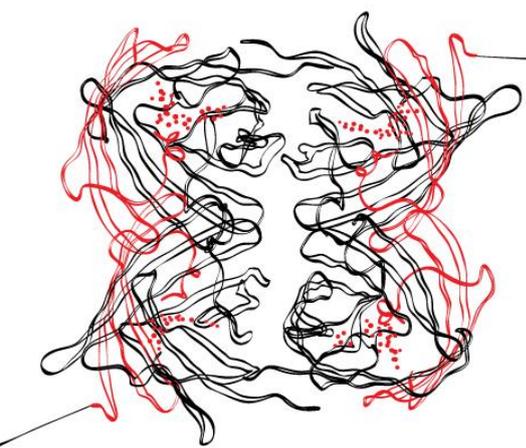
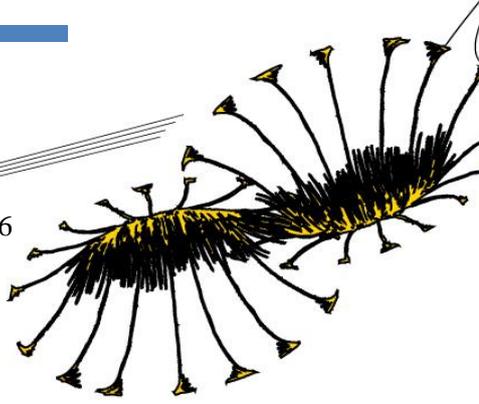




To what extent do educational background
and work-related experience determine the
success of entrepreneurs in the Netherlands?

Bachelor Thesis

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Abstract

The purpose of this paper is to explore the relationship between human capital and entrepreneurial success and to give answer to the question: To what extent do educational level, the field of study and additional training explain the success of Dutch entrepreneurs? Individual data from a Dutch panel self-employment study is used as a basis for the conduct of a cross-sectional study and a multivariate regression analysis. The intention of this analytical approach is to investigate the causal relationship between human capital attributes, associated with knowledge and skills acquisition, and performance outcome of Dutch entrepreneurs. The final results show that the observed factors have a relative weak impact on entrepreneurial success. Another significant finding is that work-related experience has greater contribution to entrepreneurial success than educational background.

Table of Contents

I. Background	1
1.1. Introduction	1
1.2. Research Question	4
II. Theoretical Framework and Conceptualization	5
2.2. The Concept of Human Capital Theory	5
2.3. Human Capital Theory and Entrepreneurial Success	6
III. Methodology	11
3.1. Dataset and Sampling	11
3.2. Validity and Reliability	13
3.3. Operationalization	14
3.3.1 Dependent variable: Success of Dutch entrepreneurs -	14
3.3.2 Independent variable one: Educational background	17
3.3.3 Independent variable two: Work-related experience	18
3.3.4 Control variable one: Gender	21
3.3.5 Control variable two: Age	22
3.3.6 Control variable three: Legal form of the company	23
3.3.7 Control variable four: Type of business sector	23
IV. Data Analysis	25
V. Conclusion	34
VI. Reference List	39
VII. Data Appendix	41

I. Background

1.1.Introduction

Researchers representing different disciplines argue that performance outcomes, including wealth and job creation, economic development and innovation, are based on entrepreneurial success (Stuart & Abetti, 1990; Unger, et al, 2011). Various factors, both endogenous and exogenous, however, are of importance when analyzing the sources of entrepreneurial success. Therefore, it is of significant interest for entrepreneurship researchers to discover to what extent such factors contribute to the performance outcomes of entrepreneurs and thus – to their business success.

One main area of entrepreneurship literature that received great attention for more than three decades studies the significance of endogenous factors, such as learning and the subsequently resulting knowledge and skills (Stuart & Abetti, 1990; Unger, et al., 2011). This is mainly reflected in entrepreneurial studies referring to the human capital-success relationship (Becker, 1964; Unger, 2011 & 2006). Scholars interpreting the concept of human capital often narrow their arguments to the impact of education, experience, knowledge and skills, as prerequisites of human capital, on the entrepreneurial success. Having been interested in the human capital-success relationship, scientists present a number of arguments suggesting a positive relationship between human capital, including education and experience, and success (Unger, et.al, 2011, p.1). Researchers believe that the role of learning and gaining skills consists of organizational adaption and flexibility in conditions of change. Thus, knowledge and additional skills help entrepreneurs to detect business opportunities and to represent a source of competitive advantage (Unger, 2006, p.10). Individual endogenous abilities play a crucial role in professional performance and in resulting outcomes, designated as successful entrepreneurial activities in the professional environment. Knowledge and skills, resulting from schooling and experience, may play an even greater role in the future because of increasing knowledge intensive activities, rapid change and new requirements in the work place. Consequently, studying human capital-success relationship contributes to the better understanding of processes, mechanisms and practices that lead an entrepreneur to greater success.

The link between learning and entrepreneurial effectiveness is far from proven (Unger, 2006, p.10). The prevailing belief is that entrepreneurial success depends to a great extent on the individual level of competence. Researchers categorize human capital into two types (The 3rd OECD World Forum, 2009). The first type refers to the economic perspective, according to which human capital is described as labor force. The second one delineates the role of human capital and the respective investment in the intellectual human capital. Based on the assumption that human capital is mainly shaped by knowledge, skills and experience, there is a widespread belief that accumulation of human capital attributes significantly influence productivity and subsequent performance outcomes. In other words, “education and experience are viewed as an investment in the future” and thus are important components to be successful (Kangasharju & Pekkala, 2001, p.1). Kangasharju and Pekkala (2001) also believe that there is abundant evidence in every-day life and scientific literature for the fact that the acquisition of knowledge and skills improve the future earnings of an entrepreneur and their subsequent overall success.

Douglass (1976), however, points at the controversy of this issue, advocating that the educational level is not the main moderator for success of self-employed people, but rather the intensity and the duration of the study programs the individuals have obtained during their education, by the time they have become entrepreneurs. Moreover, the association between human capital attributes and success highlights the fact that specific educational study programs, more specifically their duration and intensity, often increase knowledge and develop certain personal skills. This in turn may raise the interest of an individual to be self-employed in a specific business branch. According to researchers, studying the human capital-success relationship, individual’s potential to create wealth in a specific business branch is often influenced by the occupation field.

Whilst most studies conclude that human capital is related to success, there have been conflicting findings (Unger, 2006, p. 11). Despite the positive and significant relationship established between the indicators of human capital and the success of an entrepreneur, there is still uncertainty about the extent to which different human capital determinants, including educational attainment and experience, generate the an entrepreneur’s outcome. Although most researchers offer various explanations for a positive relationship between human capital and entrepreneurial success, some of the findings are still controversial and need to be reconciled for a number of theoretical and practical reasons.

The scientific gap that researchers, such as Unger and Douglass, are referring to can be attributed to the fact that most of the studies fail at describing in details the effect of human capital on entrepreneurial success. The literature with regard to the human capital-success relationship remains fragmented and is unable to present enough evidence for the exact magnitude of the impact of human capital attributes on business success.

Beyond question, human capital may increase the individual's capability of performing generic entrepreneurial tasks and facilitates the acquisition of new knowledge and skills. However, there is still a lack of knowledge to what extent human capital attributes influence entrepreneurial performance. One reason for this lies in the variety of human capital measurements, conceptualizations, study contexts and possible presence of other moderating variables.

However, successful implementation of diverse moderating variables and objective observation of the effects of human capital attributes on entrepreneurial success, as well as conducting research that carefully integrate the human capital theory, promises to close the gap that is recently observed in the studies of the human capital-success relationship.

After having carefully viewed numerous narrative reviews referring to the human capital-success relationship, very few evidence about the extent to which European entrepreneurs are considerably qualified or skilled enough to enjoy greater business success has been found.

The Netherlands and entrepreneurial success

The Netherlands have been established and known for years as a country that is in possession of one of the world's top five most competitive economies (Dutch Government, 2015). The Dutch government therefore aims at implementing self-employment policies in order to strengthen the country's position and to boost the role of domestic entrepreneurs in global context. The focus on education as a capital good relates to the concept of human capital, which emphasizes that the development of skills is an important factor in production activities and increasing the earnings potential (Olaniyan&Okemakinde, 2008, p. 479). Closing the gap between education and the respective industry is one of the vital goals of the Dutch government that should be reflected in an education system. As a result of this, entrepreneurs would have the opportunity to obtain knowledge and develop certain skills. In order to respond to those needs and to contribute to the economic growth of the business branch, researchers have investigated the relationship between the educational background and the

work-related experience, on the one hand, and the success of entrepreneurs, on the other hand. Since there is few literature that explicitly refer to the Netherlands and to the way how education and training programs influence the income of self-employed people in the country, this paper will add social and scientific value to the Dutch perspective with regard to the correlation between educational level, experience and entrepreneurial success.

In this paper the human capital is addressed by integrating theories based on proper choice of human capital measurements and suitable success indicator with regard to the case studied. The aim of this research will be to explain in depth the effects of human capital on business success and to provide a framework to explicate to what extent educational background and experience, as prerequisites of human capital, are related to the success of Dutch entrepreneurs.

1.2. Research Question

The intention of this paper, in the light of a research, is to answer the explanatory research question: “To what extent do educational background and work related experience correlate with the success of entrepreneurs in the Netherlands”.

According to the literature that deals with entrepreneurship there are three specific economic areas referring to a respective economic level which have been discussed by researchers over the years in order to find explanations for the various correlations between educational background and entrepreneurial success (Robinson & Sexton, 1994, p.142). Such areas address questions concerning the micro- and macroeconomic levels. However, this paper focuses on the micro-economic impact and intends to give a response to sub-questions, such as: “Does education enhance entrepreneur’s success?”, „Is work-related experience more important than educational background for entrepreneurial success?”, “Do entrepreneurs with an academic degree enjoy greater success than those without such?”

By trying to answer these questions, the results of this paper will provide an in-depth understanding of whether an academic degree or more work-related experience contribute significantly to the increase of an entrepreneurs’s income. The outcome of the research will be of significant scientific and social value as the entrepreneurship literature has not dealt in depth with these questions referring to the Netherlands yet.

II. Theoretical Framework and Conceptualization

2.2. The Concept of Human Capital Theory

A wide range of economic and strategic theories have been employed to provide a framework in which human capital is viewed as an important determinant of selection into entrepreneurship for the individual, entrepreneurial success for the firm and rates of firm formation in a society (Dickson, 2008, p.240). One of the main theories aiming at explaining the impact of human capital on entrepreneurial success is the human capital theory. The theory can be traced back to the emergence of classical economics in 1776 when it was first developed into a scientific theory (The 3rd OECD World Forum, 2009). After developing the concept of human capital into a scientific theory, the American economist Theodore Shultz recognized human capital as one of the most substantial factors for economic growth. According to him the economic prosperity and functioning of an economy depend on human capital stock. Furthermore, this theory has been adopted by scholars studying the effects of human capital attributes on business success and has developed a considerable framework for conducting an even larger number of researches that include indicators of human capital in prediction models for entrepreneurial success (Unger, 2006, p. 21).

Although human capital seems to be a simple concept at first sight, empirical findings have proven that human capital is fairly complex and should be scrutinized carefully. The reason for this lies in the fact that there is a large spectrum of human capital indicators, seeking to measure its magnitude and the extent to which they influence overall business success: formal education, entrepreneurial education, training, employment experience, family background, level of intelligence, skills, knowledge, etc. (Unger, 2006, p. 22). According to Becker (1964), human capital is defined as skills and knowledge that individuals acquire through investments in schooling, work-related training, and other types of experience.

A large part of the narrative reviews expresses a positive and significant relationship between human capital and entrepreneurial success. However, a variety in human capital conceptualizations and measurements lead to controversial findings. This requires a scruntinized approach so that the effects of human capital attributes on entrepreneurial success can be studied adequately.

