“TO WHAT EXTENT ARE ENTREPRENEURSHIP AND JOB GROWTH CORRELATED IN THE EUROPEAN UNION?”

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Table of contents

Foreword

This thesis is the final product of my study European Studies at the University of Twente. After a number of failed attempts at other theses, I finally decided to go with a topic of great personal interest. Besides my studies, I have been an entrepreneur for over 7 years, starting my first company in 2008, a web design company together with my best friend. In 2012, we both committed, together with a third partner, to starting a second company. Whereas our web design business had always been a side-job besides studying, this new company, Inkrease, was a full time endeavour. This undeniably caused my studies to take quite a bit longer than normally should be necessary, but also provided some amazing opportunities and taught me some extremely valuable lessons, that no school is ever able to teach.

After giving up my partnership in Inkrease in 2014, I realized that pursuing a full-time career, whether or not as an entrepreneur, and trying to write an academic thesis at the same time is not a realistic target. I then committed to writing the thesis that lies before you. I owe many thanks to my family, who have always supported me in the decisions I have taken, even though in hindsight they may not have been the right one at the time. I know how they would have loved my time at the University of Twente to have been a lot shorter.

I would also like to express my sincere appreciation to my supervisor, Dr. Nico Groenendijk, for helping me not overcomplicate things, as I tend to do easily. Without his guidance, my inherent interest in almost anything would have meant that the writing of this thesis would have been accompanied by an endless array of sidesteps to other areas. His structured approach and tight deadlines enabled me to remain focused.

By completing this thesis, a weight has been lifted off my shoulders. I am now able to look forward and jump at the chances that come along, without having to constantly keep in mind that I also need to finish my degree.

Abstract

The idea that entrepreneurs, or people who start businesses, are responsible for the generation of new jobs has been taken as a truth and for granted by policy makers around the world, Europe included. The idea that the creation of new companies generate more jobs seems logical, but is it? Do entrepreneurs really generate jobs, or are they barely able to get by for themselves? This study looks at entrepreneurship and self-employment. If entrepreneurs are to create jobs, they first need to be able to call themselves self-employed. Otherwise, they may start a company beside their daily job with an employer or even besides their education, but this is not likely to result in very many jobs generated. By performing a visual and statistical analysis of entrepreneurship versus self-employment in 15 European Member States, this thesis answers the question "to what extent are entrepreneurship and job growth correlated in the European Union?"

The results are not conclusive. Whilst the most service-based economies tend to succeed at converting entrepreneurs to self-employed people with a chance of generating new jobs, these are outnumbered by the amount of economies that either show no relationship, or even a negative relationship.

1. Introduction

It has become common practice for policy makers to stimulate entrepreneurship, in an attempt to stimulate the economy and economic growth. Not only in the European Union, but also in the United States, many initiatives are launched in order to promote the start-up of new businesses. For example, president Obama was closely involved with the launch of the "Startup America" initiative, a public/private cooperation aimed at increasing entrepreneurship and the success of entrepreneurship (The White House, 2011).
In 2013, the European Commission published the Entrepreneurship 2020 Action Plan. It is filled with claims such as "To bring Europe back to growth and higher levels of employment, Europe needs more entrepreneurs" and "Entrepreneurship is a powerful driver of economic growth and job creation" (European Commission, 2013, p. 3). The Entrepreneurship 2020 Action Plan is the follow-up of the Small Business Act of 2008, which, as the name implies, was aimed at increasing the number of small businesses in Europe. It aimed to do so by reducing the regulatory burden for small and medium sized enterprises.

There are, however, different opinions about whether or not stimulating entrepreneurship is sound public policy. Some scholars claim it is bad public policy, others claim otherwise. For example, Shane (2009) wrote "This is bad public policy. Encouraging more and more people to start businesses won't enhance economic growth or create a lot of jobs because start-ups, in general, aren't the source of our economic vitality or job creation" (Shane, 2009, p. 142). He supports this argument by claiming that there is "[..] no evidence that people create too few or the wrong businesses in the absence of government intervention, and a lot of evidence that these policies lead people to start marginal businesses that are likely to fail, have little economic impact, and generate little employment" (Shane, 2008, p. 158). On the other hand, Van Stel, Thurik and Carree (2005) come to the conclusion that "entrepreneurial activity by nascent entrepreneurs and owner/managers of young businesses affects economic growth, but that this effect depends upon the level of per capita income. This suggests that entrepreneurship plays a different role in countries in different stages of economic development." (van Stel, Carree, & Thurik, 2005, p. 311).

In the very first chapter of the Entrepreneurship 2020 Action Plan, the European Commission states: "The level of entrepreneurship and its nature vary widely between Member States, and the reasons for low enthusiasm for an entrepreneurial career are therefore diverse". The commission acknowledges the fact that the level of entrepreneurship varies greatly across Member States, but seemingly fail to find out why. Instead, the commission simply points to low willingness to become an entrepreneur, rather than opportunities, barriers, etc. One could imagine, building on the idea of van Stel, Carree, & Thurik, as well as Acs, business opportunities between economies may vary (Acs, 2006). Even though all the economies of the EU-27 may be considered very developed on a global scale, when setting them side-by-side, a clear distinction can be made between different regions. See also figure 1, derived from Eurostat, to illustrate average income differences within the European Community in 2011 (most recent data available at the time of writing).

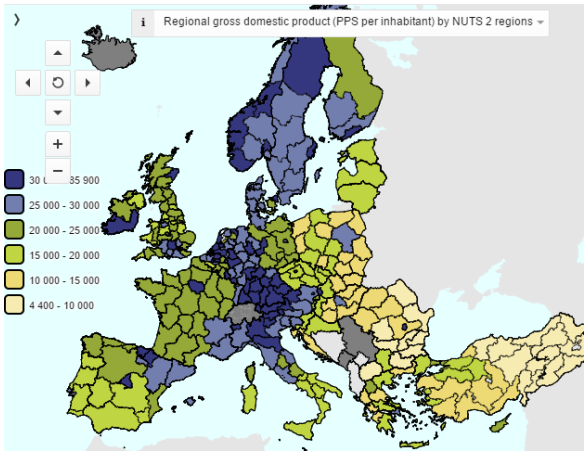

Figure 1 - GDP per region (Eurostat, 2015)

This research aims to find a correlation between entrepreneurial activity and self-employment levels, in the EU-27 countries for which the required data is available. Data from the Global Entrepreneurship

Monitor on entrepreneurship in the different European Member States will be laid out against self-employment (i.e. growth or decline) levels in the same countries. Building (freely) on the theory of Acs, who explained that economies have different stages of development (Acs, 2006, pp. 99-100), a number of economic development clusters will be identified, to see, within all the advanced economies in the EU, whether relatively more advanced economies perform better than relatively less advanced economies. All this should lead to the answer to the research question: "*To what extent are entrepreneurship and job growth correlated in the European Union?*"

2. Theoretical framework

This section is dedicated to explaining the concepts used, and the clues I will be looking for in this thesis. It serves to provide background information about the subject, explaining the relevance of this research. It will also provide a detailed description about the databases from which information is drawn, as well as a brief outline of the statistical analyses conducted.

2.1. Entrepreneurship

Schumpeter (1947) wrote: "practically all the economists of the nineteenth century and many of the twentieth have believed uncritically that all that is needed to explain a given historical development is to indicate conditioning or causal factors. […] This is sufficient in only the rarest of cases"(Schumpeter, 1947, p. 149). Schumpeter differentiates between two types of responses an economy can have to change. Firstly, if an economy reacts to a population growth by "simply adding new brains and hands to the working force in the existing employments", this is called *adaptive response* (Schumpeter, 1947, p. 150). Whenever the economy does something else, that is outside of the existing practices, that is referred to as *creative response* (Schumpeter, 1947, p. 150). Creative response, according to Schumpeter, changes social and economic situations permanently, and without possibility to move to a situation that would have emerged had the creative response not taken place. Following this logic, Schumpeter argues, a study of creative response in business is de facto the same as a study of entrepreneurship, for it is the entrepreneur who sees opportunity and acts accordingly, either by doing new things or doing things that are already being done in a new way through innovation (Schumpeter, 1947, pp. 150-151).

Baumol (1968) extends this vision of the entrepreneur a bit further. He argues that an entrepreneur "must lead, perhaps even inspire; he cannot allow things to get into a rut and for him today's practice is never good enough for tomorrow. In short, he is the Schumpeterian innovator and some more" (Baumol, 1968, p. 65). Both authors agree that entrepreneurship is the driving force of innovation, whether it be in the form of the entrepreneur being the innovator, or the entrepreneur enabling the innovator by allocating the appropriate resources. Baumol therefore argues that "In a growth conscious world I remain convinced that the encouragement of the entrepreneur is the key to the stimulation of growth" (Baumol, 1968, p. 71). Baumol suggests that, even though the reasoning of the entrepreneur may never be caught in a model, one should study the rewards of entrepreneurship. If these rewards are considered to be substantial enough by the (potential) entrepreneur, entrepreneurial activity may be expected. He states that "[..] we can try to learn how one can stimulate the volume and intensity of entrepreneurial activity, thus making the most of what is permitted by current mores and attitudes" (Baumol, 1968, p. 71). By this statement he implies that governments, through policy and regulation, can regulate economic growth by enabling and stimulating entrepreneurial activity through lifting barriers the entrepreneur may encounter, such as tax arrangements and funding for research & development (R&D).

Porter, in his Competitive Advantage of Nations (1990), argues that "companies achieve competitive advantage through acts of innovation. They approach innovation in its broadest sense, including both new technologies and new ways of doing things" (Porter, 1990, p. 74), directly in line with Schumpeter's creative response theory. He explains that innovation is often not revolution, but rather evolution; a continues stream of minor incremental improvements to either products, production methods or marketing.

The concept of innovation has relatively straightforward measurements, such as R&D spending and the amount of patents issued in a certain period of time. Nadiri (1993) provides a summary of studies in the neo-classical tradition established by Solow (1956). His cumulative study of a large number of studies regarding R&D and growth of output concludes there is a "positive and strong relationship between R&D expenditure and growth of output or total factor productivity" (Nadiri, 1993, p. 34). Nadiri acknowledges there is a strong variation in return rates of R&D between studies, but concludes that a 20-30% net rate of return at the firm level and a 10-30% return rate at industry level are reasonable estimates.

Entrepreneurship, on the other hand, does not have as long a tradition as a field of research. Shane & Venkatamaran (2000) describe that "To date, the phenomenon of entrepreneurship has lacked a conceptual framework" (Shane & Venkatamaran, 2000, p. 217). As Shane and Venkatamaran note, entrepreneurship has mostly been defined to the extent of "who the entrepreneur is and what he or she does". For example, the definition of entrepreneurship by Lazear is "[Entrepreneurship] is the process of assembling necessary factors of production consisting of human, physical, and information resources and doing so in an efficient manner"(Lazear, 2005, p. 649). On the other hand, Wennekers & Thurik use a far simpler definition, the number of business owners per labour force (Wennekers & Thurik, 1999, p. 29). Shane & Venkatamaran define entrepreneurship as "the scholarly examination of how, by whom, and with what effects opportunities to create future goods and services are discovered, evaluated, and exploited."(Shane & Venkatamaran, 2000, p. 218).
This lack of coherence in defining the concept entrepreneurship, as well as that of the entrepreneur, is a major problem in comparing the work these scholars have done.
The definition proposed by Shane & Venkatamaran is similar to the definition used by the Global Entrepreneurship Monitor (GEM), who research entrepreneurship as: "a process comprising different phases, from intending to start, to just starting, to running new or established enterprises and even discontinuing a business"(Amorós & Bosma, 2013, p. 19). In their Global Entrepreneurship Monitor Report of 2013, they have created the model found in figure 2 to describe the entrepreneurial process. By doing so, they have also created clear borders of what entrepreneurship entails, where it begins and where it ends.

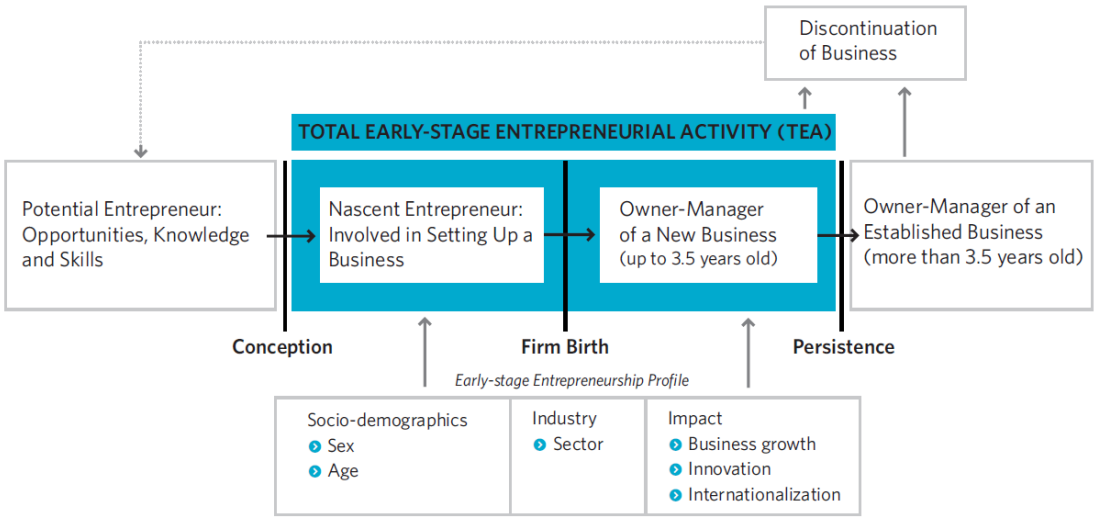

Figure 2 - GEM Entrepreneurship model

As can be seen in figure 2, the model takes into account different factors and prerequisites for entrepreneurship, such as socio-demographic and economic circumstance. It also provides a clear definition of entrepreneurship, or entrepreneurial activity, in the form of Total early-stage Entrepreneurial Activity (TEA). TEA is measured as a percentage of the working population. Entrepreneurship is hereby limited to those who are either in the process of setting up a business, and those who are owner-manager of a business less than 42 months old. This means that those individuals

with clear entrepreneurial intent, but who are not yet in the process of starting a business, as well as those who are owner-manager of a business more than 42 months old, are not yet or no longer seen as entrepreneurs.
The GEM Consortium has been measuring this TEA in an increasing number of countries since 1999. From 10 participating countries 1999, the 2013 report by Amorós and Bosma is an accumulation of data from 70 economies, gathered by approximately 3.800 national experts on entrepreneurship from over 197.000 randomly selected individuals (Amorós & Bosma, 2013, p. 17). This is done in the form of a standardized questionnaire, which is equal, though translated, for the participating individuals. This questionnaire is known as the Adult Population Survey (APS). All this data is then centrally distilled into several key indicators, including, and most importantly, TEA. This vast number of randomly sampled individuals from the separate populations ensures external validity of the GEM statistics. In the GEM report, the APS is complemented by the opinions of selected national experts on the factors that impact entrepreneurship in each country where the survey is conducted. These expert opinions are collectively called the National Expert Survey (NES).

The GEM Entrepreneurship model incorporates entrepreneurial activity up to 42 months, or 3.5 years after the conception of a new business. This is "based on a series of empirical evidence that states that many new ventures fail between their inception and 42 months, so we focus on observing the early stages of entrepreneurial activities" (Amorós & Bosma, 2013, p. 19). Once this 42 month limit is reached, a business becomes an established business. If the entrepreneur decides to either discontinue the business or transfer control of the business and start a new business, he is still seen as an entrepreneur. It is also possible that they take employment with an established company and exploit their (entrepreneurial) talents as employees. That way, they can still seize opportunities and explore (new) markets, albeit at reduced gains, but also reduced exposure to risk (Amorós & Bosma, 2013).

2.2 Self-employment

Where other scholars have opted to research the impact of entrepreneurship on broad variables such as economic growth or unemployment, I have chosen to look for a correlation with self-employment. The reason for this is quite simple. Economic growth, as well as (to a somewhat lesser degree) unemployment are key economic indicators, that are affected by a countless number of variables. Economic growth, usually depicted in the form of gross domestic product (GDP) or GDP per capita, is the total output an economy produces in a year. This is affected by things as simple as the weather and raw materials prices, to complex and abstract things such as consumer confidence, international trade and even currency exchange rates. Most of these concepts are much more influential on GDP based on the premise that they are caused by the population as a whole, and entrepreneurs only make up a small percentage of this population.
The same goes for unemployment levels. These are dependent on factors ranging from economic forecasts, the amount of people entering and leaving the labour market, labour market policy, etc. This means that while both unemployment levels and entrepreneurship levels may vary, they are moving completely separate from one another.

This brings us to self-employment. The one thing most business owners have in common, is that at one point or another, they were entrepreneurs according to the GEM definition. This means, that if a correlation can be found between TEA and self-employment, entrepreneurs at least succeed at creating jobs for themselves. This same concept has also been incorporated in the GEM survey. Early-stage entrepreneurs (those part of TEA), are asked how many employees they have and expect to have in the next five years (figure 3).

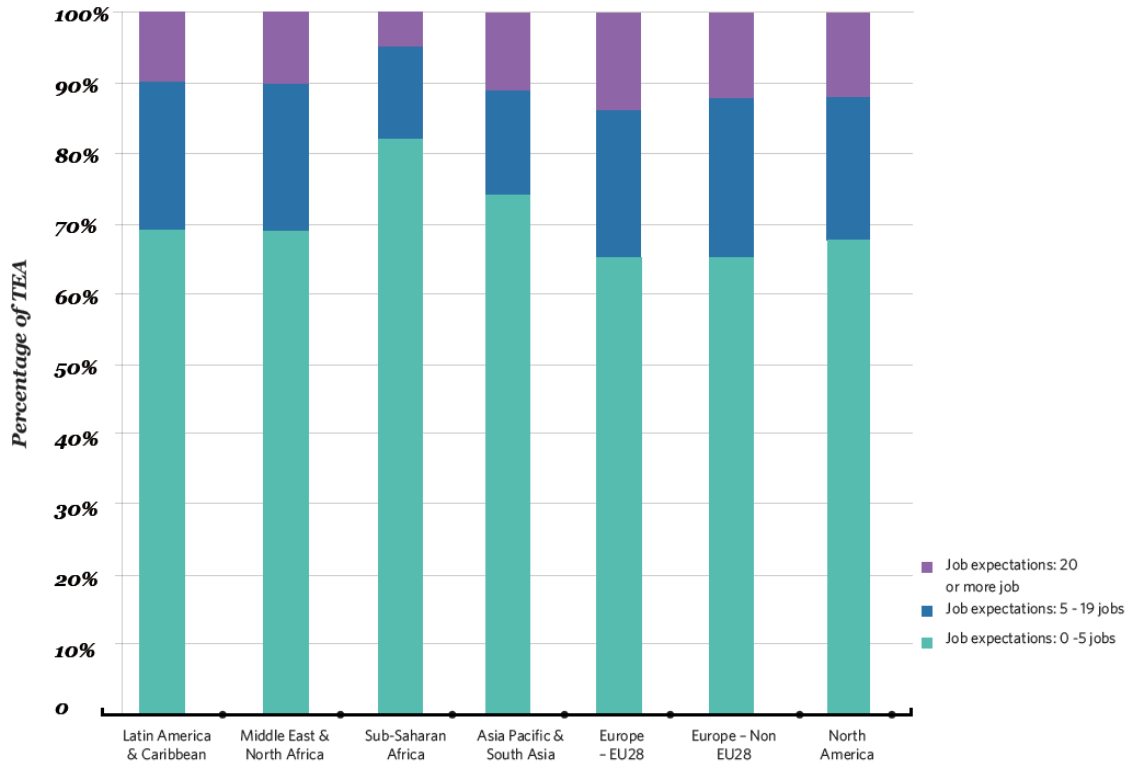

Figure 3 - Job creation expectation by entrepreneurs

This figure shows that approximately 65% of European entrepreneurs expect to create between 0 and 5 jobs, 20% expects to create between 5 and 19 jobs, and 15% expect to generate 20 or more jobs. With these numbers, European entrepreneurs are most optimistic about job creation when compared to other regions, with 35% of European (EU-28) entrepreneurs expecting to create at least 5 jobs (besides the entrepreneur) in the next 5 years from the moment of survey. That being said, this expectation is no guarantee that these jobs are actually created. As explained in section 2.1, a new business is most likely to fail within the first 42 months of conception. These jobs only stand a chance of being created if the entrepreneur is indeed successful.

2.3 Economic development

In recent years, the focus on entrepreneurship through the definitions such as those defined by Shane & Venkatamaran, as well as GEM, using a combination of social sciences and economic theory, has led to a number of publications from authors who came to different conclusions about the influence and necessity of entrepreneurship, not only between authors, but also between different economies. For example, Van Stel, Carree and Thurik conclude from their analysis that for highly developed economies, the impact of TEA is significant. In fact, they claim “the impact of entrepreneurial activity increases with per capita income” (van Stel et al., 2005, pp. 316-317). This notion is supported by Acs (2006), who explains that the three major stages of economic development respond differently to entrepreneurship. The first stage is a focus on the production of agricultural products and small-scale manufacturing. The many different self-employed people in this economy naturally diversify to gather a larger market share. The economy then slowly progresses to the second stage, where “the economy shifts from small-scale production toward manufacturing” (Acs, 2006, p. 99). Large manufacturing companies use their scale advantage to drive other businesses out of the market. The third stage of economic development is the shift away from manufacturing toward a services based economy. (Acs, 2006).

As briefly pointed out in the introduction, whilst recognizing the EU-27 economies can all be considered to be highly advanced and service based on a global scale, there are still major differences

between these countries in how they achieve their economic output. Eurostat keeps detailed statistics of how the different sectors contribute to the economic output of Member States, but also keeps track of the percentage of total jobs that each sector takes account for. Using this statistic, we will be able to differentiate between relatively "more advanced" economies (low employment levels in agriculture and industry, high employment in services), and relatively "less developed" economies, where employment levels in industry and agriculture are higher.

3. Methodology

This section is dedicated to describing the process of the research conducted. It will explain how data was gathered, and how this data was modelled in order to obtain answers to the research questions.

3.1 Hypotheses

Based on the theoretical framework outlined in section 2, a number of hypotheses that can be empirically tested is formulated.

> **Hypothesis one**: employment in the European Member States is generated predominantly and increasingly in the services-sector.
> **Hypothesis two**: a statistically significant correlation between Total Entrepreneurial Activity and self-employment is more likely to be found in Member States that have a relatively high employment level in the services-sector.
> **Hypothesis three**: a Member State with a relatively high employment level in the services sector is more likely to also have a relatively high self-employment rate.

3.2 Research questions

"*To what extent are entrepreneurship and job growth correlated in the European Union?*" That is the question this research aims to answer. To answer this main question, sub-questions regarding the individual Member States cannot be avoided. For each of the Member States for which the required data is available, the following question will be asked: "*Is entrepreneurship in (Member State) correlated to job growth?*" These are all observational or relational questions, looking at the relationship between two variables. In order to confirm the first hypothesis, the sub-question "*Does employment in the European Member States come increasingly from the services-sector?*" will need to be answered positively.

3.3 Data collection

The research draws data from two sources: Data on entrepreneurship (TEA) from the Global Entrepreneurship Monitor (GEM), and data on self-employment and distribution of employment per sector from Eurostat. Both data sources are freely accessible.

The limiting factor in data gathering for this result is clearly the data coming from GEM. Since the GEM Consortium only began gathering data in a limited amount of countries in 1999, TEA can only be retrieved for 15 of the EU-27 Member States for the period 2001-2012. These countries are:

- Belgium
- Denmark
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy

- Latvia
- Netherlands
- Slovenia
- Spain
- Sweden
- United Kingdom

The distribution of these Member States is fairly broad, with five of the six founding members of the European Union (Luxembourg first participated in with the GEM study in 2012). Then three countries from the First Enlargement (1973), Denmark, Ireland, and the United Kingdom. Followed by Greece (data from 2003 onwards) and Spain, which entered the EU in 1981 and 1986 respectively. Next are Sweden and Finland, which joined in 1995. Finally, Hungary, Latvia and Slovenia, all three joined the EU in 2004. This makes for a representative sample of European Member States.
Data on self-employment and distribution of employment per sector, both as a percentage of the working population, is freely available from the Eurostat databases, for all sample cases and for the corresponding period 2001-2012. The data from Eurostat is gathered by the national statistical institutes (NSIs) and compiled into statistics for national and European purposes (European Commission Website). In total, this gives us three longitudinal sets of data.

3.4 Research design

The three sets of data described in the previous section are all percentages of the working population, which will be plotted for each individual country. A visual analysis should be conclusive to confirm or reject the first hypothesis. Through another series of visual analyses, as well as an statistical correlation analysis between TEA and self-employment using SPSS for each of the cases, I will confirm or reject the other two hypotheses. SPSS is used to draw scatter plots, which will also be treated in the visual analysis. Besides a visual analysis on the scatter plots, a Pearson's r correlation is used to find statistical significance. The closer Pearson's r is to 1, the stronger the correlation is. A negative Pearson value indicates a negative correlation, so when one of the two values goes up, the other goes down. A positive value indicates a positive relationship, where when one value goes up, the other one goes up as well. For each case, SPSS also puts out a Sig (2-tailed) value. This value shows if the correlation found is statistically significant, and if so, on which level. Correlation is found to be significant at the .05 (5%) confidence interval level. (De Veaux, Velleman, & Bock, 2008, p. 508).

As pointed out in section 2.1, new businesses are most likely to fail in the first 42 months after their conception. Since TEA has a 42 month "limit" on entrepreneurship, a positive correlation between self-employment and TEA indicates that new businesses are surviving this 42 month period. Whether this means new entrepreneurs are starting out, or existing entrepreneurs are starting a new business whilst stepping down from the existing business, does not matter for the creation of durable jobs. As far as the visual analysis goes, one would expect self-employment figures to mostly be higher than TEA levels. The working population that is involved in entrepreneurship, should theoretically also show up in the Eurostat data as being self-employed. A margin is of course required for young entrepreneurs, who are starting a business beside their job with an employer. In any case, TEA levels are expected not to exceed self-employment levels for extended periods of time.

4. Data analysis

In this section the data gathered will be analysed in accordance with the methodology explained in section 3. The answers to the research questions will be found here, and the hypotheses posed will be either confirmed or rejected.

4.1 Employment distribution per sector

The first hypothesis hangs on the confirmation of the theory of Acs (2006) as described above. According to the Global Competitiveness Index Report 2014-2015, issued by the World Economic Forum, all the economies of the case countries are indeed either in the final stage of economic development, or in transition to that stage (Hungary), see figure 4 (World Economic Forum, 2014).

Stage 1: Factor-driven (37 economies)	Transition from stage 1 to stage 2 (16 economies)	Stage 2: Efficiency-driven (30 economies)	Transition from stage 2 to stage 3 (24 economies)	Stage 3: Innovation-driven (37 economies)
Bangladesh	Algeria	Albania	Argentina	Australia
Burkina Faso	Angola	Armenia	Bahrain	Austria
Burundi	Azerbaijan	Bulgaria	Barbados	Belgium
Cambodia	Bhutan	Cape Verde	Brazil	Canada
Cameroon	Bolivia	China	Chile	Cyprus
Chad	Botswana	Colombia	Costa Rica	Czech Republic
Côte d'Ivoire	Gabon	Dominican Republic	Croatia	Denmark
Ethiopia	Honduras	Egypt	Hungary	Estonia
Gambia, The	Iran, Islamic Rep.	El Salvador	Kazakhstan	Finland
Ghana	Kuwait	Georgia	Latvia	France
Guinea	Libya	Guatemala	Lebanon	Germany
Haiti	Moldova	Guyana	Lithuania	Greece
India	Mongolia	Indonesia	Malaysia	Hong Kong SAR
Kenya	Philippines	Jamaica	Mauritius	Iceland
Kyrgyz Republic	Saudi Arabia	Jordan	Mexico	Ireland
Lao PDR	Venezuela	Macedonia, FYR	Oman	Israel
Lesotho		Montenegro	Panama	Italy
Madagascar		Morocco	Poland	Japan
Malawi		Namibia	Russian Federation	Korea, Rep.
Mali		Paraguay	Seychelles	Luxembourg
Mauritania		Peru	Suriname	Malta
Mozambique		Romania	Turkey	Netherlands
Myanmar		Serbia	United Arab Emirates	New Zealand
Nepal		South Africa	Uruguay	Norway
Nicaragua		Sri Lanka		Portugal
Nigeria		Swaziland		Puerto Rico
Pakistan		Thailand		Qatar
Rwanda		Timor-Leste		Singapore
Senegal		Tunisia		Slovak Republic
Sierra Leone		Ukraine		Slovenia
Tajikistan				Spain
Tanzania				Sweden
Uganda				Switzerland
Vietnam				Taiwan, China
Yemen				Trinidad and Tobago
Zambia				United Kingdom
Zimbabwe				United States

This means that we can realistically expect employment levels in the agricultural and industrial sectors to be declining, and employment levels in the services sector to be rising for all cases. Figures 5 through 7 confirm this expectation. Greece and Hungary are showing a slight upward curve for employment in agriculture the last couple of years, but the trend line is still a downward slope. The services sector is clearly dominant in relative employment, with, in 2012, values above 82% employment of the working population in this sector for both the United Kingdom and the Netherlands on the top end, down to almost 62% of the working population for the relatively least "service-based" economy in 2012, Slovenia. By far the most jobs in the European member states in this study are in provided by the services sector.

This means that the first hypothesis, "*employment in the European Member States is generated predominantly and increasingly in the services-sector*." can be confirmed solidly.

What we can also conclude from figure 7, is that, even though the economies may indeed all be qualified as service-based, there is a fairly large spread between the different economies, of 20 percentage-points between the United Kingdom at 82% and Slovenia at 62%.

4.2 Service-based economies

The second hypothesis, "*a correlation between TEA and self-employment is more likely to be found in Member States that have relatively high employment level in the services-sector*" suggests that a correlation between entrepreneurship and self-employment is most likely to be found in the top end of the graph shown in figure 7. I have chosen a cut-off point of 75% or higher employment in percentage of total employment to define the group of countries that have the best chance of showing a significant. This comes down to the following countries:

- United Kingdom
- The Netherlands
- Denmark
- Belgium
- France
- Ireland
- Sweden
- Spain

Similarly, the countries where the correlation is least likely to be found, are those which generate relatively the least amount of jobs in the services sector. The three countries with relatively the lowest amount of jobs in the services sector, Slovenia, Hungary and Latvia, are also the countries with relatively high employment in the agricultural and industrial sectors. This confirms their status as relatively the least advanced economies.
Odd one out is Greece, with by far relatively most jobs in the agricultural sector, then (in 2012 for the first time) relatively the least jobs in industry and roughly in the middle with the relative amount of jobs generated in the services industry.