The conceptual basis chosen for this paper is the capability of self-employed people, as key constraint on resource acquisition which is determined by performance outcome and measured by wealth creation. “Expected earnings, or the income of the entrepreneurs, are assumed to be a function of the usual set of human capital attributes –viz., human capital developed through formal education and experience” (Boden, 1996, p.672). In line with the theoretical framework, the effect of educational background and work-related experience on entrepreneurial performance outcomes will be examined. The entrepreneurship literature articulates the assumption that education and work-related experience can both serve as determinants for choosing the type of industry or sector an entrepreneur would like to be self-employed in and as resources for increasing their performance outcome at the respective venture.

2.3. Human Capital Theory and Entrepreneurial Success

Human capital theory argues that human capital leads to success (Becker, 1964). Entrepreneurship researchers, aiming at establishing the level of human capital impact on business success, have found that organizations and firms tend to increase their investments in human capital in order to improve the performance outcomes of individuals which in turn may contribute to the company’s economic growth (Unger, 2006, p. 14). A key constraint in entrepreneurial success and in economic development, human capital is often observed as a profound set of individual characteristics that are highly correlated with the entrepreneurial capability to perform generic business tasks of discovering and exploiting new opportunities, of planning activities and of striving to reach higher business goals in order to enjoy greater entrepreneurial success. Prior knowledge and skills, developed through the years as a result of educational and training programs prepare entrepreneurs to discover specific opportunities that are not visible to people without the necessary entrepreneurial incentives and increase their senses to approach helpful mechanisms in order to acquire further utilitarian resources, including financial and physical capital. Human capital is an essential criterion for absorbing and mastering cognitive abilities, for improving the knowledge attainment and for adequate accumulation of new skills in different entrepreneurial situations (Unger, 2006, p. 23).

Given the positive impact of human capital on entrepreneurial success and the fact that higher human capital should lead to a more efficient execution of entrepreneurial tasks in running a business, scholars expect a positive and significant relationship between human capital and

success. Dickson (2008) also hypothesizes a positive relationship between human capital and various entrepreneurial outcomes, reflected on the individuals' attitude towards and capability to develop business skills, and to adjust their behavior to the constantly changing business environment. Moreover, educational background and experience are these human capital indicators that are mainly being referred to when the human capital-success relationship is studied. From a theoretical point of view, those human capital prerequisites are highly correlated with the increase in the earnings potential, indicating the success of an entrepreneur. In general terms, human capital represents the investment people make in themselves that enhance their economic productivity, associated with their earnings potential (Olanian & Okemakinde, 2008, p.479). This statement is the main cornerstone of the human capital theory. Human capital theory emphasizes on how education increases the productivity and efficiency of workers by increasing the level of cognitive stock of economically productive human capability which is a product of innate abilities and investment in human beings (Olanian & Okemakinde, 2008, p.479). Thus, human capital theory addresses the importance of education, associated with greater success in the self-employment branch.

Human capital, conceptualized as individual level competence that is gained as a result of the educational background, contributes to the process of transferring knowledge and skills in the diverse entrepreneurial environments. The human capital theory states that human capital "investments improve knowledge, skills, and thereby raise money or psychic incomes" (Becker, 1964). Schumpeter (1973) also reports that entrepreneurial development and the subsequent success are principally built upon knowledge, skills and attitude an entrepreneur has in order to be capable to boost the outcomes of the respective company, and to enjoy as a result of this greater success. Moreover, Schumpeter (1973) advocates the assumption that human capital, more specifically education, is seen as an input into the intentional and entrepreneurial efforts to be productive, successful and to create wealth. Hence, the higher the educational level an entrepreneur has, the greater business success he can enjoy.

Given the assumption based on the human capital theory, the following hypothesis has been formulated:

Hypothesis 1: Entrepreneurs with higher educational level are more likely to be successful than those with lower educational level.

Researches referring to human capital-success relationship have yielded a number of positive results showing the necessity of knowledge about entrepreneurial processes and of the capability to implement the right mechanisms in order to approach the desired business goals, leading to greater success. Although the theoretical perspective pointing at the positive impact of education on business success is acknowledged and well-developed through the years, most of the researches have paid little attention to the effect of the work-related experience thus far.

The intensity, duration of different trainings or entrepreneurial courses, as well as the respective key aspects, are a crucial point in investigating the extent to which the experience, besides the educational level an entrepreneur has obtained, is related to the performance outcomes in entrepreneurship. A better understanding of the relationship between human capital and success requires a precise analysis of the impact of different human capital attributes and of the processes explaining the respective correlations. These processes are often associated with acquisition and transfer of human capital in the specific entrepreneurial environment. According to Unger (2006) acquisition is the transformation from experience to knowledge and skills. However, “experience should not be equated with knowledge because experience may or may not lead to higher knowledge. Human capital theory does not explicate the distinction between human capital as experience and human capital as knowledge” (Unger, 2006, p. 24).

Schultz (1973) states that the capacity of a human being in terms of knowledge, skills and experience should be viewed as determinants for potential to progress. This perspective stresses the fact that knowledge and skills obtained through education and additional courses can increase the earnings of an individual. Human resources constitute the ultimate basis of wealth of entrepreneurs. According to the human capital theory, people tend to maximize their economic benefits given their knowledge and skills. “Thus, once individuals have entered entrepreneurship, those who have invested more in their human capital are likely to strive for more growth and profits in their business compared to individuals who have invested less in their human capital, simply because they want to receive higher compensation for their human capital investments, such as education and trainings” (Unger, et al., 2011, p. 343). Studying also the impact of work-related experience, associated with different kinds of entrepreneurial trainings or courses helps identifying more precisely the extent to which human capital influences the performance outcomes in entrepreneurship.

From a theoretical point of view, knowledge and skills, gained as a result of completed trainings or entrepreneurial courses, should be successfully transferred to the respective business situation which in turn will create potential for increasing the respective business success. However, the individual characteristics of an entrepreneur and the level of turbulence in the business environment also play a role in the process of transferring knowledge and skills in real life. “It is possible that two individuals can be sent to separate businesses and thus have equal experiences. However, the outcomes can be dramatically different (Quinones et al., 1995, p. 905). Besides the ability of an individual to absorb and master knowledge and skills gained as a result of specific trainings or courses, the time spent on gathering entrepreneurial experience and on practicing the respective skills is of greatest importance. The reason for this lies in the fact that individuals need time to learn to implement the acquired knowledge and skills that will help them to adapt to the dynamic entrepreneurial environment. As a result of this, entrepreneurs will be able to respond with the time better to new situations of business nature and to make right and immediate decisions. Thus, accomplishing entrepreneurial tasks and striving to achieve higher business goals require great cognitive abilities, on the one hand, and experience, on the other hand.

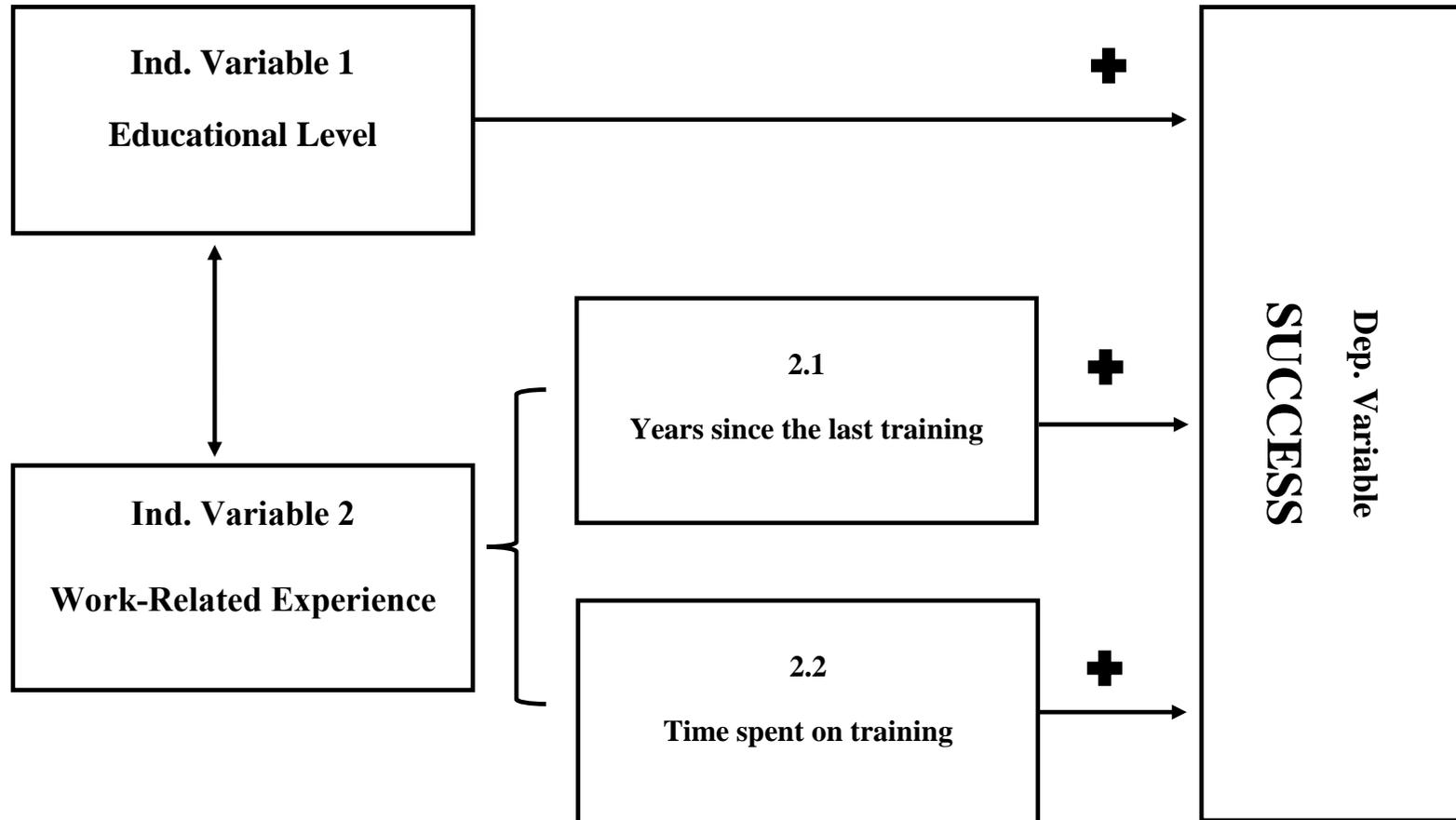
The successful transformation of knowledge and skills into experience and the subsequent performance of entrepreneurial activities need time to be mastered. Over the years, individuals learn to be flexible and establish practices in order to respond to the needs of the entrepreneurial environment, this enables them to analyze the business opportunities more precisely and to make faster and better decisions, as well as to act more efficiently. In turn, this increases their potential to present higher performance outcomes and to be therefore, more successful. Thus, the more time spent for gaining experience and practicing the acquired skills, the higher chance for entrepreneurs to enjoy greater success.

On the basis of further assumptions resulting from the human capital theory, the following two hypotheses will also be tested:

Hypothesis 2: The more time has passed since entrepreneurs have completed training, the more likely they are to be successful.

Hypothesis 3: Entrepreneurs who have spent more time in attending entrepreneurial courses are more likely to be successful.

Causal Diagramm



III. Methodology

3.1. Dataset and Sampling

The empirical part of this research aims at explaining the relationship between educational background and work-related experience, on the one hand, and the resulting success of Dutch entrepreneurs, on the other hand. This can be explained by applying cross-sectional as well as quantitative research designs in a coherent and logical way. The reason for this analytical strategy lies in the fact that both research designs aim at approaching causal inferences with regard to the observed correlation and serve the research in a way that data collection, measurement and analysis mechanisms will be implemented in the best way possible.

The fact that all variables indicated in the research question (educational background, work-related experience and success of Dutch entrepreneurs) are measured at the same time and that a clear correlation between those variables is observed advocates for the applicability of a cross-sectional research design in the following study. Moreover, the unit of analysis in this research, and namely the Dutch entrepreneurs, are not manipulated differently during the study, which rules out the possibility that the observed correlation between educational background, trainings and entrepreneurial success is being modified purposefully by any extraneous intervention.

As the goal of this research is to examine the existence, the nature and the extent to which the success of Dutch entrepreneurs can be predicted by the educational background and the work-related experience by the time the data was gathered, a multivariate regression analysis, as an indicator for the quantitative research approach, is also conducted. It aims at establishing the impact of educational level, major field of study and additional trainings on entrepreneurial success, and more specifically at providing insight to the relative contribution of each of the predictors to the variance in the dependent variable.

The data used in this research is a secondary data which is generated from a Dutch panel self-employment study (ZZP Panel) conducted last in 2013. This data will be the cornerstone for explaining the relationship between the educational background and work-related experience, on the one hand, and success of Dutch entrepreneurs, on the other hand.

Data Archiving and Network Services (DANS) is the organization that granted the data from the Dutch self-employment panel study for the purpose of this research. This panel study has been conducted four times so far – in 2010, 2011 2012 and in 2013. The data used in this research is the one generated from the latest study conducted, namely the one in 2013. The reason for this is the attempt to make the research as relevant and up-to-date as possible. The Dutch panel self-employment study (ZZP Panel) is a product of the joint cooperation between the Ministry of Economic Affairs and the Ministry of Social Affairs and Employment. The panel study conducted in 2013 consists of two parts: telephone and internet surveys. The respondents were first approached via a telephone call by the researchers and answered questions about the development of their business and their financial position. After being asked if they are also willing to be approached via internet, those who responded positively received also an internet survey whose main questions reflected those from the first part of the panel study.

The Dutch panel self-employment study is primarily aimed at all kinds of relevant aspects of the management and security of self-employed businesses. The panel gives thematic understanding, i.e. personal characteristics, business characteristics, business and income, insurance, independence, market conditions, innovation and investment.

In the panel study that was conducted in 2013 3,000 panelists in total took part in the surveys. However, another important specification is the legal form of the company an individual is self-employed in. After conducting descriptive statistics, it was found out that 504 individuals with a company with limited liability (the so called Ltd), 2436 solo self-employed and 60 individuals having other legal form of a company participated in the panel study (See Table 1). This data is collected after having asked the question: Do you carry out your activities in your company in the form of a limited company, sole or other legal form?

The solo entrepreneurs in the Netherlands have been chosen as a unit of analysis in the Dutch panel self-employment study and respectively – in the following research since their percentage rate represents 81,2% out of all 3,000 respondents.

The researchers indicated that the respondents can be classified as solo self-employed if their characteristics correspond with the following definition for solo self-employed person. A person is classified as self-employed if that person:

- is performing independent entrepreneurial activities;

- has no employees;
- has no co-partner;
- spends at least 15 hours per week at the company;
- receives no support from family member with regard to the entrepreneurial activities, that could result in substantial part of the revenue of the company;
- produces no goods and indicates that labor (crafts, skills, knowledge, capacity, etc.) is regarded as the main product of the company;

3.2. Validity and Reliability

Drawing credible and valuable conclusions as a result of the following data analysis is the main goal of this study so that the research question “To what extent do educational background and work-related experience determine the success of entrepreneurs in the Netherlands?”. For this purpose, judging the quality of the data is an important step. The measures should be assessed on two dimensions: validity and reliability. Reliability refers to the degree to which observed scores are “free from errors of measurement” (Dooley, 2009, p. 76). Validity, on the other hand, refers to the relevance, significance and effectiveness of the specific implications made from the measures (Dooley, 2009, p. 76).

The aim of the implemented cross-sectional research design is to show the expected significant contribution of educational level and work-related experience to the increase of entrepreneurial earnings. That is to say that there is expected high correlation between the examined variables. As a result of their correlation, some threats may occur with regard to the internal validity and the reliability of the data used in this research and should be considered.

In this cross-sectional study in which educational background, work-related experience and success of Dutch entrepreneurs are measured at the same time, a reverse causation is a threat that can occur. This means, there is no 100% certainty that the presumed cause is a result of the presumed effect, or more specifically – that the success of Dutch entrepreneurs came after they have completed a specific educational level and have obtained work-related experience. It could be assumed that because of previous success in a specific entrepreneurial branch, the entrepreneurs have decided to attend specific entrepreneurial courses and thus to develop themselves so that they can be even more successful. In order to prevent this threat and to make the study as truthful as possible, an artificial event has been taken into account. The

educational background and work-related experience, as proxies for independent variables, and the success of Dutch entrepreneurs, in the light of the dependent variable, have been measured at the time the data was gathered and it is assumed that at least the one independent variable, the educational level of the Dutch entrepreneurs, is obtained before becoming self-employed.

Another threat which can occur when examining the relationship between the educational background, the work-related experience and the success of Dutch entrepreneurs, is the effect of a third variable. An example for such third variable influence could be the gender or the type of business sector an entrepreneur is self-employed in. On the one hand, gender differences should be considered with regard to the full potential a woman or a man has to be a successful entrepreneur. Fertility, family roles and flexibility come into consideration when the gender gap is observed. On the other hand, different business sectors are related to different target groups which can result in different turnover and therefore – in different possibilities to create wealth. A self-employed gardener will likely earn less, than an IT entrepreneur. For these reasons, gender and type of business sectors are included in this research as control variables in order to check for threats that might occur as a result of a third variable effect. The reverse causation unfortunately cannot be completely ruled out since the conducted research is a cross-sectional one and reverse causation cannot be controlled in an observational study.

3.3. Operationalization

3.3.1 Dependent variable: Success of Dutch entrepreneurs

Success of Dutch entrepreneurs is observed in this research in the light of a dependent variable. However, the term “success” can be interpreted differently and can be associated with various definitions. Success, as a concept used in a scientific research, is very complex. It can be related, for example, to the turnover of the company, or to the ability of the firm to grow and to create new work places, or to the income of the respective entrepreneur and his or her potential to create wealth. Therefore, a specific identification and clear understanding of this concept is required so that the research can provide sufficient results and can arrive at credible conclusions as a result of a critical analysis of the observed relationship between educational background, work-related experience and success of Dutch entrepreneurs.

In the database used in this research, data with respect to the turnover and to the income of the observed Dutch entrepreneurs are to be found. The income of Dutch entrepreneurs which they gain monthly will be chosen to be the measurement of their success. This choice can be motivated by saying that observing the income of the respective entrepreneurs provides more objective insight to the way how the company functions and the way how the individual performs his or her entrepreneurial activities. Since the goal of the research is to study the human capital-success relationship, endogenous factors which contribute to a great extent to entrepreneurial success are examined. On the one hand, educational background and work-related experience are associated with types of investment in human capital. On the other hand, the expected performance outcome of an individual is expected to be related to his or her personal ability to create wealth, as an indicator for human capital outcome. It is more reasonable to examine the income, as a measurement of entrepreneurial success, rather than the turnover of the respective company, because income is expected to rather correlate with human capital attributes and with the individual ability to create wealth. Turnover, on the other hand, can be often influenced by external factors, such as environment, socialization, innovation, etc.

As stated previously, the data used in this research is generated from a Dutch self-employment panel study and all the information is provided in Dutch. Therefore, it must be translated into English. Re-coding of the examined variables is also required. The monthly income of Dutch entrepreneurs is coded in the database as “inkomen” and re-coded in this research as “income”. There is a scale consisting of 6 sections for measuring the income of the respondents in the panel study, as a specific value is attached to each section referring to the respective answer of the respondent. After having received the question “What is the approximate amount of your net income you earn on the average as a result of your current business activities?” the panelists had to choose one of the following options:

- Less than 1250 euro a month
- Between 1250 and 1500 euro a month
- Between 1500 and 2000 euro a month
- Between 2000 and 3000 euro a month
- Between 3000 and 5000 euro a month
- More than 5000 euro a month

However, the answers are not definite and rather vague which make the following multivariate regression difficult to be interpreted. For that reason, the options provided in the survey as possible answers to the question about the income of Dutch entrepreneurs are recoded in this research and the mid-points of them are taken into account. For answers one (less than 1,250 euro a month) and six (more than 5,000 euro a month) the mean cannot be found and thus, the respective numbers provided in the panel study are used in this research. Therefore, the respective values in this research are labelled as followed:

- 1= 1250 euro a month
- 2= 1375 euro a month
- 3 = 1750 euro a month
- 4 = 2500 euro a month
- 5 = 4000 euro a month
- 6 = 5000 euro a month

This scale will contribute to the better interpretation of the following multivariate regression analysis and drawing conclusions about the relationship between income and the observed factors in this research will be easier.

After running descriptive statistics, it was found out that there are 268 respondents who did not respond to that question. 2732 is the number of the entrepreneurs who provided information about their monthly income (See Table 1).

Table 1

What is the approximate amount of your net income that you earn as a result of your current business activities?				
Valid		Frequency	Percent	Valid Percent
	1250 euro a month	682	22,7%	25,0%
	1375 euro a month	367	12,2%	13,4%
	1750 euro a month	493	16,4%	18,0%
	2500 euro a month	629	21,0%	23,0%
	4000 euro a month	377	12,6%	13,8%
	5000 euro a month	184	6,1%	6,7%
	Total	2732	91,1%	100,0%
Missing	I do not know	268	8,9%	
Total		3000	100,0%	

3.3.2 Independent variable one: Educational background

One of the main independent variables that is expected to explain the reason why some entrepreneurs are more successful and other – less with regard to their endogenous abilities is the educational background, associated in this research with the educational level of the respective solo self-employed person.

The variable of educational background is coded in the database as “opleidingsniveau” and re-coded in this research as “educational_level”. The scale for measurement of this variable consists of six options which refer to six different levels of education in the Netherlands. The respondents were asked to indicate which the highest educational level they have obtained recently is. The possible answers suggested in the survey are the following:

- University
- High school
- Vocational school
- Middle school
- Lower school
- Primary school

Since the aim of this research is to investigate the impact of the educational level on the success of Dutch entrepreneurs with regard to the fact if they have obtained an academic level or not, the types of educational levels in the Netherlands indicated in the panel study are recoded and new variables are created, as it follows:

- academic_education - which includes the university level
- non_academic_education – which includes high school, vocational school and middle school levels
- lower_educational_level – which includes lower school and primary school levels

The above mentioned variables account for the fact if the respective entrepreneur observed in this research has obtained an academic, non-academic or lower educational level until the data was gathered, are computed in a new one, coded as “educ_level”. The values are labelled as follows:

- 1 = academic level
- 2 = non-academic level
- 3 = lower education

In the following multivariate regression, the dummies of the respective educational levels will be included, whereas non-academic level will be used as a reference category and a comparison between academic and the lack academic level will be made.

After running descriptive statistics, the following outcome was derived from it (See Table 3).

Table 2

Which is the highest educational level you have obtained?				
Valid		Frequency	Percent	Valid Percent
	Academic level	1383	46,1%	46,3%
	Non-academic level	1271	42,4%	42,6%
	Lower educational level	330	11,0%	11,1%
	2984	99,5%	100,0%	
Missing	System	16	0,5%	
Total		3000	100,0%	

3.3.3 Independent variable two: Work-related experience

The concept of work-related experience can be interpreted in various ways depending on the goal of the study. Experience is often related to activities that are targeted to a specific objective related to the area in which an individual is self-employed in. Extending the knowledge and developing certain skills so that the individual afterwards can enjoy greater success in what he is doing are often seen as outcomes of the work-related experience.

In the database obtained from the Dutch panel self-employed study various indicators are available with respect to the experience entrepreneurs have gained until the data was gathered.

Work-related experience is presented in this research by two variables which aim at examining the relationship between the time that have passed since the last training or a course an entrepreneur has obtained and his success, and the relationship between the time spent on training or a course and the subsequent success of the respective entrepreneur.