Figure 4 - Countries/economies at each stage of economic development (World Economic Forum, 2014)

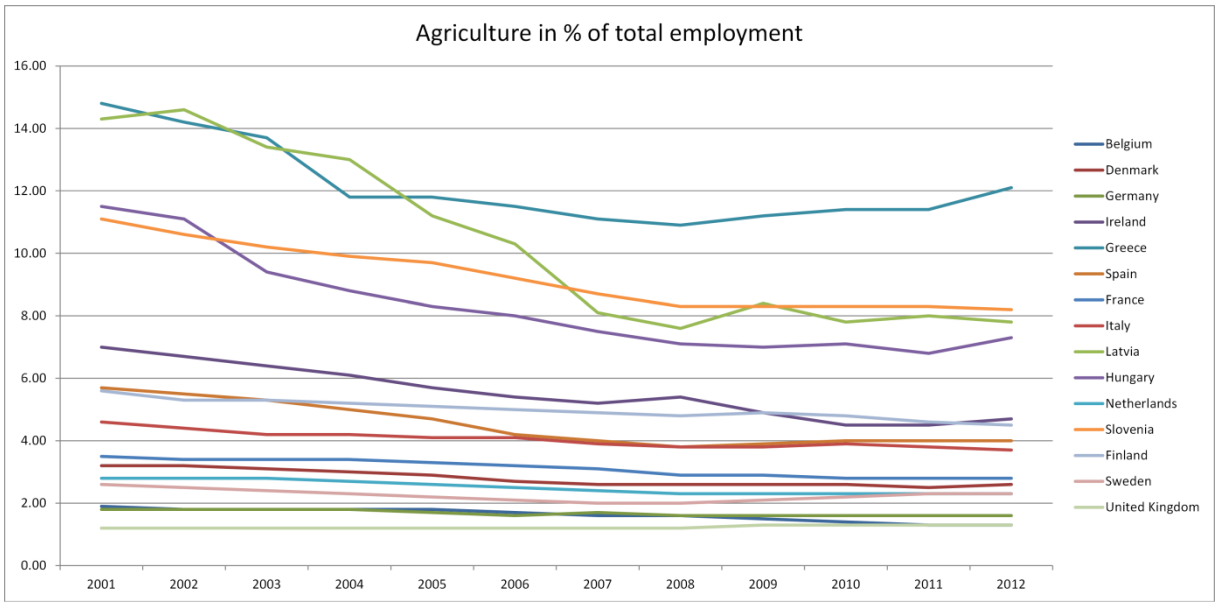

Figure 5 - Agriculture in % of total employment (Eurostat, 2015)

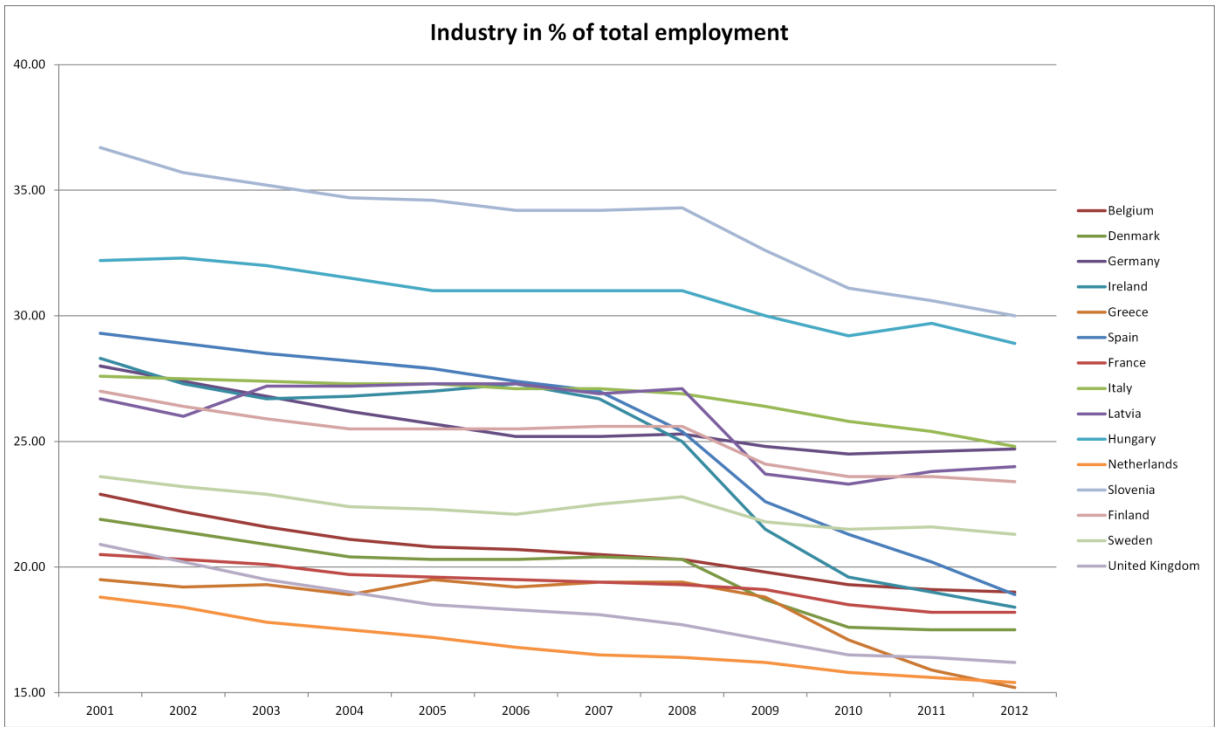

Figure 6 - Industry in % of total employment (Eurostat, 2015)

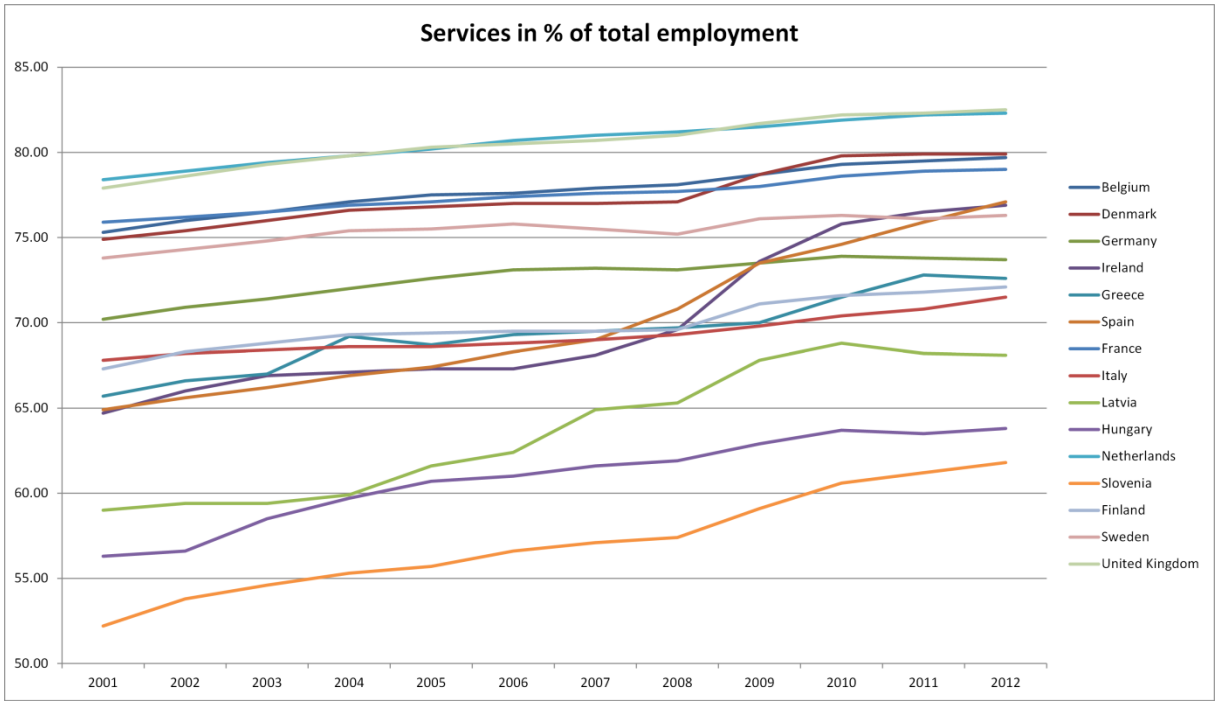

Figure 7 - Services in % of total employment (Eurostat, 2015)

4.3 Self-employment versus entrepreneurship

In this section I will give a visual analysis of the graphs describing self-employment as measured by Eurostat versus entrepreneurship in TEA for each individual case. Also, for each case, an SPSS w-tailed Pearson's r analysis will be conducted. The results will be explained briefly, suggestions for further research given, and the second hypothesis will be confirmed / rejected. The graphs used in this section can be found in Appendix A. To place the results in perspective, I have first made a graph

showing the differences in self-employment levels in percentage of total employment in the different member states, see figure 8.

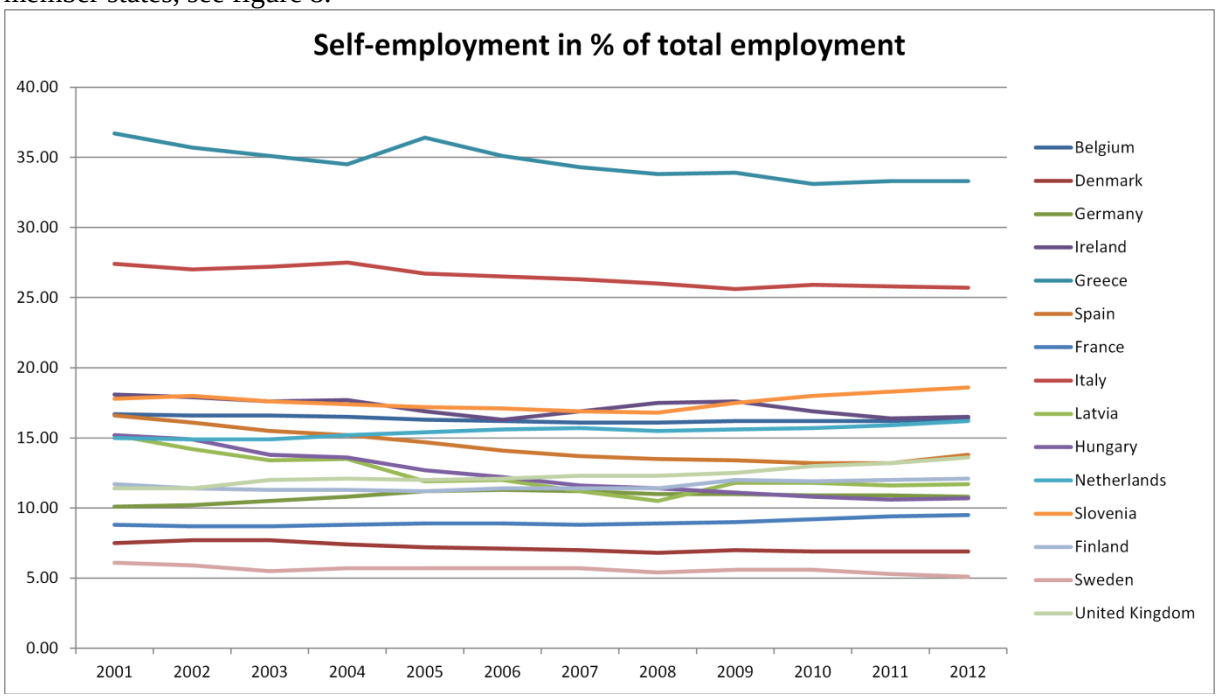

Figure 8 - Self-employment in % of total employment (Eurostat, 2015)

What can be seen is that self-employment levels for most cases are fairly close together, ranging roughly between 10% and 20% for most. Outliers on the top end are Italy and Greece, with values over 25% and even over 33% respectively. On the lower end there are two less significant outliers, with Sweden having just 5% of its working population self-employed, and Denmark close to 7%.
Figure 9, shown below, shows a TEA graph for the case countries. What is immediately apparent, especially compared to the graphs shown above, is the volatility of the lines, with big differences between the years for almost all cases.

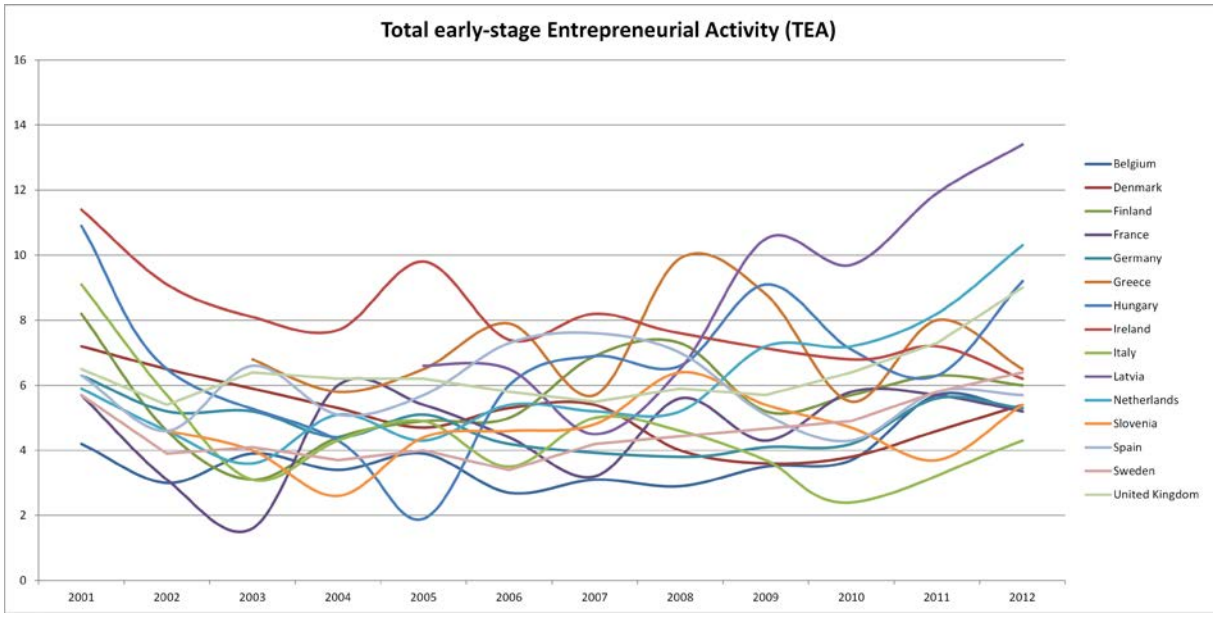

Figure 9 - TEA as % of working population

The next sections will focus on a case-by-case visual analysis of generated graphs showing entrepreneurship in TEA and self-employment, both as a percentage of the working population. The

graphs used can be found in Appendix A, in alphabetical order. After the visual analysis, the correlation is checked using the Pearson r correlation analysis in SPSS. This SPSS output can be found in Appendix B, also in alphabetical order. The cases will also be treated in alphabetical order. Additional graphs may be used to clarify results. For every case, the question *"Is entrepreneurship in (Member State) correlated to job growth?"* will be answered here.

4.3.1 Belgium

The TEA versus self-employment graph for Belgium (Appendix A: graph 1) shows no apparent relationship between TEA and self-employment. The trend line for self-employment is slightly downward, whilst the trend line for TEA is slightly upward. Self-employment in Belgium is very steady, constantly hovering around the 16,5% mark. The scatter plot (Appendix B: SPSS output 1) seems to show a randomly distributed spread, from which no clear correlation can be distinguished. The Pearson's r correlation test confirms this, with a low value of just 0,145. In short, **no correlation** is found for Belgium.

4.3.2 Denmark

The TEA versus self-employment graph for Denmark (Appendix A: graph 2) shows a downward trend for both TEA and self-employment. The difference in TEA is greater than the difference in self-employment, however, both lines show a clear downward trend in the years 2001 to 2009, then levelling off and moving upward again in the period 2010 to 2012. When the TEA line is plotted against a secondary axis, the relationship between TEA and self-employment becomes more apparent (figure 10). This is confirmed by the SPSS scatter plot (Appendix B: SPSS output 2), which shows the data is closely grouped. The Pearson's r correlation value is high at 0,756, with a significant result at the 0.01 level. In Denmark, **entrepreneurship is correlated to job growth**.

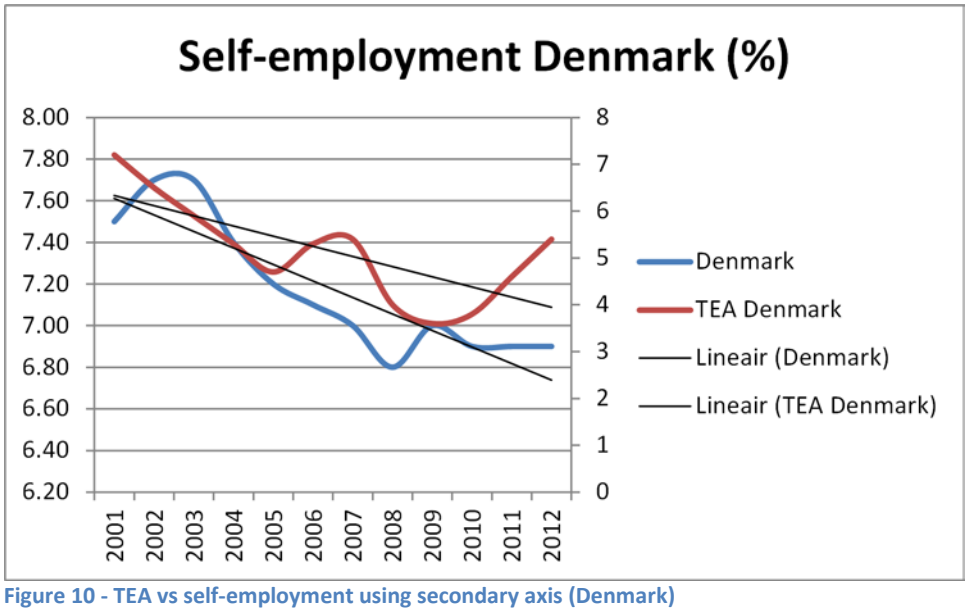

Figure 10 - TEA vs self-employment using secondary axis (Denmark)

4.3.3 Finland

The TEA versus self-employment graph for Finland (Appendix A: graph 3) seems to show no relationship at first, even though both trend lines are slightly upward. The SPSS scatter plot and low Pearson's correlation (0,342) seem to confirm this lack of relationship (Appendix B: SPSS output 3). However, when charting the TEA line on a secondary axis, it seems that TEA in Finland might have a delayed effect on self-employment (see figure 11). This might suggest that in Finland entrepreneurs are cautious. They might be starting or trying to start a business besides their daily job, and build for a year or two, before becoming a full-time self-employed person. However, this is merely a suggestion,

and further research is required to make any claims about this. For now, we cannot exclude the possibility of a correlation between TEA and self-employment in Finland, nor can we confirm it.