The variable that specifies how much time has passed until the last training or a course an entrepreneur has obtained is constructed in this research from the respective variable in the database, indicating the year the interviewed entrepreneurs attended their last training or course. The respondents in the panel study received an open question “When did you obtain your last training or a course?” on which they had to answer with the particular year in which they last obtained training or a course. The new variable is coded as “year_since_last_training” and is computed as a result of the formula: 2013 minus the year in which the respondent last obtained training or a course. The new variable aims at indicating the exact time that has passed between the year in which the data was gathered and the year the respective entrepreneur last attended training or a course. Additionally, the variable “years_since_last_training” is constructed in three categories measuring in the interval from 2 year the time that has passed since the entrepreneur last obtained certain training or a specific course. The following values are attached to each category:

1 = 0-2 years

2 = 3-13 years

3 = more than 13 years.

The minimum time that could have passed, in case the last training was in the same year when the panel study was conducted, is 0 years, and the maximum time that could have passed adds up to 63 years, in case an entrepreneur obtained his last training in 1950. Table 3 visualizes the number and the respective percentage of the entrepreneurs who did their last training in one of the time periods shown below.

Table 3

How many years have passed since your last training?				
Valid		Frequency	Percent	Valid Percent
	0-2 years	1642	54,7%	57,6%
	3-13 years	766	25,5%	26,9%
	More than 13 years year	444	14,8%	15,6%
	Total	2852	95,1%	100,0%
Missing	System	148	4,9%	
Total		3000	100,0%	

The second variable indicating the work-related experience and which will be studied with respect to the relation between the time that has been spent on training or a course and the success of Dutch entrepreneurs is recoded in the following research as “time_spent_for_training”. The entrepreneurs had to provide information about the days they have spent on training or a course. So that the outcome out of the following multivariate regression can be analyzed systematically and be interpreted more easily, the variable “time_spent_for_training” is categorized in weeks. The following values are attached to each category for this variable:

- 1 = 1 week
- 2 = 2 weeks
- 3 = 3 weeks
- 4 = 4 weeks and more.
- 5 = 0 weeks

After running descriptive statistics, table 4 has been created and aims at visualizing the numbers of entrepreneurs and the time they have spent on training or a course.

Table 4

How much time have you spent on training or course?				
Valid		Frequency	Percent	Valid Percent
	1 week	1136	37,9%	37,9%
	2 weeks	191	6,4%	6,4%
	3 weeks	81	2,7%	2,7%
	4 weeks and more	176	5,9%	11,1%
	0 weeks	1413	47,1%	47,1%
	Total	2997	99,9%	100,0%
Missing	System	3	47,1%	
Total		3000	100,0%	

In the following section the control variables will be presented. Gender, age, legal form of the company and type of business sector will be examined as control variables in this research so that various and irrelevant explanations with regard to the relationship between educational background, work-related experience and success of Dutch entrepreneurs can be excluded. Those variables will be held constant in the multivariate regression analysis in order to assess or to clarify the correlation between the independent and dependent variables.

3.3.4 Control variable one: Gender

Gender is included in the research as a dummy control variable. The aim of the current study is to examine the human capital-success relationship with regard to the educational background, the work-related experience and the income of Dutch entrepreneurs. However, the gender differences should be considered as a determinant for becoming self-employed and for enjoying more or less success in a specific business branch. The reason for this lies in the fact that fertility, flexibility, gender roles in the family, ability to lead, occupational choices, etc. represent often the main differences between men and women. In order to exclude various and unrelated to the goal of this research explanations and conclusions, gender will be controlled and held constant in the multivariate regression analysis. In the panel study 2188 (72, 9%) of the respondents are male and 812 (27, 1%) – female (See Table 5).

Table 5

	Gender of the respondents		
	Frequency	Percent	Valid Percent
Male	2188	72,9%	72,9%
Female	812	27,1%	27,1%
Total	3000	100,0%	100,0%

3.3.5 Control variable two: Age

Another variable that will be held constant when conducting the multivariate regression analysis and will serve the research as a control variable is age. In order to exclude possible explanations that some entrepreneurs are more or less successful because they have more or respectively less (life) experience and to rule out the conclusion that stage of development, besides educational level, determine the success of Dutch entrepreneurs, age is observed as a control variable. The variable that indicates the age of the respondents is coded in the database as “leeftijd” and re-coded in the research as “age”. However, the fact that the big sampling size makes it complicated to study each of the respondents by their age separately, a new categorical variable of age is created. The new variable is coded as “age_groups” and the assessment of the measurement is designed into categories and does not refer anymore individually to the age of each entrepreneur in the panel study. There are three categories composed from the variable, re-coded as “age”, which are referring to a specific age group. The first category, indicated with the value of 1, refers to the respondents who are under 35 years old; the second one, assessed with a value of 2 – refers to the group of entrepreneurs who are between 35 and 54 years old, the third category, indicated with 3 as a value, mentions the group of solo self-employed people that are older than 54 years.

After running descriptive statistics, it was found out that the majority of the solo-entrepreneurs are aged between 35 and 54 years. One in ten solo-entrepreneurs is younger than 35 years and one in three solo-entrepreneurs is 55 years old or above (See Table 6). According to the Dutch self-employment panel study there is no significant difference in the age structure between solo-entrepreneurs, self-employed in a LTD or those in sole proprietorial type of company (ZZP panel).

Table 6

How old are you?				
Valid		Frequency	Percent	Valid Percent
	Under 35 years	276	9,2%	9,2%
	Between 35 and 54 years	1770	59,0%	59,0%
	Above 55 years	954	31,8%	31,8%
	Total	3000	100,0%	100,0%

3.3.6 Control variable three: Legal form of the company

The goal of the Dutch panel study is to observe the self-employed people in the Netherlands, and more specifically solo entrepreneurs. One of the important questions asked in the survey aims at detecting the legal form of the company under which it is registered in the Dutch Chamber of Commerce so that also comparisons with regard to the type of company the entrepreneur is self-employed can be made. In order to exclude possible explanations which may arise from that distinction between the companies, legal form is observed in this research as a control variable. Table 7 is provided so that the aim of the question “Do you carry your activities in your company in the form of a limited company, sole proprietorship or other legal form” can be visualized.

Table 7

Do you carry out your activities in your company in the form of a limited company, sole proprietorship or other legal form?			
Valid	Frequency	Percent	Valid Percent
LTD	504	16,8%	16,8%
Sole proprietorship	2436	81,2%	98,0%
Other legal form	60	2,0%	100,0%
Total	3000	100,0%	100,0%

3.3.7 Control variable four: Type of business sector

The last control variable in this research is the type of business sector. A very common explanation for the success of Dutch entrepreneurs can be related to the branch each self-employed person observed in the panel study is executing his or her entrepreneurial activities. One can say an ICT or agricultural entrepreneur is more capable than a freelancer in the care and well-being branch to increase his or her earnings as a result of the income that can arise from executing entrepreneurial activities or services for which the customers are paying more. Since the aim of this research is to focus on the human capital-success relationship and on the endogenous factors, such as educational background and work-related experience, possible

explanations for the success of Dutch entrepreneurs with regard to the business sector the company belongs to should be excluded.

After conducting descriptive statistics table 8 is created and provided in order to visualize the different sectors in which the observed Dutch entrepreneurs are self-employed in.

Table 8

Which sector does your company belong to?				
Valid		Frequency	Percent	Valid Percent
	Agriculture	256	8,5%	8,5%
	Industry	257	8,6%	8,6%
	Construction	301	10,0%	10,0%
	Trade, catering, repair	318	10,6%	10,6%
	Transport, storage, communication	252	8,4%	8,4%
	ICT	266	8,9%	8,9%
	Other business services	351	11,7%	11,7%
	Care and well- being	285	9,5%	9,5%
	Education and training	313	10,4%	10,4%
	Other services	401	13,4%	13,4%
	Total	3000	100,0%	100,0%

IV. Data Analysis

The underlying analytical strategy includes conducting first statistical tests in order to estimate if the relationship between the outcome variable, income of Dutch entrepreneurs, and each predictor variable - educational level, years that have passed since the last training and time spent on training or a course, is statistically significant and to what extent the variance in income can be explained through each of those predictor variables. For estimating a precise bivariate relationship between income and each of the predictor variables, a simple bivariate regression analysis will be conducted. Bivariate regression tests will also check for some basic assumptions, the most important of which, however, is the simple correlation between income of Dutch entrepreneurs and each of the predictor variables. Furthermore, statistical tests of significance are also required. To determine whether a measure of a variable is different from zero, a 95% confidence interval is also computed when conducting the bivariate regression analysis. After having run and analyzed the statistical tests, in the step thereafter multivariate regression analysis follows to be conducted. The results out of it will be the basis on which the hypotheses will be tested. The purpose will be to confirm or to reject the respective hypotheses and to present important conclusions about the research question.

Bivariate Regression Analysis

The bivariate regression analysis consists of three models. Each of them include the outcome variable, income of Dutch entrepreneurs, and one of the predictor variables – either educational level or years that have passed since the last training obtained or time spent on training. Basing on the outcome out of the bivariate regression analysis, conclusions about the magnitude of the impact of each predictor variable on the outcome variable can be made. For each correlation tested will be presented a table which consists of four coefficients -B coefficient (which shows the average change in income of Dutch entrepreneurs associated with 1 unit change in the respective predictor variable), Beta coefficient (which indicates the strength of the observed relationship, referring to how many standard deviations a dependent variable will change, per standard deviation increase in the predictor variable), significance value of the tested association and R Square. The estimation of the coefficient of determination, denoted R^2 indicates the variance in income of Dutch entrepreneurs explained by the predictor variable included in the respective model.

The first bivariate regression model analyses the correlation between income of Dutch entrepreneurs, in the light of outcome variable, and educational level. The model represents a negative and a rather weak relationship (Beta= -.056) between the observed variables. Moreover, the R Square is 0.003 and is an indicator for the low ability of the predictor variable, educational level, to explain the variance in income of Dutch entrepreneurs. The Coefficient table (table 9) shows further that the statistical significance is 0.003, indicating that the overall regression model statistically and significantly predicts the outcome. Higher educational level is reported not to increase the income of Dutch entrepreneurs. The value of B coefficient (b= -.134) means that there is a decrease of 0.134 euros in the income of Dutch entrepreneurs if a higher educational level is obtained. Mathematically, the correlation between income and obtained higher educational level can be expressed, as following:

$$\text{Income} = 3,293 - 0.134 (\text{educational level})$$

Table 9

Coefficients				
Model	Unstandardized Coefficient	Standardized Coefficient	Sig.	R Square
1	B	Beta		R ²
Constant	3,293		.000	
Educational level	-.134	-0.56	.003	.003

In the second bivariate regression model (table 10) educational level is replaced by years that have passed since the last training. This model also indicates a negative and a rather weak relationship between income of Dutch entrepreneurs and the observed predictor variable (Beta= -.066). Moreover, the R Square (= .004) is again very low which points the fact that the observed predictor variable is rather unable to explain the variance in income of Dutch entrepreneurs. The significance value is .001 and therefore, indicates the quality of predictability given in this model. The value of -.140 for B coefficient (see “Unstandardized Coefficient” column) shows that for each further year that have passed the income of a Dutch entrepreneur decreases with 0.140 euros. The mathematical expression of this statement is the following:

Income = 3,302 -0.140. (years since the last training)

Table 10

Coefficients				
Model	Unstandardized Coefficient	Standardized Coefficient	Sig.	R Square
1	B	Beta		R ²
Constant	3,302		.000	
Years since last training	-.140	-0.66	0.001	.004

The last model of the bivariate regression analysis includes, besides income of Dutch entrepreneurs, time spent on training as a predictor variable. The model represents higher values for each of the observed coefficients in comparison to the previous two models. R Square (= .007), for example, shows that the time spent on entrepreneurial training programs can best, among all observed predictor variables, explain the variance in income of Dutch entrepreneurs. Moreover, the significance value of 0.000 indicates that the model is highly reliable to predict the correlation between income of Dutch entrepreneurs and the time they have spent on trainings. Beta coefficient (see “Standardized Coefficient” column) with the value of -.073 expresses again the negative and a rather weak relationship between the outcome and predictor variable. The value of B coefficient (= .073) means that with each week more spent on entrepreneurial training program the income of Dutch entrepreneurs decreases with 0.073 euros. The mathematical expression of this statement is the following:

Income = 3,307 – 0.073 (time spent on training)

Table 11

Coefficients				
Model	Unstandardized Coefficient	Standardized Coefficient	Sig.	R Square
1	B	Beta		R ²
Constant	3,307		.000	
Time spent on training	-.073	-.086	.000	.007

As a result of the conducted bivariate regression analysis, it is to be concluded that the data are statistically significant and appropriate for running multivariate regression analysis as a next step.

Multivariate Regression Analysis

The multivariate regression analysis aims at explaining the overall impact of the predictor variables observed in this research on income of Dutch entrepreneurs. For that purpose two models have been constructed and follow to be analyzed. The only difference between those models is the inclusion or the respective exclusion of control variables. The two multivariate regression models (with and without control variables) will be compared and conclusions about the possible effect of the particular control variables on the correlation between income of Dutch entrepreneurs and the examined predictor variables will be made. To recall one more time, the control variables included in this research are the following: gender, age, legal form of the company and type of business sector. The multivariate regression analysis, however, differs from the bivariate one that was run earlier not only in the amount of predictor variables included in the models. Multivariate regression analysis basically includes all predictor variables at the same time and controls for their overall impact on the outcome variable. Bivariate regression analysis, on the other hand, examines the impact of only one independent variable on the dependent one. An important distinction between the two regression approaches in this research is expressed by the fact that, for the purpose of this study, dummies have been created for each of the variables (predictor, outcome and control ones) included in the multivariate regression analysis.

In comparison to the bivariate regression which aimed simply at establishing the availability of simple associations between one predictor variable and income of Dutch entrepreneurs and at determining the overall impact of that independent variable on the dependent one, the aim of the multivariate regression analysis in this research is different. The latter serves the purpose to include dummies for each predictor variables for several reasons. Tests have shown that some of the variables are heavily skewed, i.e. distribution of those variables is not symmetric which in turn means that there is no normal distribution relate to the respective variables. Combined with the fact that the the bivariate tests reported very modest linear relationships between income of Dutch entrepreneur and each predictor variables, may mean that those relationships are not necessarily linear. Including the observed variables as dummies allows to explore potential non-linear relationships between income of Dutch

entrepreneurs and the predictor variables. Furthermore, one category from each of the predictor variable will be chosen as a reference category the outcome out of the multivariate regression analysis can be analyzed in relation to. As a result of this, the contribution of each group of the predictor variables to the variance in income of Dutch entrepreneurs, when control variables are considered not, can be analyzed.

The two multivariate regression models, with and without control variables, are analyzed in the following part and delineated in table 12. The model with control variables will be referred to as model 1 and the one without control variables – as model 2. The values for each predictor variable are presented one below the other, respectively for model 1 and model 2. At the end the number of all individuals included in the multivariate regression analysis is provided. This amounts to 2595 participants. Table 13 presents basically the outcome of the two combined Coefficients tables that are generated after a multivariate regression analysis was run for each model and consists of five coefficients - B and Beta coefficients, value of significance, value of R and R Square. The values of those determinants will be the basis on which the results will be analyzed and compared. The main observation that can be made, after the two multivariate regression models have been compared, is that the correlation between the outcome and the observed predictor variables is stronger ($R = .153$ for model 1 and $R = .458$ for model 2) and can be better explained ($R^2 = .023$ for model 1 and $R^2 = .210$ for model 2) when control variables are included (model 2). The higher value of R Square in model 2 (increase from 2% in model 1 to 21% in model 2) is an indicator for the high contribution of the control variables to the respective regression model. The variance in income of Dutch entrepreneurs, resulting from the effect of the observed predictor variables is better explained when age, gender, legal form of the company and type of business sector, in the light of control variables, are also taken into account.

The contribution of each predictor variable to the variance in income of Dutch entrepreneurs presented in the following table will be discussed, assuming that all other variables are held constant. An important specification is that one of the categories of each independent variable has been chosen to be the reference category that the outcome will be analyzed in relation to. For the better understanding of the table and of the resulting conclusions, the reference categories for each variable included are the following: non-academic level for educational level, 0-2 years for years that have passed since the last training obtained, 0 weeks for time spent on trainings, female for gender, between 35 and 54 years for age, solo proprietorship for legal form of the company and other services for type of business sector. However, the

contribution of each control variable will not be separately analyzed because the aim of this research is to observe the overall impact of the considered control variables on the regression model. This means that only non-academic level, 0-2 years passed since the last training obtained and 0 weeks spent on trainings will be related to the analysis of the multivariate regression model.

Table 12

Coefficients						
	Model	Unstandardized Coefficient B	Standardized Coefficient Beta	Sig.	R	R Square
Model 1	1 (Constant)	2,020		.000	.153	.023
Model 2		2.258		.000	.458	.210
	Academic level	.237	.075	.001		
		.215	.068	.001		
Reference Category	Non-academic level					
	Lower educational level	.230	.043	.036		
		.109	.021	.283		
Reference Category	0-2 years passed since the last training					
	3-13 years passed since the last training	.927	.260	.000		
		.685	.192	.001		
	More than 13 years passed since the last training	.686	.156	.004		
		.594	.135	.006		
Reference	0 weeks spent on					

Category	training			
	1 week spent on	1.061	.227	.000
	training	.959	.296	.000
	2 weeks pent on	1.182	.188	.000
	training	1.060	.168	.000
	3 weeks spent on	.829	.087	.004
	training	.838	.088	.001
	4 weeks spent on	.602	.091	.018
	training	.650	.098	.005
	N = 2595			

Results from Multivariate Regression Analysis

Both multivariate regression models show that when all predictor variables are included together in one regression model, they have a positive impact on income of Dutch entrepreneurs. Although the correlation between all predictor and outcome variables is not strong, it is positive, both when control variables are taken into account or not (see Beta coefficients in table 12). However, the values of B coefficient, indicating the variance in income of the observed solo self-employed people, decrease when control variables are considered in the regression model which speaks for their overall impact on the observed relationship.

The impact of academic level, in relation to non-academic one, on income is positive in both regression models (with and without control variables). The results show that the income of self-employed people increases with 0.237 euro when they have obtained an academic degree, relative to those without an academic degree (i.e., the reference category), assuming that all other observed variables are held constant and control variables are not considered. When the latter are, however, taken into account, the correlation between educational level and income of Dutch entrepreneurs becomes weaker and the contribution of academic level, in relation to non-academic level, decreases from $b = .237$ to $b = .215$. The values for lower educational level are, however, not significant in both multivariate regression models.

The effect of the second predictor variable, years that have passed since the last training, follows to be analysed. The results show that 3 to 13 years, in relation to the period of 0 to 2 years (i.e. reference category), that have passed since the last training they have obtained significantly contribute to the increase of income of Dutch entrepreneurs, assuming again that all other variables are held constant and no control variables are included in the regression model. Relative to the entrepreneurs who received training recently (between 0 and 2 years ago), those who received training longer ago have higher levels of income. For each training that was obtained 3 to 13 years ago, the income of solo self-employed people in the Netherlands increases with 0.92 euros (see “Unstandardized B Coefficient”). In comparison to that model, the one with the control variables shows a decrease in B coefficient, indicating that with only 0.68 euros the income of Dutch entrepreneurs increases, when the last training was, in relation to the period of 0 to 2 years, 3 to 13 years ago. The regression models also show that the period of more than 13 years that have passed since the last training becomes insignificant when control variables are considered.

The last observed predictor variable is time spent on trainings. The results out of both regression models indicate the fact that this variable, among all predictor variables, has the greatest contribution to the variance of income of Dutch entrepreneurs. The outcome of the regression models show that if solo self-employed people in the Netherlands spend between 1 and 2 weeks for trainings their income will increase by around 1 euro. To be more specific, 2 weeks spent on entrepreneurial trainings, in relation to no time spent, will contribute the most to the increase of income of Dutch entrepreneurs. However, the increase of 1.18 euros ($b = 1.182$) in income, in case entrepreneurial trainings lasted 2 weeks and no control variables are considered, becomes less when the latter are also included in the regression model ($b = 1.060$). Such a slight change in the increase in income is also observed when the time spent, in relation to 0 weeks spent on trainings, is 1 week ($b = 1.061$ in table 13 and $b = .959$ in table 14). In comparison to the results out of the multivariate regression analysis so far, the values of the coefficients for groups 3 weeks and 4 weeks increase when control variables are also taken into account, instead of decrease when the latter are considered.

This research aims at testing the hypotheses stated earlier, taking the outcome out of the conducted multivariate regression analysis into account. The following findings have been formulated:

Hypothesis 1, stating that entrepreneurs with higher educational level are more likely to be successful than those with lower educational level, is confirmed. The results show that solo self-employed people with an academic educational level are reported to have higher income and therefore, to enjoy greater success. Lower educated entrepreneurs are reported to have respectively lower levels of income.

Hypothesis 2, stating that the more time has passed since entrepreneurs have completed training, the more likely they are to be successful, is, however, rejected. The results show that the more time has passed since the last training an entrepreneur has obtained, the less increase in income is to be observed. Entrepreneurs who obtained training longer ago are reported to have lower levels of income than those who attended training recently.

Hypothesis 3, stating that entrepreneurs who have spent more time in attending entrepreneurial courses are more likely to be successful, is partially confirmed. The results show that if the trainings lasted 1 or respectively 2 weeks, the income of Dutch entrepreneurs increases proportionally. However, spending more than 2 weeks on an entrepreneurial training leads to decrease in income of Dutch entrepreneurs. On the other hand, the results can be a matter of a difference between entrepreneurs who obtained training in comparison to those who have not.

V. Conclusion

This research examined the impact of educational level, years that have passed since the last training and the time spent on entrepreneurial trainings on the variance in income of Dutch entrepreneurs. Those factors are observed in the research as determinants for the success of solo self-employed people in the Netherlands. The extent to which the above mentioned factors contribute to the increase of income of Dutch entrepreneurs, associated in this research with greater success, was tested on the basis of the three hypotheses that were formulated at the beginning of this research. Serving as a basis for the line of reasoning in this research, human capital theory provided valuable input to the examined research question. The application of this theory shed some light on the assumptions about the human capital-success relationship that were formulated on the basis of previous studies.

Although entrepreneurship researchers found out that educational level, for example, is one of the main determinants for the entrepreneurial success, the findings so far are still unclear to some extent. This is the reason why this research aimed at investigating the impact of both the educational background and work-related experience, the latter associated in this research with years that have passed since the last training and time spent on entrepreneurial trainings.

Having implemented an analytical approach that consisted of running bivariate and multivariate regression analyses, notable findings were presented and gave input for future recommendations. The most striking difference between the two regression approaches is that each of the examined predictor variables has a *negative impact* on income of Dutch entrepreneurs when they are studied separately. In case, all predictor variables are included in one regression model, a multivariate regression one, it is to be observed that their overall impact on entrepreneurial success becomes *positive*. This can be interpreted as a necessity for combining different human capital factors so that the entrepreneurial success can be explained in the best way possible. However, the contribution of each factor to the increase of income is different. It was found out that educational level does not have such a strong effect on entrepreneurial success as it was reported in numerous studies. Experience, on the other hand, seems to have a greater impact on the earnings that are generated as a result from different entrepreneurial activities. Moreover, the impact of time spent on entrepreneurial trainings was found out to be the greatest among all observed predictor variables. The results show that the 1 or 2 weeks spent on trainings increase significantly the income of Dutch entrepreneurs. However, if the entrepreneurial trainings lasted more than 2 weeks, the findings report a

decrease in the earnings of solo self-employed people in the Netherlands. These results raise further questions and give future researchers the motivation to investigate why there is specific time period needed for entrepreneurial trainings. Questions, such as “Are there any other cognitive factors or psychological effects that should be also taken into account?”, “Do duration and the respective intensity of entrepreneurial courses relate to the performance outcome of entrepreneurs?”, “How are short- and long-lasting trainings constructed?”, should be further investigated. The findings that not the longest training obtained, but one that lasted for about two weeks, lead to the conclusion that maybe the quality and the intensity of an entrepreneurial course, associated with specific way of working and program, adjusted to the time period play also a crucial role. Task-relatedness and focusing on specific activities during the entrepreneurial trainings could be another explanation for those findings.