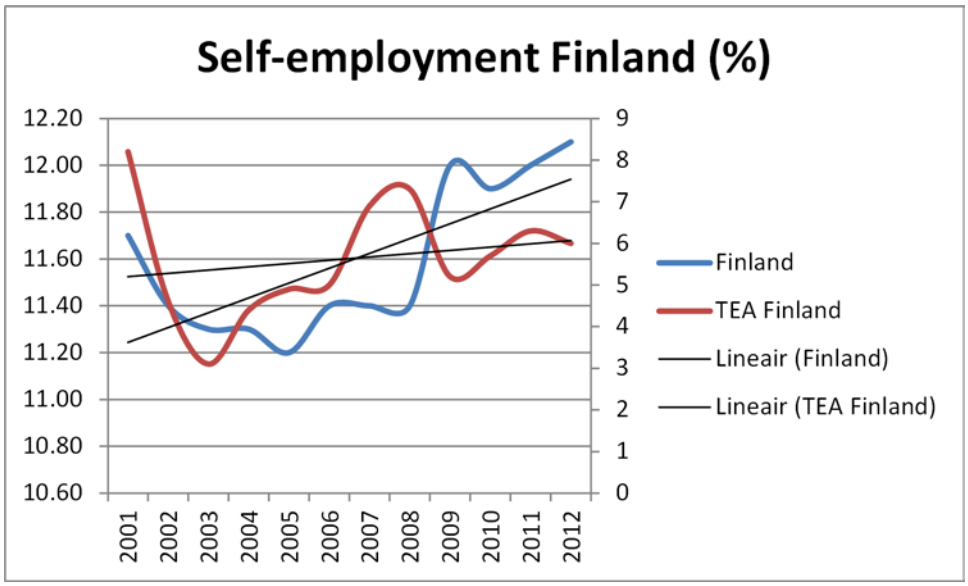

Figure 11 - TEA vs self-employment using secondary axis (Finland)

4.3.4 France

The TEA versus self-employment graph for France (Appendix A: graph 4) shows a wildly fluctuating line for TEA, with a slightly upward trend in the long term, and a steady, slowly declining trend for self-employment levels. **No apparent correlation** can be found in either the visual analysis of this graph, the scatter plot, or the Pearson's r correlation test (Appendix B: SPSS output 4).

4.3.5 Germany

The TEA versus self-employment graph for Germany shows something interesting (Appendix A: graph 5). When TEA goes up, self-employment goes down, and vice-versa. The scatter plot and Pearson's r correlation of -0,652 confirm this negative correlation to exist and be significant at the 5% confidence interval level (Appendix B: SPSS output 5). The **negative correlation** can be seen even better when TEA is charted on a secondary axis (see figure 12). This counter-intuitive result is difficult to explain. One possibility is that long-time self-employed people who go bankrupt take on a job with an employer, and at the same time try and start up a new business on the side. That way they are both no longer (mainly) self-employed, as well as included in TEA. This seems, however, to be a long shot. Further research needs to be conducted before any real arguments can be made as to why this phenomenon occurs.

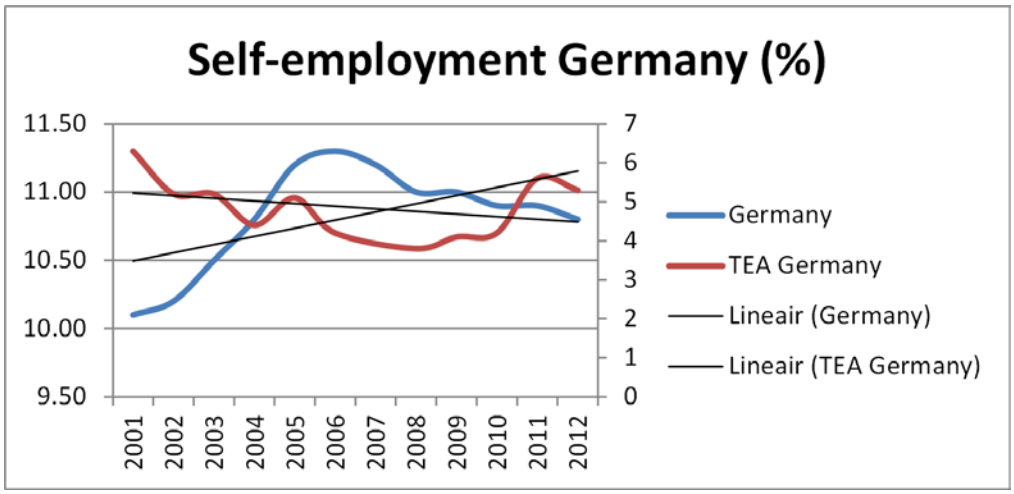

Figure 12 - TEA vs self-employment using secondary axis (Germany)

4.3.6 Greece

The first thing that is immediately apparent when looking at the self-employment versus TEA graph for Greece (Appendix A: graph 6) is that self-employment in Greece is incredibly high. Consistently over 33% of the Greek working population is self-employed. In 2001, the first data point in this set, self-employment in Greece even was 36,7%. The TEA line shows a similar movement to that of France, with strong fluctuations between the years. As far as a correlation goes, none is to be found in the visual analysis. This is confirmed by the SPSS output (Appendix B: SPSS output 6), with a Pearson's r value of just -0,116 and a randomly distributed scatter plot. **No correlation** exists between TEA and self-employment in the case of Greece.

4.3.7 Hungary

The TEA versus self-employment graph for Hungary (Appendix A: graph 7) shows a steady decline in self-employment in Hungary for the period 2001 to 2012. Where in 2001 over 15% of the Hungarian population was self-employed, in 2012 this was down to 10,7%. This is the steepest drop in any of the countries studied. At the same time, TEA was fairly strong at almost 11% in 2001, only to come down to just 2% in 2005. By 2012, this number was up again to over 9%. In none of the analyses for Hungary is there a correlation to be found. As Hungary is the only country classified by the World Economic Forum as in transition from a stage 2 to a stage 3 economy, the theory suggests that the correlation was least likely to be found in Hungary. The **lack of correlation** therefore comes as no surprise.

4.3.8 Ireland

The TEA versus self-employment graph for Ireland (Appendix A: graph 8) shows two almost parallel lines. This is even better visible when charting TEA against a secondary axis (figure 13 below). The trend lines are then almost identical. This visual correlation is confirmed by the scatter plot and Pearson's correlation (Appendix B: SPSS output 8), with a closely grouped scatter plot, and a Pearson's r value of 0,63. Significance is found at the 5% confidence interval level. This means **there is a correlation** strong enough to be considered significant.

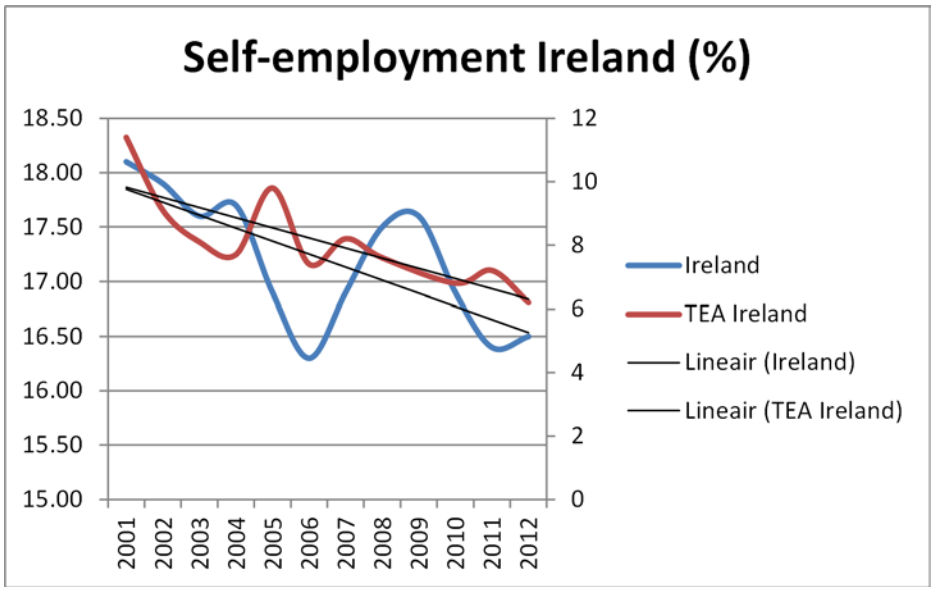

Figure 13 - TEA vs self-employment using secondary axis (Ireland)

4.3.9 Italy

The TEA versus self-employment graph for Italy (Appendix A: graph 9) shows a result quite similar to that of Greece. There is a consistently high level of self-employment, never dipping below 25%, although steadily decreasing. TEA levels are consistently a lot lower, hovering around the 5% level with a slightly downward trend. This big high level of self-employment and low level of entrepreneurial activity can be contributed to the high level of family businesses in Italy. Over 85% of the total number of businesses are family businesses (Italian Association of Family Businesses, 2014). When charting TEA on a secondary axis, the lack of correlation becomes more obvious, see figure 14. Even though both trend lines are going down, the graphs show a very clearly different development. The SPSS output shows a low Pearson's r value of 0,465 (Appendix B: SPSS output 9). In short, for Italy, **no correlation is found**.

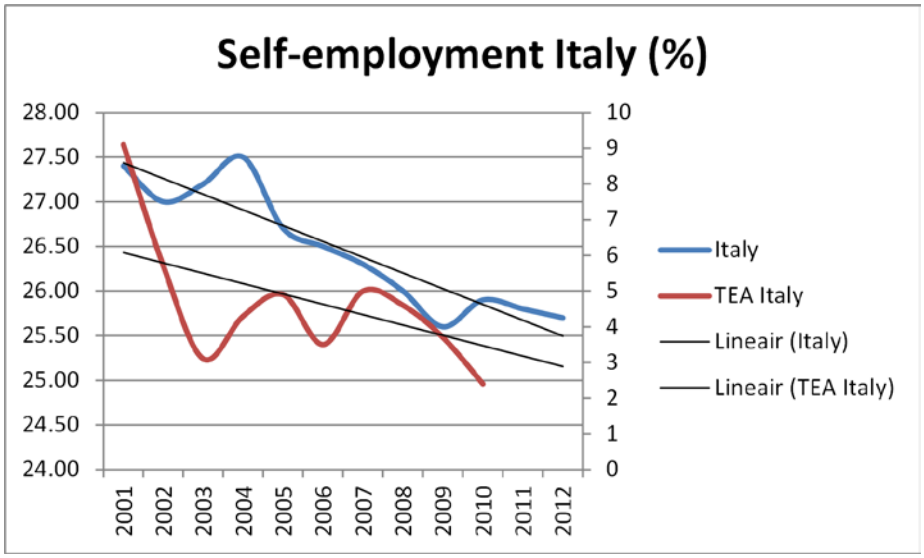

Figure 14 - TEA vs self-employment using secondary axis (Italy)

4.3.10 Latvia

The TEA versus self-employment graph for Latvia (Appendix A: graph 10) show no apparent correlation. The scatter plot and Pearson's r value of 0,336 quickly confirm this suspicion (Appendix B: SPSS output 10). Even though TEA data for Latvia is only available from 2005 onwards, this

would almost certainly not have made a difference to the conclusion that **no correlation** can be found for Latvia.

4.3.11 The Netherlands

The TEA versus self-employment graph for the Netherlands (appendix A: graph 11) shows two similar lines for TEA and self-employment. The Netherlands is one of the few countries in this research where the self-employment trend line is upward. The scatter plot shows a nicely grouped line, which suggests a strong correlation. This is confirmed by the high Pearson's r value of 0,808; giving a significant correlation at the 0.01 or 1% confidence interval (Appendix B: SPSS output 11). Charting TEA against a secondary axis gives a clear illustration of how closely TEA and self-employment **are correlated** in the Netherlands, see figure 15.

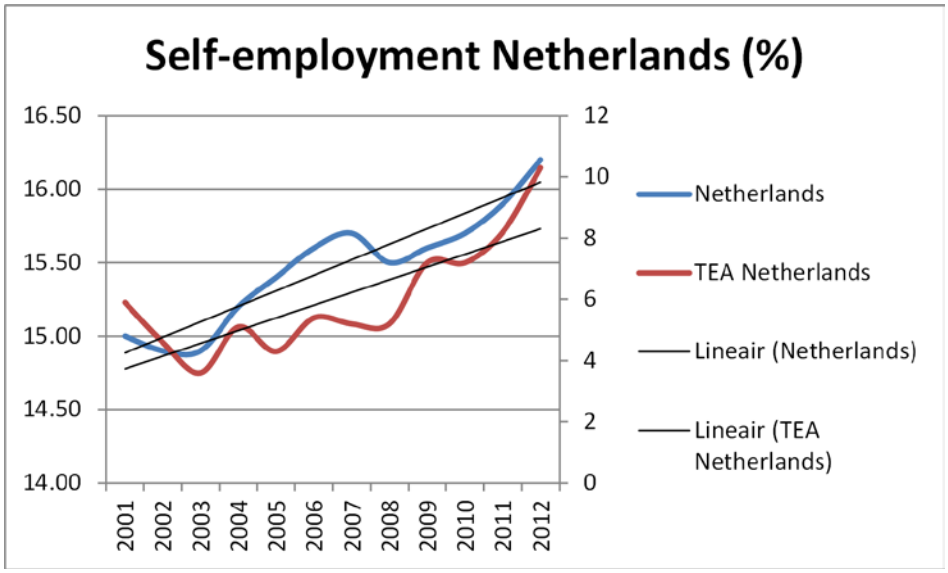

Figure 15- TEA vs self-employment using secondary axis (Netherlands)

4.3.12 Slovenia

The TEA vs self-employment graph for Slovenia (Appendix A: graph 12) shows a very steady trend for self-employment, and in the long term also a fairly steady trend for TEA. TEA levels are quite a bit lower, on average around the 5% level, whereas self-employment is close to 18% of the working population. When charting TEA on the secondary axis for a closer look (see figure 16 below), it becomes quickly apparent that there is **no correlation** to speak of between TEA and self-employment for Slovenia. This is confirmed by the randomly distributed scatter plot and the low Pearson's r correlation of just -0,168 (Appendix B: SPSS output 12).

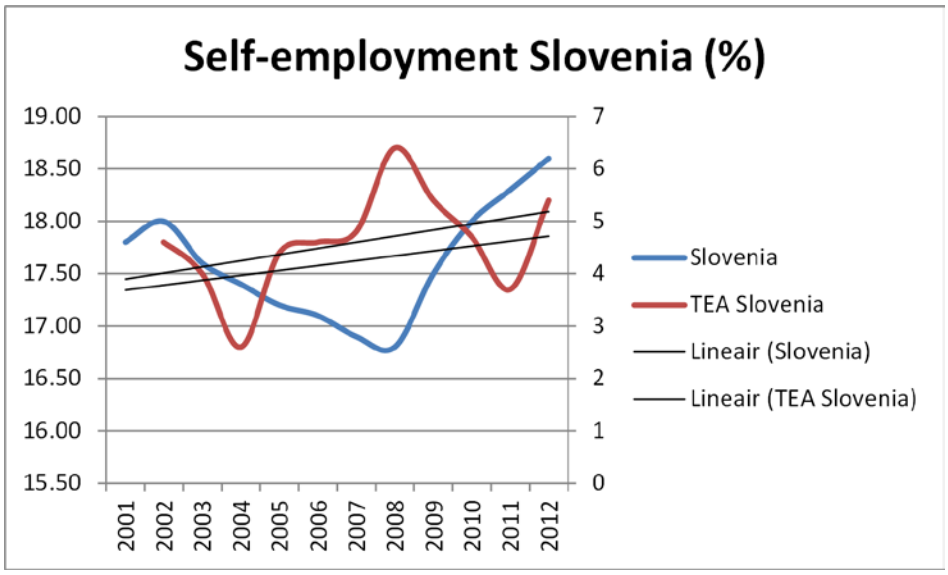

Figure 16 - TEA vs self-employment using secondary axis (Slovenia)

4.3.13 Spain

The TEA versus self-employment graph for Spain (Appendix A: graph 13) shows no sign of correlation between these two variables. The randomly distributed scatter plot and the very low Pearson's r value of just -0,066 (Appendix B: SPSS output 13) confirm that there is **no correlation** in the case of Spain.

4.3.14 Sweden

The TEA versus self-employment graph for Sweden (Appendix A: graph 14) suggests that there is a negative correlation between TEA and self-employment in Sweden. The scatter plot confirms this, with a nicely grouped scatter with a single outlier (Appendix B: SPSS output 14). When removing this outlier from the data set (the TEA value of 5,7% in 2001), the Pearson's r correlation goes up from a non-significant -0,452 to a very strong correlation of -0,889. This is a significant correlation at the 0,01 or 1% confidence interval level (see figure 17). Of course, simply removing a valid data point from the set is not a way of achieving statistically relevant proof. It does show, however, that a **(negative) correlation in the real world is not to be excluded** in the case of Sweden.

Correlations

		TEA_SW	Self_employment_SW
TEA_SW	Pearson Correlation	1	-,889**
	Sig. (2-tailed)		,001
	N	9	9
Self_employment_SW	Pearson Correlation	-,889**	1
	Sig. (2-tailed)	,001	
	N	9	12

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

Figure 17 - Correlation after removing outlier (Sweden)

4.3.15 United Kingdom

The TEA vs self-employment graph for the United Kingdom shows likeness to that of The Netherlands, with both TEA and self-employment steadily rising. The scatter plot shows a fairly tightly distributed scatter, which also indicates correlation. The Pearson's r value of 0,708 confirms

this to be a statistically significant outcome at the 1% confidence interval level. When the TEA graph is charted on the secondary axis, the **correlation found** becomes more visual, see figure 18.

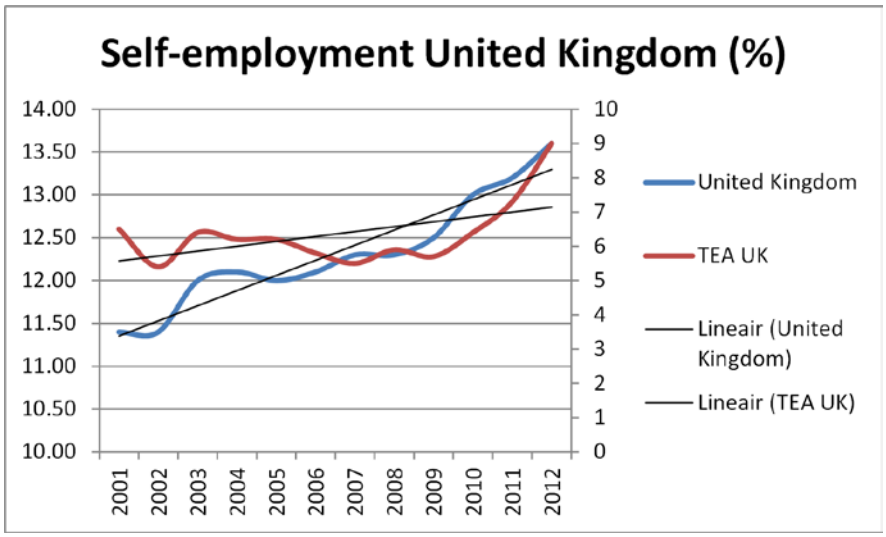

Figure 18 - TEA vs self-employment using secondary axis (United Kingdom)

4.4 Self-employment in the services-sector

The third hypothesis, "*a Member State with a relatively high employment level in the services sector is more likely to also have a high self-employment rate*" cannot be confirmed. In fact, the three countries with the lowest self-employment levels, Sweden, Denmark and France, are among those that have the highest relative employment levels in the services sector. The countries with the highest self-employment levels, Greece and Italy, rank average when it comes to relative employment in the services sector. This means that the third hypothesis can not only not be confirmed, it needs to be rejected.

5. Conclusions

In this section I will briefly come back to the hypotheses and answer the main research question. Some implications for policy will be given, as well as suggestions for further research.

5.1 Hypotheses

Of the three hypotheses, two are confirmed and one is rejected. Confirming the first hypothesis, "*employment in the European Member States is generated predominantly and increasingly in the services-sector*" shows that employment in the economies of the European Member States does in fact mainly come from the services-sector.

For the second hypothesis, "*a correlation between TEA and self-employment is more likely to be found in Member States that have the relatively highest employment level in the services-sector*" I established that the following countries were most likely to show a correlation between entrepreneurship and self-employment, i.e. those with the highest levels of relative employment in the services sector:

- United Kingdom
- The Netherlands
- Denmark
- Belgium
- France
- Ireland

- Sweden
- Spain

Of these 8 countries, 4 show an immediate and clear correlation, the United Kingdom, the Netherlands, Denmark and Ireland. The "top 3" service-based economies in this study all show a strong positive correlation between entrepreneurship and self-employment. Since the four countries that showed a (statistically significant) correlation between TEA and self-employment were all included in this list, the second hypothesis can be confirmed.

The rejection of the third hypothesis, "*a Member State with a relatively high employment level in the services sector is more likely to also have a relatively level of self-employment*", seems to contradict Acs (2006) in the notion that economies that are in the final stage of economic development have higher levels of self-employment. As economies become more service-based, opportunities for entrepreneurship become greater (Acs, 2006, p. 100). Further research needs to be conducted to determine whether this is in fact something that is happening, and if the current outcomes are the result of necessity-entrepreneurship.

5.2 Main research question

The answer to the main research question, "*To what extent are entrepreneurship and job growth correlated in the EU?*" is two-fold. It appears in that those economies that relatively generate the most employment in the services sector, entrepreneurship leads to greater self-employment. Taken into account the optimism of European entrepreneurs when it comes to job creation, entrepreneurship in these economies should directly contribute to the generation of new jobs. On the other hand, for most cases studied, no correlation between entrepreneurship and self-employment was found. This means that either entrepreneurs go bankrupt and try again, or they have a business beside their job with an employer. The premise that the entrepreneur has a job with an employer suggests that there is then no financial room for other employees. Finally, there are the two cases with a negative correlation, Sweden and Germany. Sweden shows a negative correlation that can be seen in the excel graph and scatter plot, but because of the one outlier not in statistical significance. Germany too shows a negative correlation, that shows in both the visual representations as well as the statistical tests. This result is quite counter-intuitive. One would expect, that if a correlation is present, this relationship to be positive. A higher level of entrepreneurship should not lead to a lower number of self-employed people. Whether they are starting a new business whilst also taking a job with an employer, or whether they are so revolutionary in the creation of their new business that they drive a number of existing companies out of business, the negative correlation suggests a destruction of jobs, rather than the creation thereof, if anything.

Why then, this counter intuitive phenomenon occurs in not just one, but two cases is not clear, and further research should to be conducted to be able to shed some light on this matter.

5.3 Policy implications

The results of this research show that there are in fact distinct differences between the European economies. This is true for the stages of economic development, and consequently also on the make-up of GDP. The results show that for the most service-based economies, entrepreneurship is likely to create new jobs. A logical policy implication would for those countries mean the removal of barriers for entrepreneurs and increasing access to finance could lead to an increase in the amount of jobs generated by entrepreneurs. For other economies, the results suggest that stimulating entrepreneurship might not have such a direct positive effect. This does not necessarily mean that a negative result is the consequence, as only for Germany a significant negative correlation was found. Either way, the diverse results suggest that policy at the European level is only recommended if national and perhaps even regional differences are taken into account. A policy that is aimed at the EU as a whole, rather than its Member States, is not very likely to be successful.

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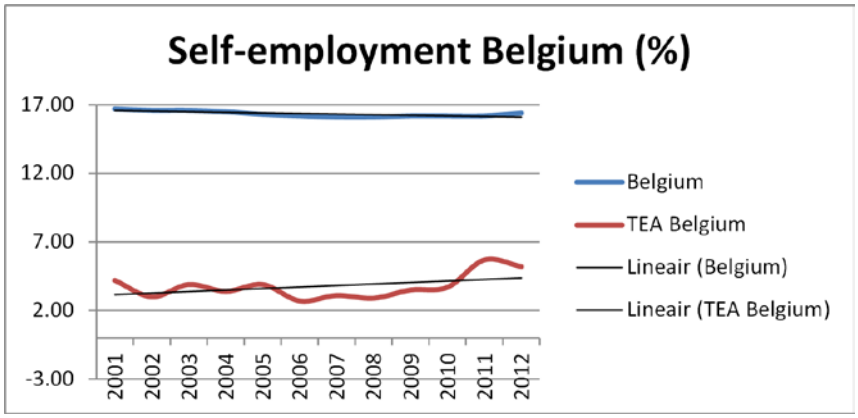
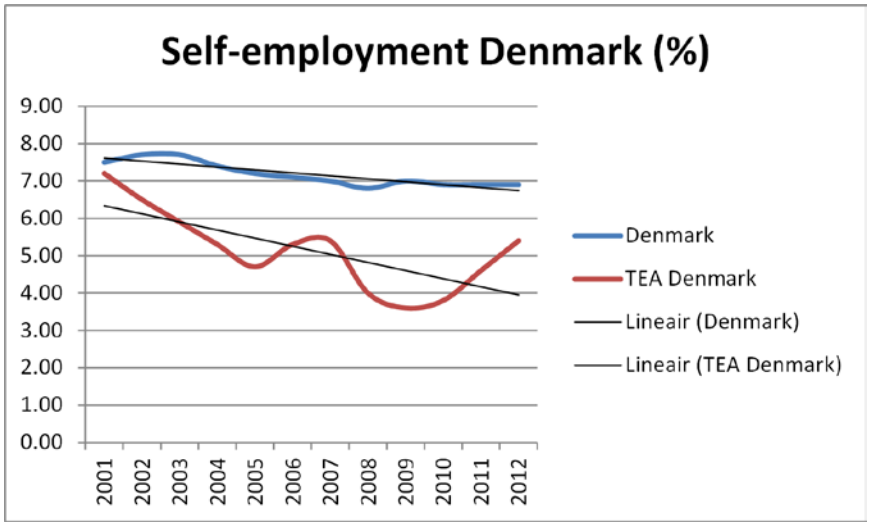
Appendices

Appendix A: Graphs for visual analysis

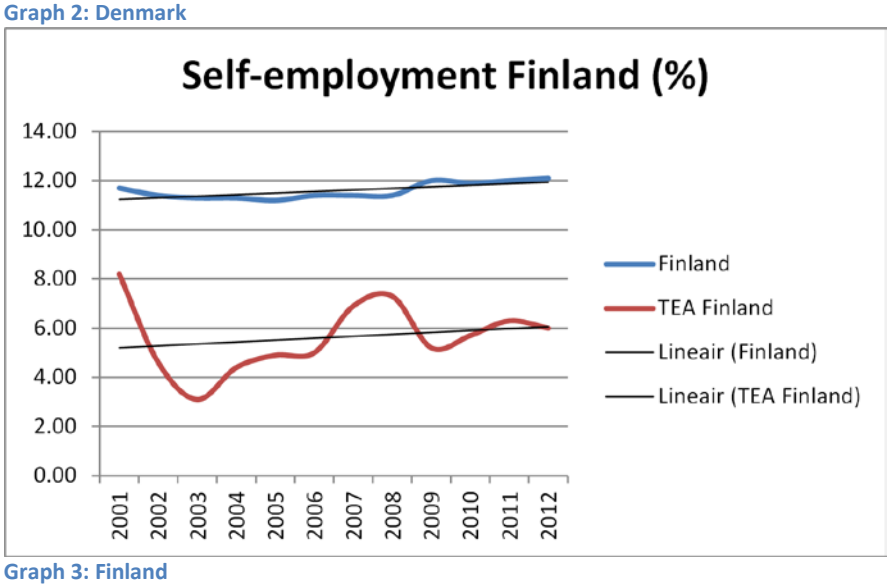
Here you will find the 15 excel-generated graphs on TEA vs self-employment. The blue lines indicate elf-employment levels, the red lines indicate TEA levels. The trend lines for all data are included for better visual analysis.