Another interesting result is that the hypothesis, stating that the more time has passed since entrepreneurs have completed training, the more likely they are to be successful, was rejected. The underlying assumption that the time passed contributes to better accumulation of the knowledge and skills gained through entrepreneurial courses was, however, reported to be false. The fact that an entrepreneur can develop his or her business skills when he or she faces different situations of business nature and get used with the time how to implement his or her knowledge or to react in the constantly changing entrepreneurial environment was not supported by the findings. The reason for the outcome of the regression analysis could be explained by assuming that there might be other external, and not less important, factors that influence the earnings potential of an entrepreneur. Factors, such as characteristics of business environment, demand for innovative way of working, ability to integrate in a more flexible business sphere, as well as skills to develop incentives to implement the up-to-date technology in the working environment, could be of great importance. On the one hand, time is needed so that knowledge can be expanded or skills – further developed, but on the other hand, the constantly developing and changing world poses a challenge to the entrepreneurs to develop deeper incentives required for a better understanding of the current business environment. Entrepreneurs nowadays should be very flexible and aware of techniques and methods to implement effectively their knowledge and skills in the current business situations. The latter could, however, sometimes require rather a more innovative and up-to-date way of working that could not have been adopted in the past, so that entrepreneurs increase in an easier way their earnings and enjoy therefore greater entrepreneurial success.

Another finding that also receives attention is the remarkable influence of control variable on the correlation between educational level, years that have passed since the last training, time spent on trainings and income of Dutch entrepreneurs. The results, showing that the impact of predictor variables on income decreases when control variables are also taken into account, lead to the conclusion that other external factors should be also considered in the analysis so that a more objective explanation to the observed human capital-success relationship can be given. Entrepreneurship researches have reported in previous studies that gender and age aspirations could significantly influence the performance outcome of entrepreneurs. Gender differences are often associated with fertility, flexibility and ability to respond to the respective work-load. The findings in this research only confirm the assumptions made by entrepreneurship researchers so far. The results show that the impact of gender and age should not be underestimated since those factors alter to some extent the strength of the observed relationship.

Moreover, type of business sector, i.e another control variable, could also significantly influence the performance outcome of entrepreneurs. The branch, which an individual is self-employed in, could determine to a great extent the way of practice in the respective company which in turn leads to differences in performance outcome. For example, an IT entrepreneur is expected to earn more than a gardener, simply because an IT service is more expensive than the one service offered by a gardener. The last control variable included in this study is the legal form of the company. The reason for this lies also in the intention to rule out other possible explanations for the observed relationship. Different legal forms of a company are associated with different procedures in terms of paying taxes and determining the netto income which in turn can again alter the performance outcome of an entrepreneur.

The successful application of the respective analytical approach in this research led to valuable findings that can stimulate further researches. The most notable finding of this study is that experience does have a stronger impact on income of entrepreneurs than educational level. Since those two factors cannot fully explain the variance in income of solo self-employed people in the Netherlands, further investigation of the human capital-success relationship is required. The question why educational level does not contribute that much to the performance outcome of an entrepreneurs could be further investigated, for example, if an individual has obtained a Business administration diploma is also considered when conducting a research. Moreover, the intensity of entrepreneurial, as well as the focus on

specific entrepreneurial tasks or activities during the trainings, should be also investigated and related to the performance outcome of entrepreneurs.

This research may be valuable for practitioners or companies that are interested in the question if educational level and work-related experience significantly contribute to the success of Dutch entrepreneurs, associated with their earnings potential, and respectively – what their contribution is. Furthermore, this study gives input to the fact that other external factors, such as the availability of a Business Administration degree, intensity or task-relatedness of entrepreneurial trainings, etc, should be also investigated and integrated when human capital-success relationship is studied.

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I would like to thank my both supervisors, Mr. Giedo Jansen and Mr. Jörgen Svensson, for their support and commitment in this thesis process. Their expert advice and valuable feedback helped me a lot throughout this difficult project. I would also like to thank my fellow students, Tala, Natalie and Nik, for their recommendations and outstanding support. Last but not least, I would like to express my gratitude to my family, Maximilian Ahlefelder and Judith Laackman. This thesis would not have been possible without their extraordinary dedication, support and encouragement.

VI. Reference List

- Boden, R.J., JR. (1996). Gender and Self-Employment Selection: An Empirical Assessment, 25(6), 671-682.
- Burke, A.E., FitzRoy, F.R., Nolan, M.A. (2002). Self-employment Wealth and Job Creation: The role of gender, non-pecuniary motivation and entrepreneurial ability, 12, 255-270.
- Croitoru, A. (2008). Schumpeter, J.A., 1934 (2008), *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle*, translated from the German by Redvers Opie, New Brunswick (U.S.A) and London (U.K.): Transaction Publishers, 137-148.
- Dickson, P.H., et al. (2008). Entrepreneurial selection and success: does education matter, 15(2), 239- 258
- Douglas, M. (1976). Relating Education and Entrepreneurial Success, 40-44.
- Kangasharju, A, Pekkala, S. (2001). The Role of Education in Self-employment success, 1-32.
- Kwon, Dae-Bong (2009). The 3rd OECD World Forum on “Statistics, Knowledge and Policy” Human Capital and Its Measurement, 1-15
- Olaniyan, D.A & Okemakinde, T. (2008). Human Capital Theory: Implications for Educational Development, 5(5), 479-483.
- Quinones, M.A., Ford, J.K., & Teachout, M.S. (1995). The relationship between work experience and job performance: A conceptual and meta-analytic review. *Personnel Psychology*, 48, 887-91.
- Robinson, P.B., Sexton, E.A. (1993). The effect of education and experience on self-employment success, 9(2), 141-156.
- Scherer, R.F., Brodzinski, J.D., Wiebe, F.A. (1990). Entrepreneur Career Selection and Gender: A Socialization Approach, 37-44.
- Stuart, Robert & Abett, Pier A. (1990). Impact of entrepreneurial and management experience on early performance, 5, 151-162.

Unger, J.M., (2006). Entrepreneurial success: The Role of Human Capital and Learning, 1-244.

Unger, J.M., et al. (2011). Human capital and entrepreneurial success: A meta-analytical review, (26), 341-356.

Books:

Becker, (1964). Human Capital.

Dooley, (2009). Social Research Methods.

Website:

<https://www.government.nl/> (n.d) Retrieved April 26th, 2016, From Enterprise and Innovation:
<https://www.government.nl/topics/enterprise-and-innovation/contents/the-government-supports-entrepreneurs>

VII. Data Appendix

Tables

Table 1

What is the approximate amount of your net income that you earn as a result of your current business activities?				
Valid		Frequency	Percent	Valid Percent
	1250 euro a month	682	22,7%	25,0%
	1375 euro a month	367	12,2%	13,4%
	1750 euro a month	493	16,4%	18,0%
	2500 euro a month	629	21,0%	23,0%
	4000 euro a month	377	12,6%	13,8%
	5000 euro a month	184	6,1%	6,7%
	Total	2732	91,1%	100,0%
Missing	I do not know	268	8,9%	
Total		3000	100,0%	

Table 2

Which is the highest educational level you have obtained?				
Valid		Frequency	Percent	Valid Percent
	Academic level	1383	46,1%	46,3%
	Non-academic level	1271	42,4%	42,6%
	Lower educational level	330	11,0%	11,1%
	2984	99,5%	100,0%	
Missing	System	16	0,5%	
Total		3000	100,0%	

Table 3

How many years have passed since your last training?				
Valid		Frequency	Percent	Valid Percent

	0-2 years	1642	54,7%	57,6%
	3-13 years	766	25,5%	26,9%
	More than 13 years year	444	14,8%	15,6%
	Total	2852	95,1%	100,0%
Missing	System	148	4,9%	
Total		3000	100,0%	

Table 4

How much time have you spent on training or course?				
Valid		Frequency	Percent	Valid Percent
	1 week	1136	37,9%	37,9%
	2 weeks	191	6,4%	6,4%
	3 weeks	81	2,7%	2,7%
	4 weeks and more	176	5,9%	11,1%
	0 weeks	1413	47,1%	47,1%
	Total	2997	99,9%	100,0%
Missing	System	3	47,1%	
Total		3000	100,0%	

Table 5

Gender of the respondents				
		Frequency	Percent	Valid Percent
Male		2188	72,9%	72,9%
Female		812	27,1%	27,1%
Total		3000	100,0%	100,0%

Table 6

How old are you?				
Valid		Frequency	Percent	Valid Percent
	Under 35 years	276	9,2%	9,2%
	Between 35 and	1770	59,0%	59,0%

54 years			
Above 55 years	954	31,8%	31,8%
Total	3000	100,0%	100,0%

Table 7

Do you carry out your activities in your company in the form of a limited company, sole proprietorship or other legal form?			
Valid	Frequency	Percent	Valid Percent
LTD	504	16,8%	16,8%
Sole proprietorship	2436	81,2%	98,0%
Other legal form	60	2,0%	100,0%
Total	3000	100,0%	100,0%

Table 8

Which sector does your company belong to?			
Valid	Frequency	Percent	Valid Percent
Agriculture	256	8,5%	8,5%
Industry	257	8,6%	8,6%
Construction	301	10,0%	10,0%
Trade, catering, repair	318	10,6%	10,6%
Transport, storage, communication	252	8,4%	8,4%
ICT	266	8,9%	8,9%
Other business services	351	11,7%	11,7%
Care and well-being	285	9,5%	9,5%
Education and training	313	10,4%	10,4%
Other services	401	13,4%	13,4%

Total	3000	100,0%	100,0%
-------	------	--------	--------

Table 9

Which sector does your company belong to?				
Valid		Frequency	Percent	Valid Percent
	Agriculture	256	8,5%	8,5%
	Industry	257	8,6%	8,6%
	Construction	301	10,0%	10,0%
	Trade, catering, repair	318	10,6%	10,6%
	Transport, storage, communication	252	8,4%	8,4%
	ICT	266	8,9%	8,9%
	Other business services	351	11,7%	11,7%
	Care and well-being	285	9,5%	9,5%
	Education and training	313	10,4%	10,4%
	Other services	401	13,4%	13,4%
	Total	3000	100,0%	100,0%

Table 10

Which sector does your company belong to?				
Valid		Frequency	Percent	Valid Percent
	Agriculture	256	8,5%	8,5%
	Industry	257	8,6%	8,6%
	Construction	301	10,0%	10,0%
	Trade, catering, repair	318	10,6%	10,6%
	Transport, storage, communication	252	8,4%	8,4%

ICT	266	8,9%	8,9%
Other business services	351	11,7%	11,7%
Care and well-being	285	9,5%	9,5%
Education and training	313	10,4%	10,4%
Other services	401	13,4%	13,4%
Total	3000	100,0%	100,0%