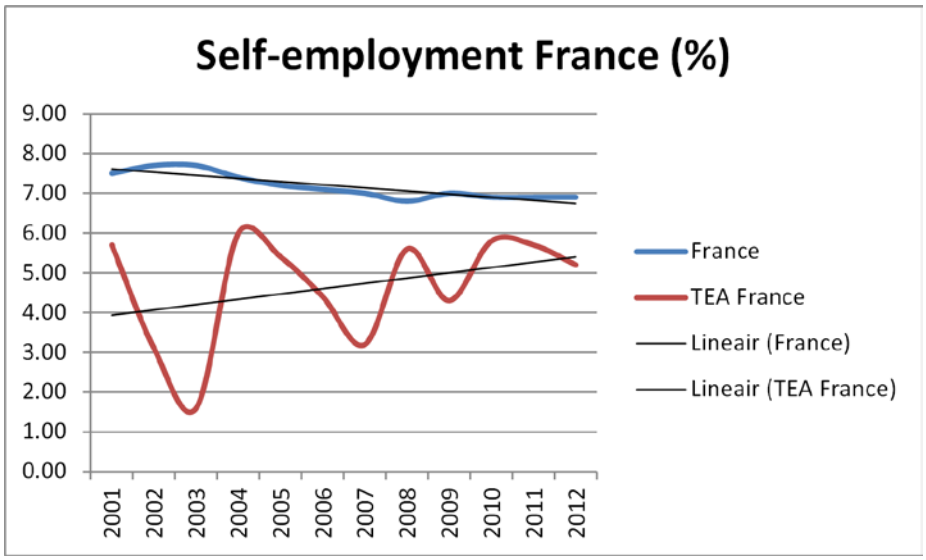
Graph 1: Belgium



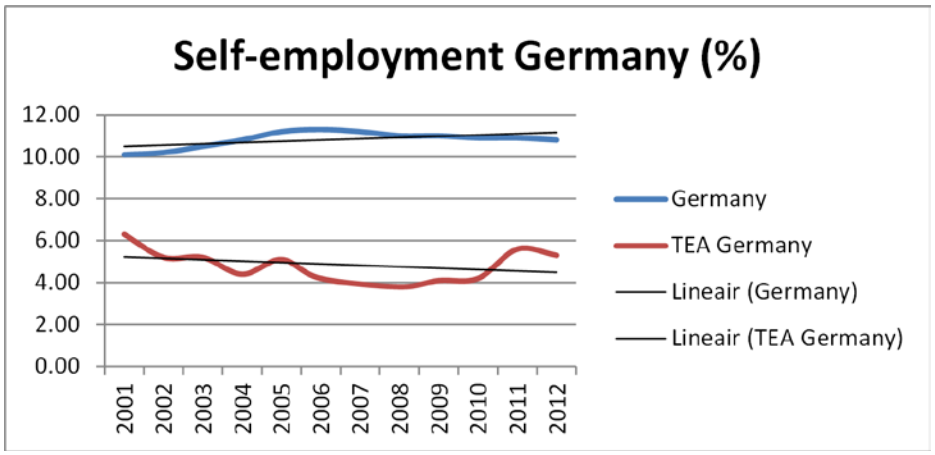
Graph 2: Denmark



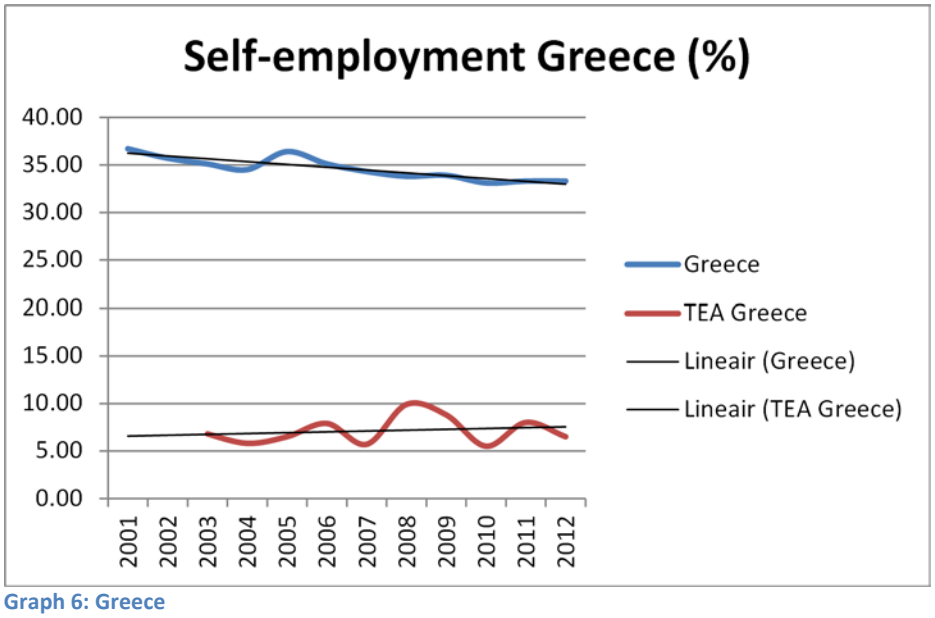
Graph 3: Finland



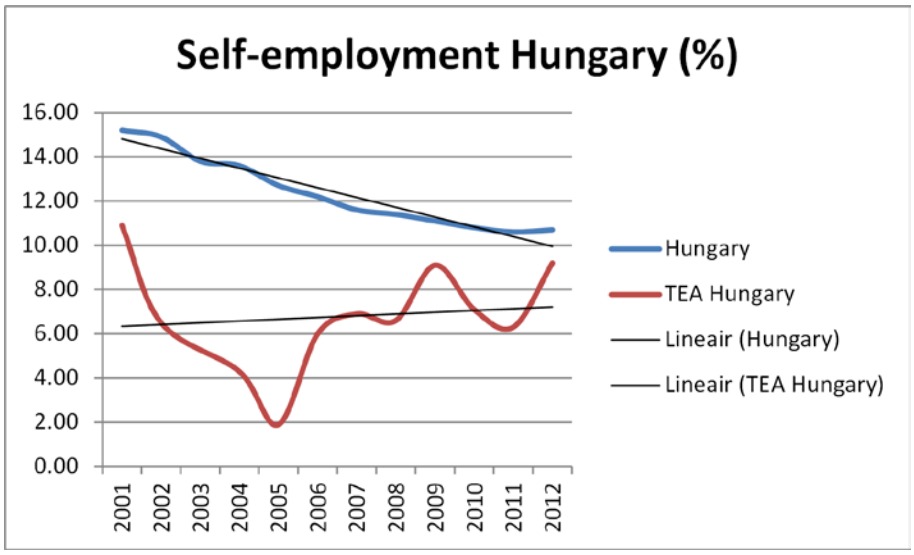
Graph 4: France



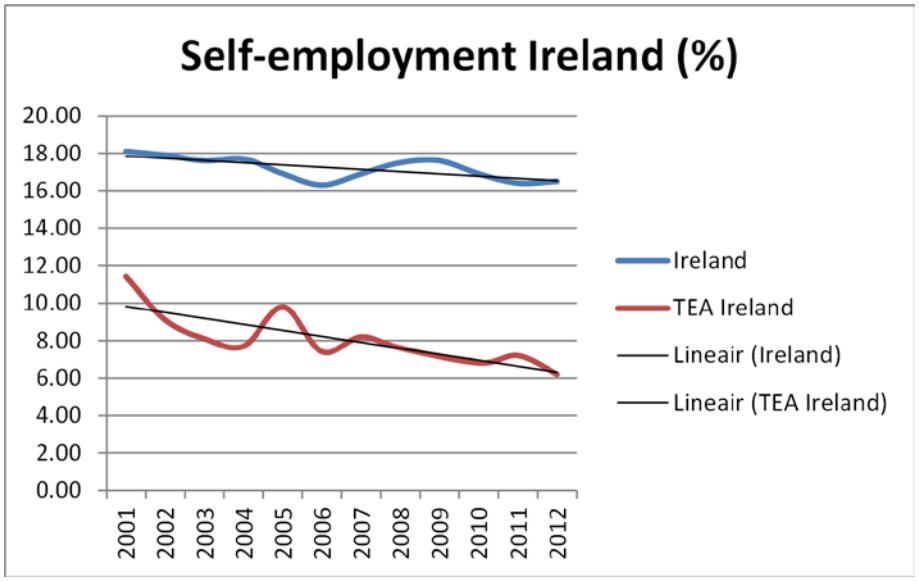
Graph 5: Germany



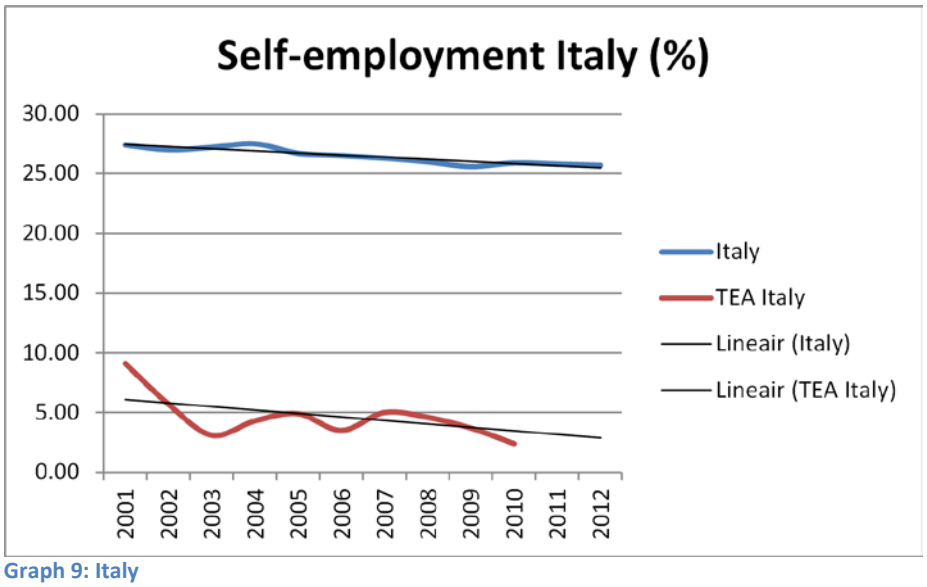
Graph 6: Greece



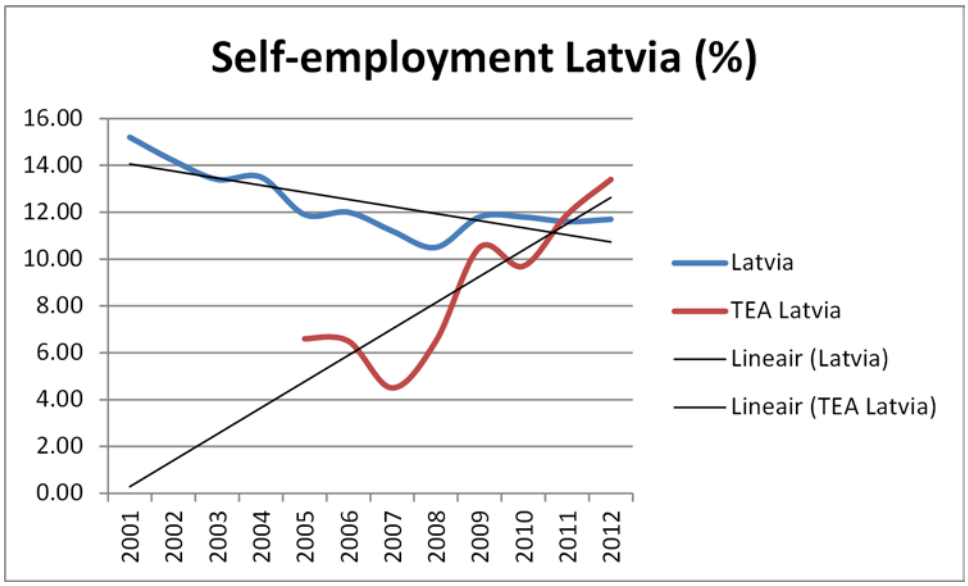
Graph 7: Hungary



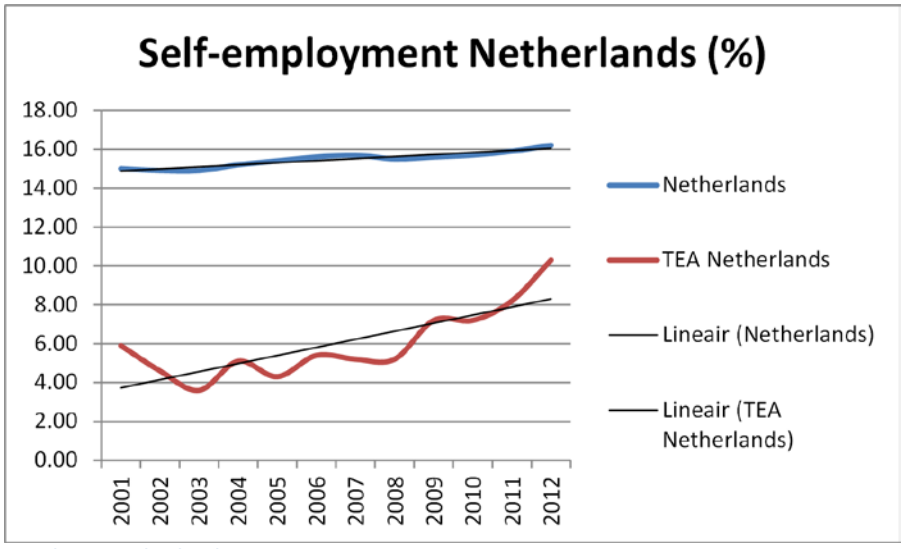
Graph 8: Ireland



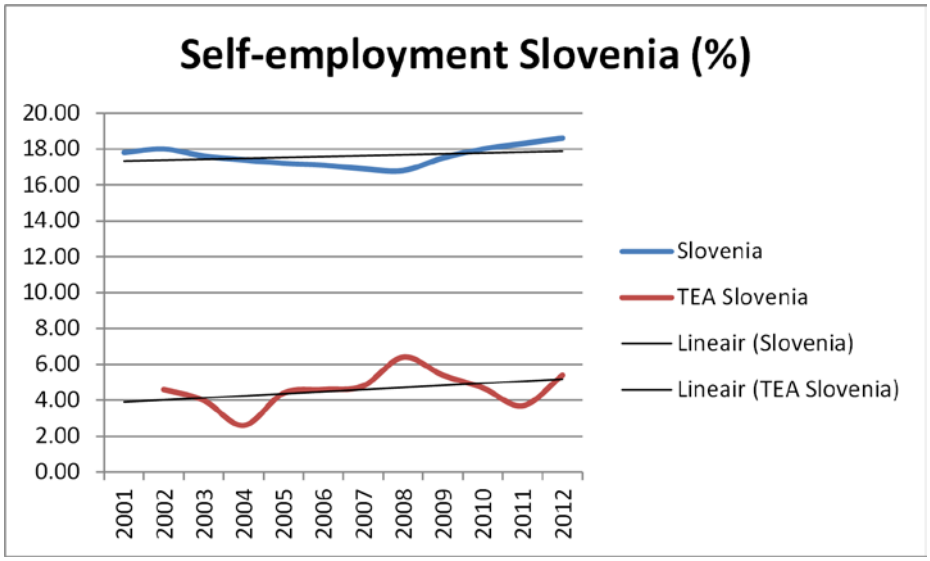
Graph 9: Italy



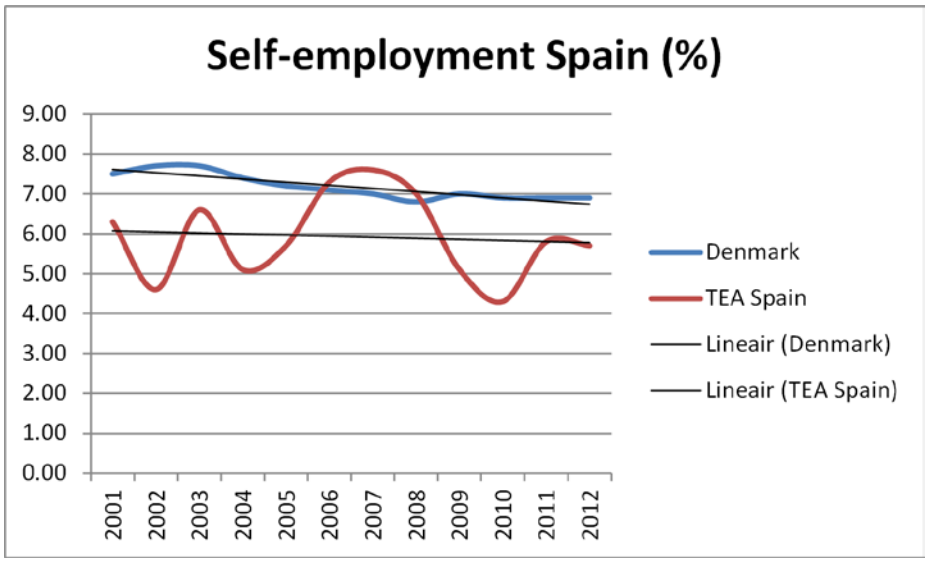
Graph 10: Latvia



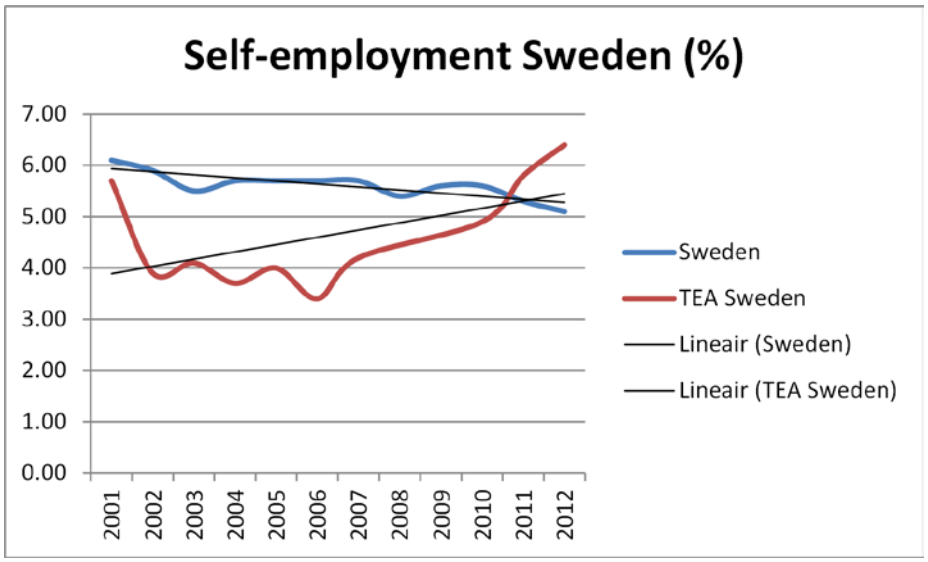
Graph 11: Netherlands



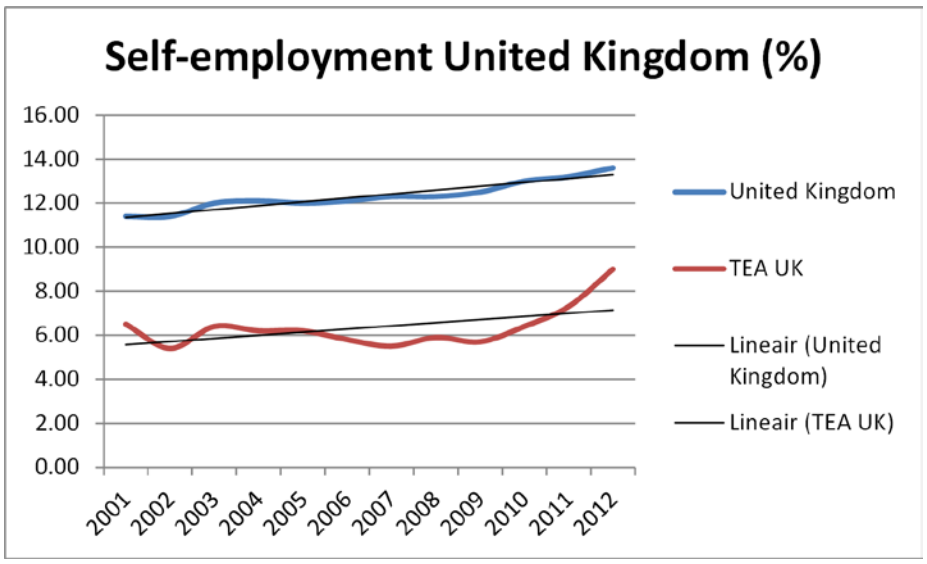
Graph 12: Slovenia



Graph 13: Spain



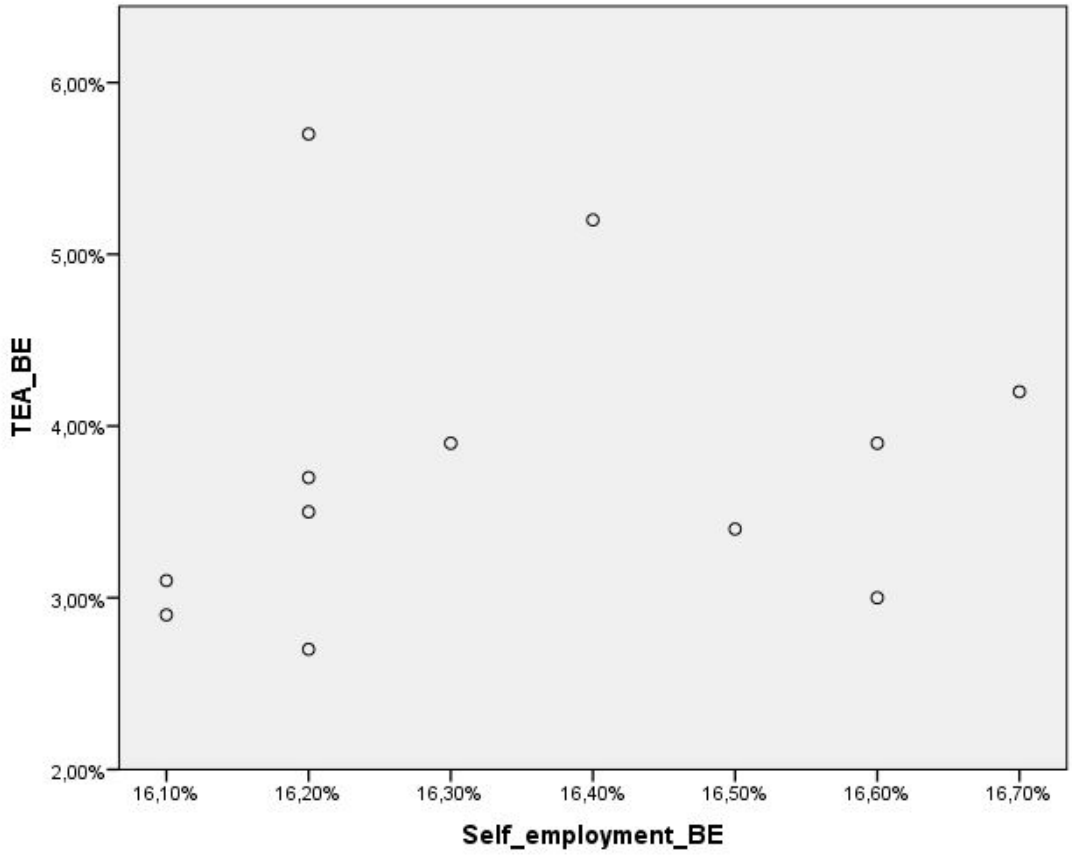
Graph 14: Sweden



Graph 15: United Kingdom

Appendix B: SPSS output, scatter plots & Pearson correlation

This section contains the SPSS output in the form of a scatter plot and a correlation analysis for each case. They are sorted alphabetically.



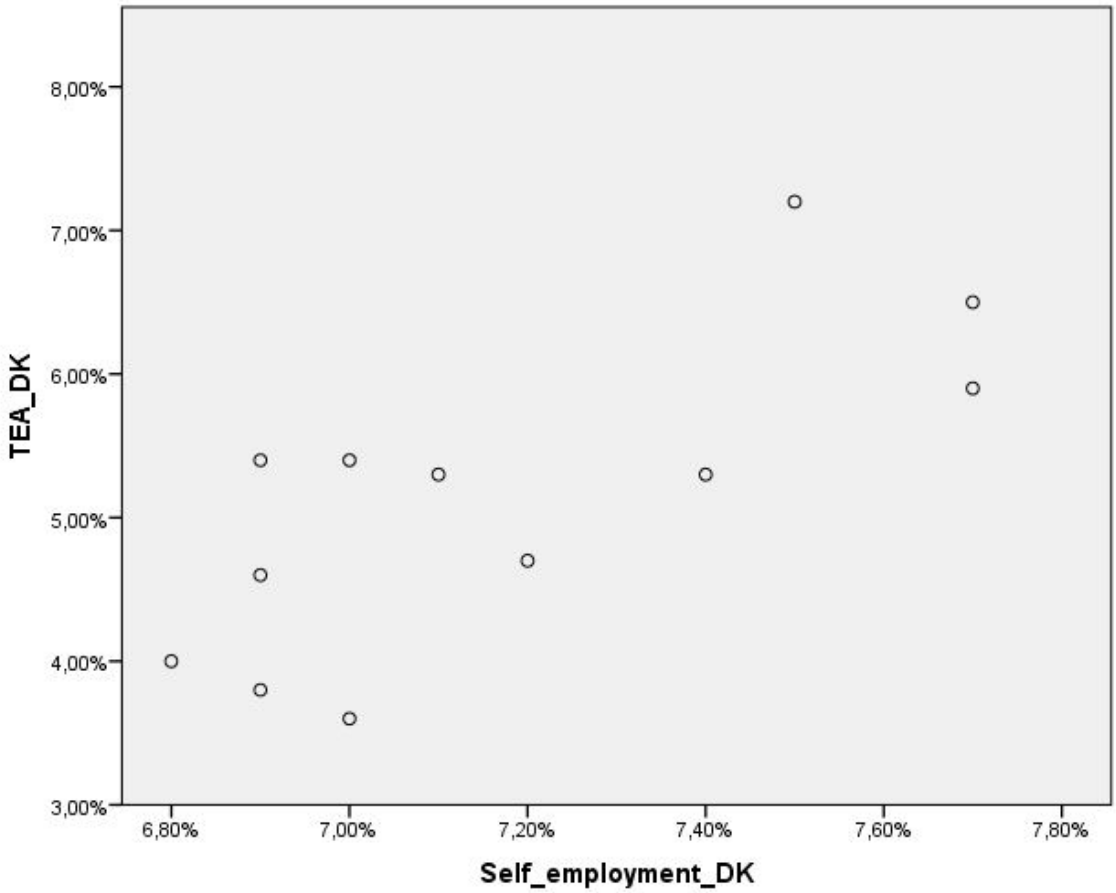

```
CORRELATIONS
  /VARIABLES=Self_employment_BE TEA_BE