Table 11

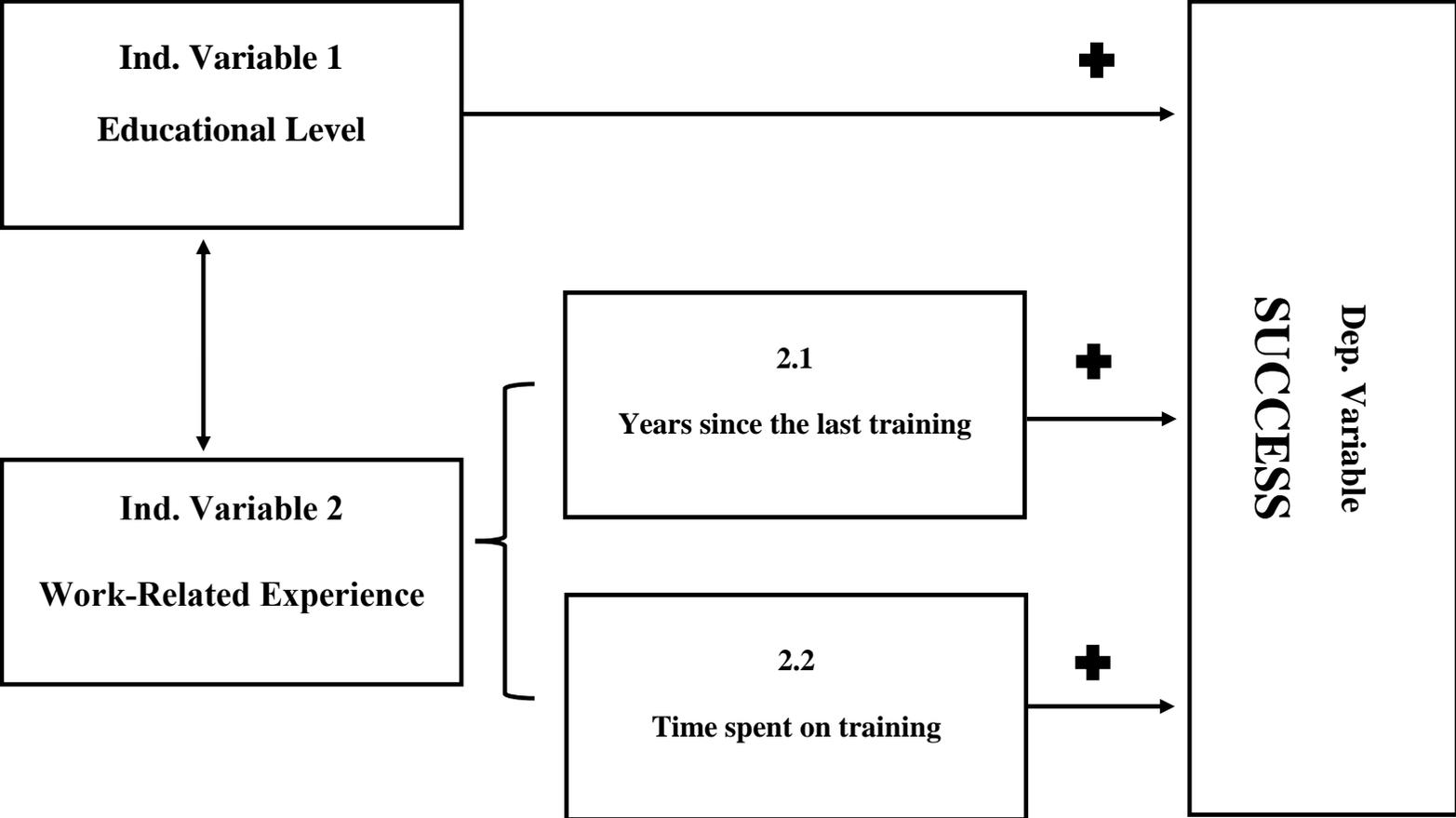
Coefficients				
Model	Unstandardized Coefficient	Standardized Coefficient	Sig.	R Square
	B	Beta		R ²
Constant	3,307		.000	
Time spent on training	-.073	-.086	.000	.007

Table 12

Coefficients						
	Model	Unstandardized Coefficient B	Standardized Coefficient Beta	Sig.	R	R Square
Model 1	1 (Constant)	2,020		.000	.153	.023
Model 2		2.258		.000	.458	.210
	Academic level	.237	.075	.001		
		.215	.068	.001		

Reference	Non-academic level			
Category				
	Lower educational level	.230 .109	.043 .021	.036 .283
Reference	0-2 years passed since the last training			
Category				
	3-13 years passed since the last training	.927 .685	.260 .192	.000 .001
	More than 13 years passed since the last training	.686 .594	.156 .135	.004 .006
Reference	0 weeks spent on training			
Category				
	1 week spent on training	1.061 .959	.227 .296	.000 .000
	2 weeks spent on training	1.182 1.060	.188 .168	.000 .000
	3 weeks spent on training	.829 .838	.087 .088	.004 .001
	4 weeks spent on training	.602 .650	.091 .098	.018 .005
	N = 2595			

Graph



SPSS Output

Frequencies

Statistics

What is the approximate amount of your net income that you earn as a result of your current business activities?

N	Valid	2732
	Missing	268

What is the approximate amount of your net income that you earn as a result of your current business activities?

				Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1250	euro	a	682	22,7	25,0	25,0
	month						
	1375	euro	a	367	12,2	13,4	38,4
	month						
	1750	euro	a	493	16,4	18,0	56,4
	month						
	2500	euro	a	629	21,0	23,0	79,5
	month						

4000 euro a month	377	12,6	13,8	93,3
5000 euro a month	184	6,1	6,7	100,0
Total	2732	91,1	100,0	
Missing I do not know	268	8,9		
Total	3000	100,0		

Frequencies

Statistics

What is the highest educational level you have obtained?

N	Valid	2984
	Missing	16

Frequencies

Statistics

educ_level

N	Valid	2984
	Missing	16

educ_level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	academic level	1383	46,1	46,3	46,3
	non-academic level	1271	42,4	42,6	88,9
	lower educationallevel	330	11,0	11,1	100,0
	Total	2984	99,5	100,0	
Missing	System	16	,5		
Total		3000	100,0		

Frequencies

Statistics

How much has passed since obtained your last training or course?

N	Valid	2852
	Missing	148

How much has passed since obtained your last training or course?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0-2 years	1642	54,7	57,6	57,6
3-13 years	766	25,5	26,9	84,4
more than 13 years	444	14,8	15,6	100,0
Total	2852	95,1	100,0	
Missing System	148	4,9		
Total	3000	100,0		

Frequencies

Statistics

How much time did you spend on training or a course?

N	Valid	2997
	Missing	3

How much time did you spend on training or a course?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 week	1136	37,9	37,9	37,9

2 weeks	191	6,4	6,4	44,3
3 weeks	81	2,7	2,7	47,0
4 weeks and more	176	5,9	5,9	52,9
0 weeks	1413	47,1	47,1	100,0
Total	2997	99,9	100,0	
Missing System	3	,1		
Total	3000	100,0		

Frequencies

Statistics

How much time did you spend on training or a course?

N	Valid	2997
	Missing	3

How much time did you spend on training or a course?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 week	1136	37,9	37,9	37,9

2 weeks	191	6,4	6,4	44,3
3 weeks	81	2,7	2,7	47,0
4 weeks and more	176	5,9	5,9	52,9
0 weeks	1413	47,1	47,1	100,0
Total	2997	99,9	100,0	
Missing System	3	,1		
Total	3000	100,0		

Create dummy variables

Variable Creation

	Label
education_1	educ_level=academic level
education_2	educ_level=non-academic level
education_3	educ_level=lower education level

Create dummy variables

Variable Creation

	Label
years_since_last_trainin g_1	years_since_l ast_training= 0-2 years
years_since_last_trainin g_2	years_since_l ast_training= 3-13 years
years_since_last_trainin g_3	years_since_l ast_training= more than 13 years

Create dummy variables

Variable Creation

	Label
time_spent_for_training _1	time_spent_f or_training=1 week
time_spent_for_training _2	time_spent_f or_training=2 weeks

time_spent_for_training _3	time_spent_f or_training=3 weeks
time_spent_for_training _4	time_spent_f or_training=4 weeks and more
time_spent_for_training _5	time_spent_f or_training=0 weeks

Create dummy variables

Variable Creation

	Label
gender_1	gender=male
gender_2	gender=female

Frequencies

Statistics

Gender of the respondent

N	Valid	3000
---	-------	------

Missing	0
---------	---

Gender of the respondent

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid male	2188	72,9	72,9	72,9
female	812	27,1	27,1	100,0
Total	3000	100,0	100,0	

Frequencies

Statistics

How old are you?

N	Valid	2999
	Missing	1

How old are you?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Under 35 years	276	9,2	9,2	9,2
Between 35 and 54 years	1770	59,0	59,0	68,2

Above 55 years	953	31,8	31,8	100,0
Total	2999	100,0	100,0	
Missing System	1	,0		
Total	3000	100,0		

Create dummy variables

Variable Creation

	Label
age_groups_1	age_groups= Under 35 years
age_groups_2	age_groups= Between 35 and 54 years
age_groups_3	age_groups= Above 55 years

Create dummy variables

Variable Creation

	Label

legal_form_ 1	legal_form=L TD
legal_form_ 2	legal_form=S ole proprietorshi p
legal_form_ 3	legal_form= Other legal form

Frequencies

Statistics

Do you carry out your activities in your company in the form of a limited company, sole proprietorship or other legal ?

N	Valid	3000
	Missing	0

Do you carry out your activities in your company in the form of a limited company, sole proprietorship or other legal ?

	Frequency	Percent	Valid Percent	Cumulative Percent
--	-----------	---------	---------------	--------------------

Valid LTD	504	16,8	16,8	16,8
Sole proprietorship	2436	81,2	81,2	98,0
Other legal form	60	2,0	2,0	100,0
Total	3000	100,0	100,0	

Frequencies

Statistics

Which sector does your company belong to?

N	Valid	3000
	Missing	0

Which sector does your company belong to?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Agriculture	256	8,5	8,5	8,5
Industry	257	8,6	8,6	17,1
Construction	301	10,0	10,0	27,1
Trade, catering, repair	318	10,6	10,6	37,7
Transport, storage, communication	252	8,4	8,4	46,1

ICT	266	8,9	8,9	55,0
Other business services	351	11,7	11,7	66,7
Care and well-being	285	9,5	9,5	76,2
Education and training	313	10,4	10,4	86,6
Other services	401	13,4	13,4	100,0
Total	3000	100,0	100,0	

Create dummy variables

Variable Creation

	Label
type_of_business_sector_1	type_of_business_sector=Agriculture
type_of_business_sector_2	type_of_business_sector=Industry
type_of_business_sector_3	type_of_business_sector=Construction
type_of_business_sector_4	type_of_business_sector=Trade, catering, repair

type_of_business_sector_5	type_of_business_sector= Transport, storage, communication
type_of_business_sector_6	type_of_business_sector=I CT
type_of_business_sector_7	type_of_business_sector= Other business services
type_of_business_sector_8	type_of_business_sector= Care and well-being
type_of_business_sector_9	type_of_business_sector= Education and training
type_of_business_sector_10	type_of_business_sector= Other services

Regression

Descriptive Statistics

	Mean	Std. Deviation	N
What is the approximate amount of your net income that you earn as a result of your current business activities?	3,07	1,587	2722
educ_level	1,6363	,66738	2722

Correlations

	What is the approximate amount of your net income that you earn as a result of your current business activities?	educ_level
--	--	------------

Pearson Correlation	What is the approximate amount of your net income that you earn as a result of your current business activities?	1,000	-,056
	educ_level	-,056	1,000
Sig. (1-tailed)	What is the approximate amount of your net income that you earn as a result of your current business activities?	.	,002
	educ_level	,002	.
N	What is the approximate amount of your net income that you earn as a result of your current business activities?	2722	2722
	educ_level	2722	2722

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	educ_level ^b	.	Enter

a. Dependent Variable: What is the approximate amount of your net income that you earn as a result of your current business activities?

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,056 ^a	,003	,003	1,585

a. Predictors: (Constant), educ_level

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21,724	1	21,724	8,649	,003 ^b
	Residual	6831,581	2720	2,512		
	Total	6853,305	2721			

a. Dependent Variable: What is the approximate amount of your net income that you earn as a result of your current business activities?

b. Predictors: (Constant), educ_level

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
	B	Std. Error	Beta				
1 (Constant)	3,293	,080		40,929	,000		
educ_level	-,134	,046	-,056	-2,941	,003		

Coefficients^a

Model		95,0% Confidence Interval for B	
		Lower Bound	Upper Bound
1	(Constant)	3,135	3,450
	educ_level	-,223	-,045

a. Dependent Variable: What is the approximate amount of your net income that you earn as a result of your current business activities?

Regression

Descriptive Statistics

	Mean	Std. Deviation	N
What is the approximate amount of your net income that you earn as a result of your current business activities?	3,07	1,586	2729
How much time did you spend on training or a course?	3,1722	1,86917	2729

Correlations

	What is the approximate amount of your net income that you earn as a result of your current business activities?	How much time did you spend on training or a course?
--	--	--

Pearson Correlation	What is the approximate amount of your net income that you earn as a result of your current business activities? How much time did you spend on training or a course?	1,000	-,086
		-,086	1,000
Sig. (1-tailed)	What is the approximate amount of your net income that you earn as a result of your current business activities? How much time did you spend on training or a course?	.	,000
		,000	.
N	What is the approximate amount of your net income that you earn as a result of your current business activities? How much time did you spend on training or a course?	2729	2729
		2729	2729

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	How much time did you spend on training or a course? ^b		. Enter

a. Dependent Variable: What is the approximate amount of your net income that you earn as a result of your current business activities?

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,086 ^a	,007	,007	1,580

a. Predictors: (Constant), How much time did you spend on training or a course?

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
-------	----------------	----	-------------	---	------

1	Regression	51,233	1	51,233	20,522	,000 ^b
	Residual	6807,815	2727	2,496		
	Total	6859,048	2728			

a. Dependent Variable: What is the approximate amount of your net income that you earn as a result of your current business activities?

b. Predictors: (Constant), How much time did you spend on training or a course?

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t			
		B	Std. Error	Beta				
1	(Constant)	3,307	,060		55,492			
	How much time did you spend on training or a course?	-,073	,016	-,086	4,530			

Coefficients^a

Model	Sig.	95,0% Confidence Interval for B
-------	------	---------------------------------

		Lower Bound	Upper Bound	
1	(Constant)	,000	3,190	3,423
	How much time did you spend on training or a course?	,000	-,105	-,042

a. Dependent Variable: What is the approximate amount of your net income that you earn as a result of your current business activities?

Regression

Descriptive Statistics

	Mean	Std. Deviation	N
What is the approximate amount of your net income that you earn as a result of your current business activities?	3,08	1,586	2609
How many years have passed since obtained your last training or course?	1,5803	,74240	2609

Correlations

	What is the approximate amount of your net income that you earn as a result of your current business activities?	How many years have passed since obtained your last training or course?
Pearson Correlation	What is the approximate amount of your net income that you earn as a result of your current business activities?	How many years have passed since obtained your last training or course?
	1,000	-,066
	-,066	1,000
Sig. (1-tailed)	What is the approximate amount of your net income that you earn as a result of your current business activities?	,000

	How many years have passed since obtained your last training or course?	,000	.
N	What is the approximate amount of your net income that you earn as a result of your current business activities?	2609	2609
	How many years have passed since obtained your last training or course?	2609	2609

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	How many years have passed since obtained your last training or course? ^b		Enter

a. Dependent Variable: What is the approximate amount of your net income that you earn as a result of your current business activities?

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,066 ^a	,004	,004	1,583

a. Predictors: (Constant), How many years have passed since obtained your last training or course?

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28,348	1	28,348	11,313	,001 ^b
	Residual	6532,749	2607	2,506		
	Total	6561,097	2608			

a. Dependent Variable: What is the approximate amount of your net income that you earn as a result of your current business activities?

b. Predictors: (Constant), How many years have passed since obtained your last training or course?

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t			
	B	Std. Error	Beta				
1 (Constant)	3,302	,073		45,302			
How many years have passed since obtained your last training or course?	-,140	,042	-,066	3,363			

Coefficients^a

Model	Sig.	95,0% Confidence Interval for B	
		Lower Bound	Upper Bound
1 (Constant)	,000	3,159	3,445
How many years have passed since obtained your last training or course?	,001	-,222	-,059

a. Dependent Variable: What is the approximate amount of your net income that you earn as a result of your current business activities?

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
What is the approximate amount of your net income that you earn as a result of your current business activities?	2732	3,07	1,586	1	6

Regression

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method

1	time_spent_f or_training=4 weeks and more, time_spent_f or_training=3 weeks, educ_level=a cademic level, time_spent_f or_training=2 weeks, years_since_l ast_training= more than 13 years, educ_level=l ower educationalle vel, years_since_l ast_training= 3-13 years, time_spent_f or_training=1 week ^b		. Enter
---	--	--	---------

a. Dependent Variable: What is the approximate amount of your net income that you earn as a result of your current business activities?

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,153 ^a	,023	,020	1,570

a. Predictors: (Constant), time_spent_for_training=4 weeks and more, time_spent_for_training=3 weeks, educ_level=academic level, time_spent_for_training=2 weeks, years_since_last_training=more than 13 years, educ_level=lower educationallevel, years_since_last_training=3-13 years, time_spent_for_training=1 week

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	153,120	8	19,140	7,767	,000 ^b
	Residual	6374,849	2587	2,464		
	Total	6527,969	2595			

a. Dependent Variable: What is the approximate amount of your net income that you earn as a result of your current business activities?

b. Predictors: (Constant), time_spent_for_training=4 weeks and more, time_spent_for_training=3 weeks, educ_level=academic level, time_spent_for_training=2 weeks, years_since_last_training=more than 13 years, educ_level=lower educationallevel, years_since_last_training=3-13 years, time_spent_for_training=1 week

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t			
	B	Std. Error	Beta				
1 (Constant)	2,020	,226		8,933			
educ_level=academic level	,237	,066	,075	3,604			
educ_level=lower educationallevel	,230	,110	,043	2,095			
years_since_last_training=3-13 years	,927	,230	,260	4,035			

years_since_last_training=more than 13 years	,686	,236	,156	2,901			
time_spent_for_training=1 week	1,061	,227	,327	4,666			
time_spent_for_training=2 weeks	1,182	,251	,188	4,702			
time_spent_for_training=3 weeks	,829	,287	,087	2,883			
time_spent_for_training=4 weeks and more	,602	,254	,091	2,375			

Coefficients^a

Model	Sig.	95,0% Confidence Interval for B	
		Lower Bound	Upper Bound
1 (Constant)	,000	1,577	2,464
educ_level=academic level	,000	,108	,366
educ_level=lower educationallevel	,036	,015	,445
years_since_last_training=3-13 years	,000	,477	1,377

years_since_last_training=more than 13 years	,004	,222	1,149
time_spent_for_training=1 week	,000	,615	1,506
time_spent_for_training=2 weeks	,000	,689	1,675
time_spent_for_training=3 weeks	,004	,265	1,392
time_spent_for_training=4 weeks and more	,018	,105	1,099

a. Dependent Variable: What is the approximate amount of your net income that you earn as a result of your current business activities?

Regression

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
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1	<p>type_of_business_sector= Education and training, legal_form= Other legal form, time_spent_for_training=4 weeks and more, time_spent_for_training=3 weeks, age_groups= Above 55 years, legal_form= LTD, type_of_business_sector= Transport, storage, communication, time_spent_for_training=2 weeks, type_of_business_sector= Industry, educ_level= Lower education level, type_of_business_sector=</p>		
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a. Dependent Variable: What is the approximate amount of your net income that you earn as a result of your current business activities?

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,458 ^a	,210	,203	1,416

a. Predictors: (Constant),
 type_of_business_sector=Education and training,
 legal_form=Other legal form, time_spent_for_training=4
 weeks and more, time_spent_for_training=3 weeks,
 age_groups=Above 55 years, legal_form=LTD,
 type_of_business_sector=Transport, storage,
 communication, time_spent_for_training=2 weeks,
 type_of_business_sector=Industry, educ_level=lower
 educationallevel, type_of_business_sector=Trade, catering,
 repair, age_groups=Under 35 years,
 years_since_last_training=3-13 years,
 type_of_business_sector=ICT,
 type_of_business_sector=Agriculture,
 type_of_business_sector=Care and well-being,
 years_since_last_training=more than 13 years,
 gender=female, educ_level=academic level,
 type_of_business_sector=Construction,
 type_of_business_sector=Other business services,
 time_spent_for_training=1 week

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1372,012	22	62,364	31,122	,000 ^b
	Residual	5155,958	2573	2,004		
	Total	6527,969	2595			

a. Dependent Variable: What is the approximate amount of your net income that you earn as a result of your current business activities?

b. Predictors: (Constant), type_of_business_sector=Education and training, legal_form=Other legal form, time_spent_for_training=4 weeks and more, time_spent_for_training=3 weeks, age_groups=Above 55 years, legal_form=LTD, type_of_business_sector=Transport, storage, communication, time_spent_for_training=2 weeks, type_of_business_sector=Industry, educ_level=lower educationallevel, type_of_business_sector=Trade, catering, repair, age_groups=Under 35 years, years_since_last_training=3-13 years, type_of_business_sector=ICT, type_of_business_sector=Agriculture, type_of_business_sector=Care and well-being, years_since_last_training=more than 13 years, gender=female, educ_level=academic level, type_of_business_sector=Construction, type_of_business_sector=Other business services, time_spent_for_training=1 week

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
	B	Std. Error	Beta				
1 (Constant)	2,258	,224		10,086	,000		
educ_level=academic level	,215	,067	,068	3,225	,001		

educ_level=lower	,109	,102	,021	1,073	,283		
educationallevel							
years_since_last_training=3-13 years	,685	,209	,192	3,272	,001		
years_since_last_training=more than 13 years	,594	,218	,135	2,730	,006		
time_spent_for_training=1 week	,959	,207	,296	4,640	,000		
time_spent_for_training=2 weeks	1,060	,228	,168	4,644	,000		
time_spent_for_training=3 weeks	,838	,260	,088	3,219	,001		
time_spent_for_training=4 weeks and more	,650	,229	,098	2,835	,005		
gender=female	-1,127	,074	-,317	15,321	,000		
age_groups=Under 35 years	-,172	,100	-,032	1,718	,086		
age_groups=Above 55 years	-,454	,064	-,131	7,075	,000		
legal_form=LTD	,646	,081	,150	7,962	,000		

legal_form=Other legal form	,378	,210	,032	1,800	,072		
type_of_business_sector=Agriculture	,261	,130	,046	2,012	,044		
type_of_business_sector=Industry	,242	,126	,042	1,914	,056		
type_of_business_sector=Construction	,458	,126	,085	3,642	,000		
type_of_business_sector=Trade, catering, repair	-,235	,120	-,044	- 1,956	,051		
type_of_business_sector=Transport, storage, communication	,166	,126	,029	1,322	,186		
type_of_business_sector=ICT	,506	,123	,092	4,107	,000		
type_of_business_sector=Other business services	,665	,113	,137	5,907	,000		
type_of_business_sector=Care and well-being	,435	,120	,082	3,624	,000		

type_of_business_sector=Education and training	,110	,114	,022	,960	,337		
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Coefficients^a

Model	95,0% Confidence Interval for B	
	Lower Bound	Upper Bound
1 (Constant)	1,819	2,697
educ_level=academic level	,084	,346
educ_level=lower educationallevel	-,091	,309
years_since_last_training=3-13 years	,274	1,095
years_since_last_training=more than 13 years	,167	1,020
time_spent_for_training=1 week	,554	1,364
time_spent_for_training=2 weeks	,612	1,508
time_spent_for_training=3 weeks	,327	1,348
time_spent_for_training=4 weeks and more	,200	1,101
gender=female	-1,271	-,982
age_groups=Under 35 years	-,368	,024
age_groups=Above 55 years	-,580	-,328
legal_form=LTD	,487	,805

legal_form=Other legal form	-,034	,790
type_of_business_sector=Agriculture	,007	,516
type_of_business_sector=Industry	-,006	,489
type_of_business_sector=Construction	,211	,704
type_of_business_sector=Trade, catering, repair	-,470	,001
type_of_business_sector=Transport, storage, communication	-,080	,413
type_of_business_sector=ICT	,265	,748
type_of_business_sector=Other business services	,444	,885
type_of_business_sector=Care and well-being	,200	,670
type_of_business_sector=Education and training	-,115	,334

a. Dependent Variable: What is the approximate amount of your net income that you earn as a result of your current business activities?