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Correlations

Correlations

		Self_employment_BE	TEA_BE
Self_employment_BE	Pearson Correlation	1	,145
	Sig. (2-tailed)		,653
	N	12	12
TEA_BE	Pearson Correlation	,145	1
	Sig. (2-tailed)	,653	
	N	12	12

SPSS output 1 – Belgium




```
CORRELATIONS
  /VARIABLES=TEA_DK Self_employment_DK
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

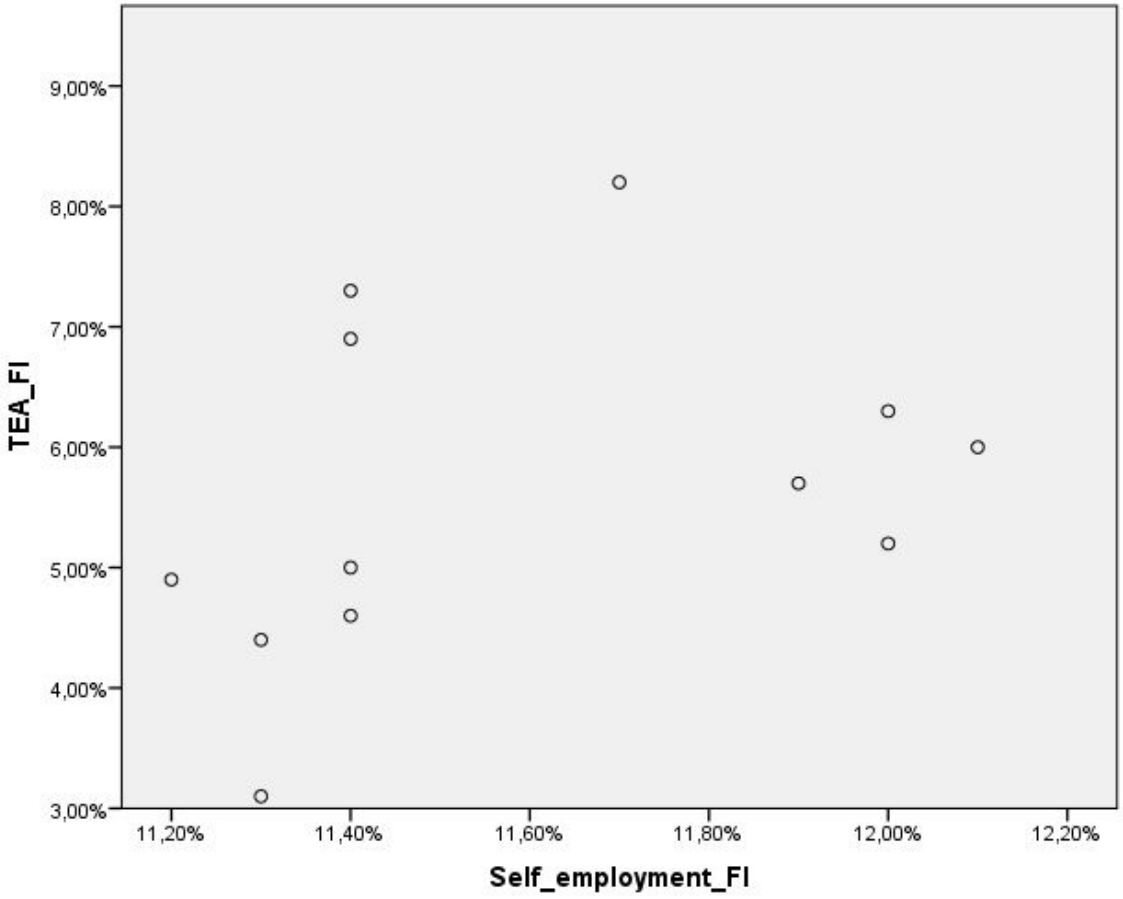
Correlations

Correlations

		TEA_DK	Self_employment_DK
TEA_DK	Pearson Correlation	1	,756**
	Sig. (2-tailed)		,004
	N	12	12
Self_employment_DK	Pearson Correlation	,756**	1
	Sig. (2-tailed)	,004	
	N	12	12

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

SPSS output 2 - Denmark



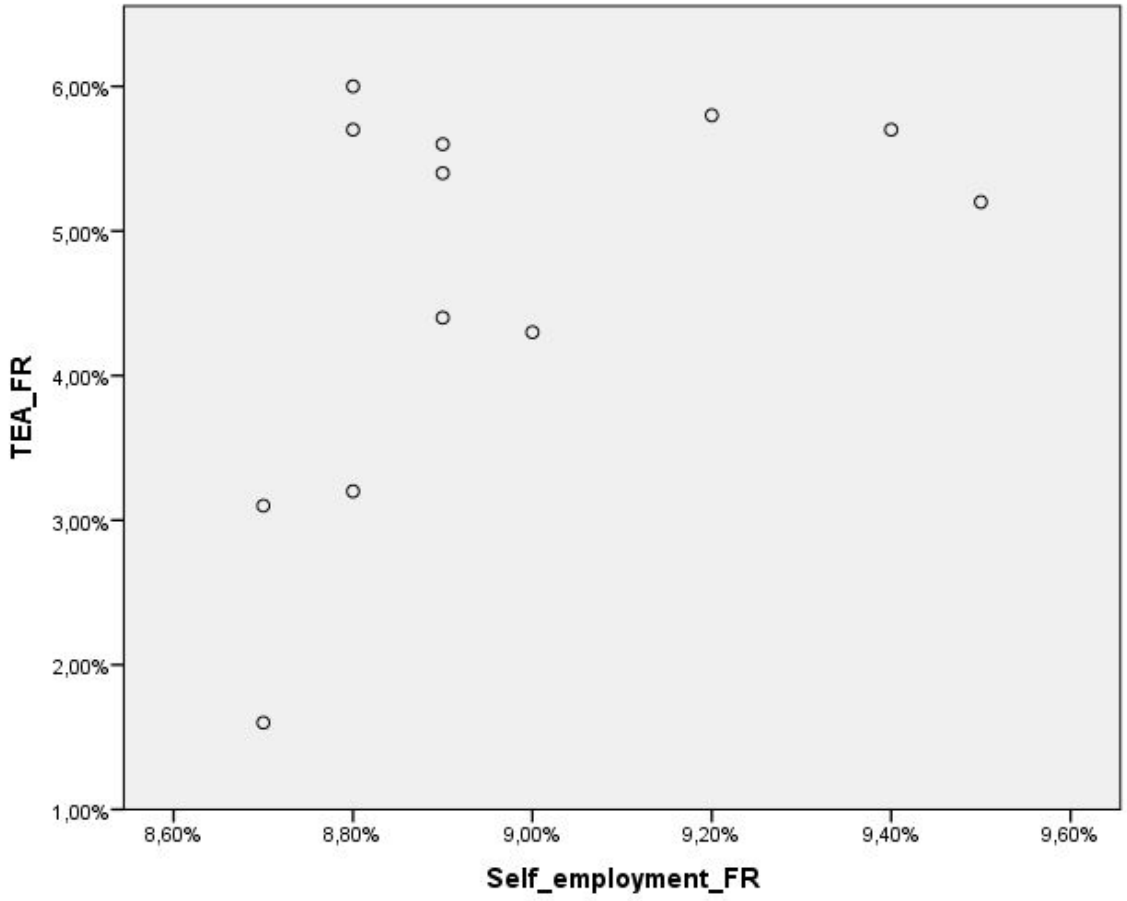

```
CORRELATIONS
  /VARIABLES=TEA_FI Self_employment_FI
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Correlations

Correlations

		TEA_FI	Self_employment_FI
TEA_FI	Pearson Correlation	1	,342
	Sig. (2-tailed)		,276
	N	12	12
Self_employment_FI	Pearson Correlation	,342	1
	Sig. (2-tailed)	,276	
	N	12	12

SPSS output 3 - Finland



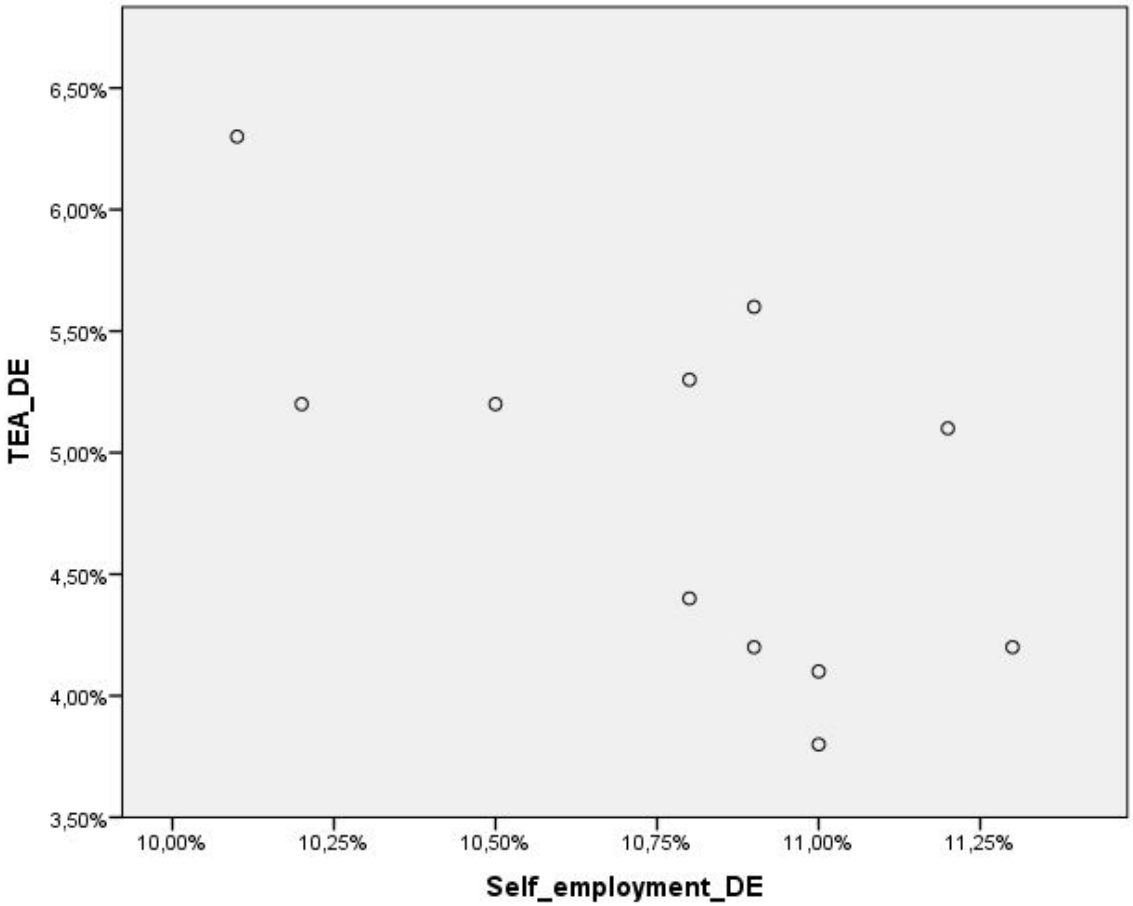

```
CORRELATIONS
  /VARIABLES=TEA_FR Self_employment_FR
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Correlations

Correlations

		TEA_FR	Self_employment_FR
TEA_FR	Pearson Correlation	1	,491
	Sig. (2-tailed)		,105
	N	12	12
Self_employment_FR	Pearson Correlation	,491	1
	Sig. (2-tailed)	,105	
	N	12	12

SPSS output 4 - France




```
CORRELATIONS
  /VARIABLES=TEA_DE Self_employment_DE
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

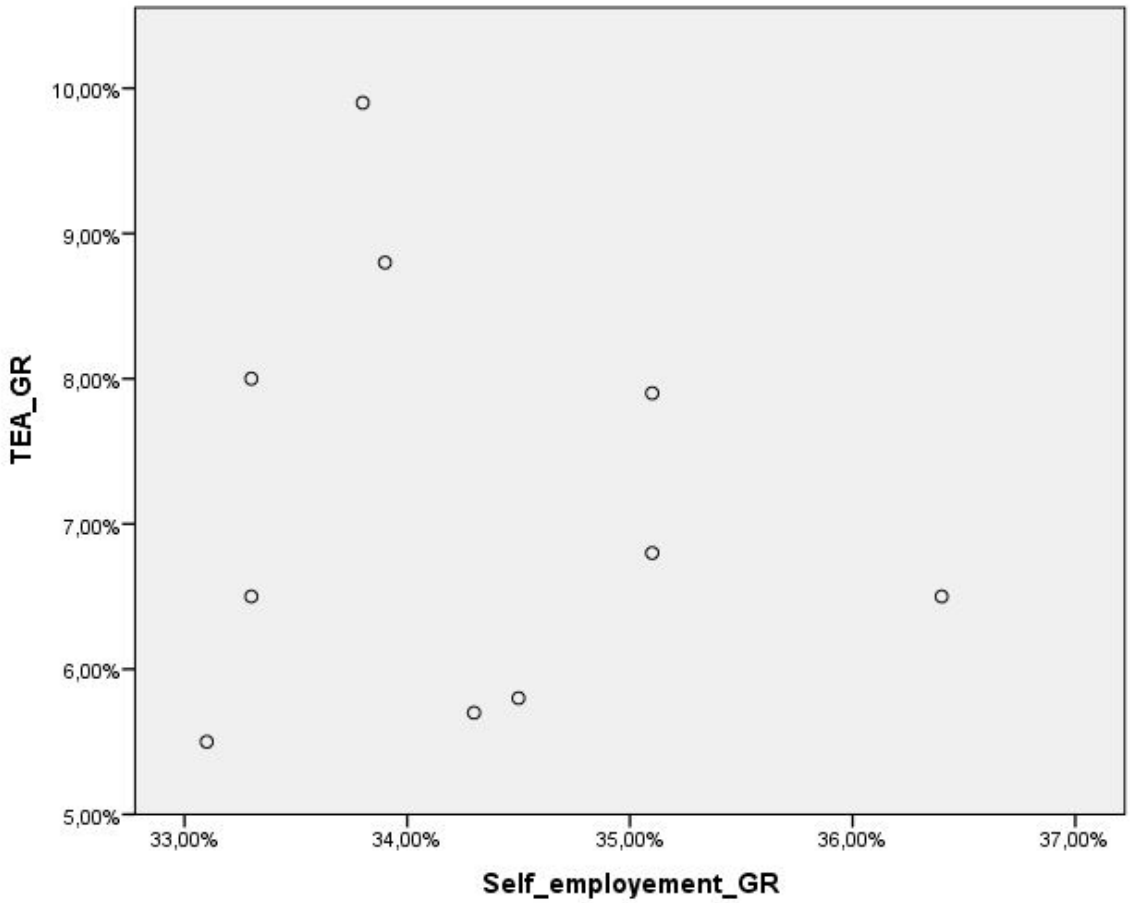
Correlations

Correlations

		TEA_DE	Self_employment_DE
TEA_DE	Pearson Correlation	1	-,652*
	Sig. (2-tailed)		,030
	N	11	11
Self_employment_DE	Pearson Correlation	-,652*	1
	Sig. (2-tailed)	,030	
	N	11	12

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

SPSS output 5 - Germany



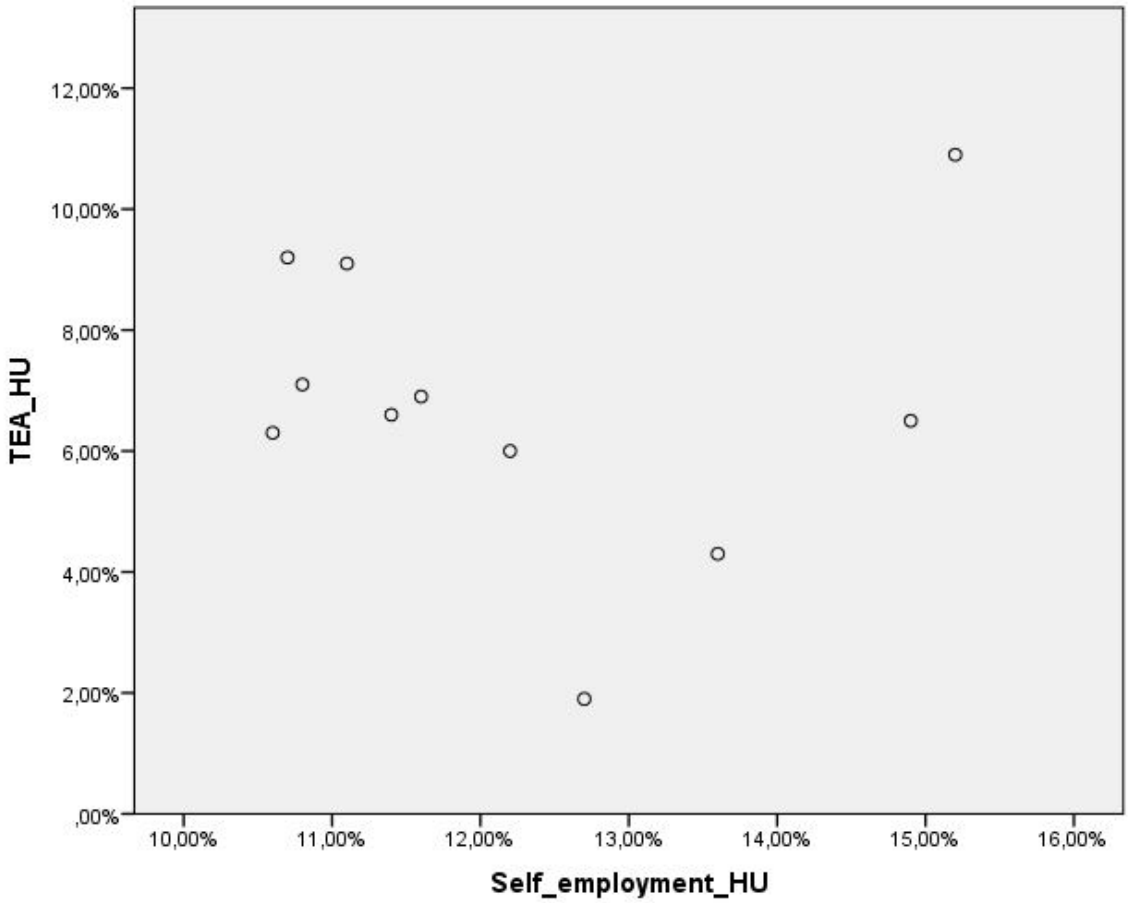

```
CORRELATIONS
  /VARIABLES=TEA_GR Self_employement_GR
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Correlations

Correlations

		TEA_GR	Self_employement_GR
TEA_GR	Pearson Correlation	1	-,116
	Sig. (2-tailed)		,750
	N	10	10
Self_employement_GR	Pearson Correlation	-,116	1
	Sig. (2-tailed)	,750	
	N	10	12

SPSS output 6 - Greece



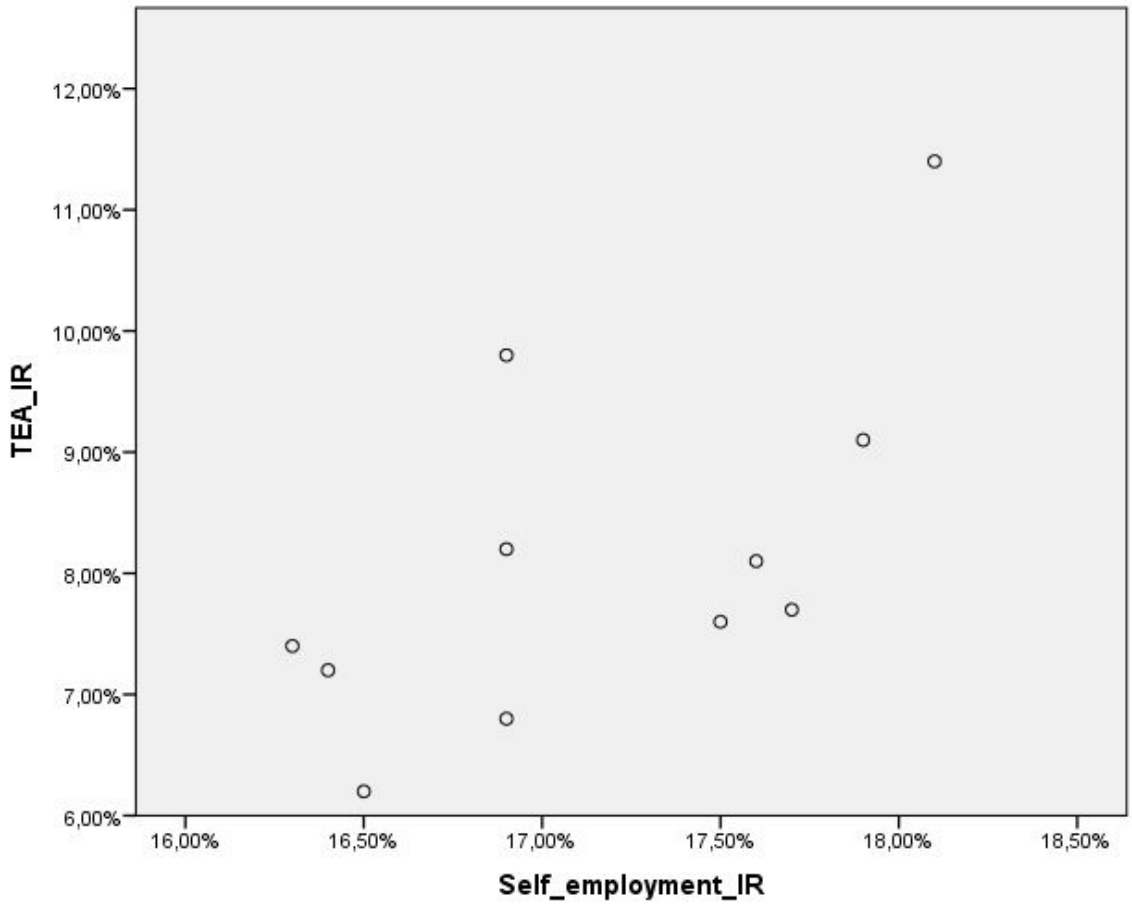

```
CORRELATIONS
  /VARIABLES=TEA_HU Self_employment_HU
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Correlations

Correlations

		TEA_HU	Self_employment_HU
TEA_HU	Pearson Correlation	1	-,003
	Sig. (2-tailed)		,994
	N	11	11
Self_employment_HU	Pearson Correlation	-,003	1
	Sig. (2-tailed)	,994	
	N	11	12

SPSS output 7 - Hungary




```
CORRELATIONS
  /VARIABLES=TEA_IR Self_employment_IR
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

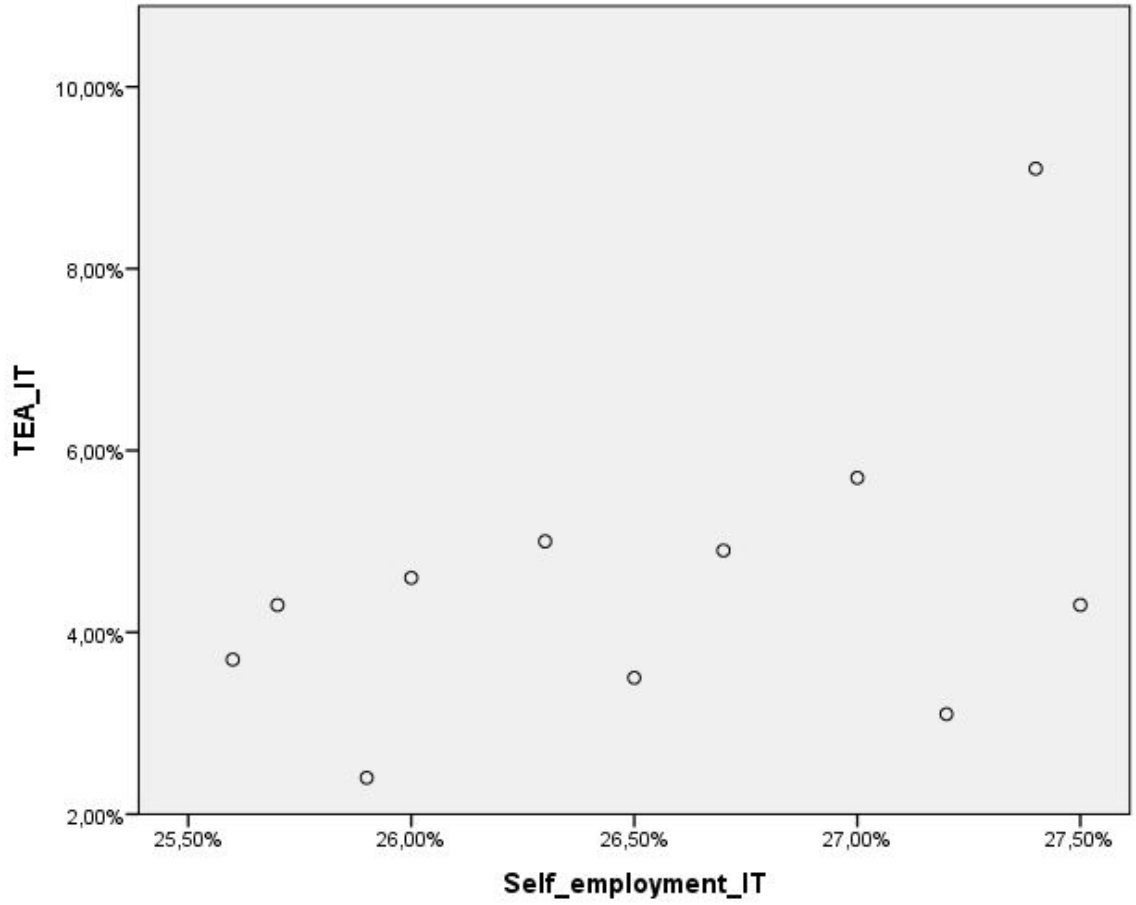
Correlations

Correlations

		TEA_IR	Self_employment_IR
TEA_IR	Pearson Correlation	1	,630*
	Sig. (2-tailed)		,038
	N	11	11
Self_employment_IR	Pearson Correlation	,630*	1
	Sig. (2-tailed)	,038	
	N	11	12

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

SPSS output 8 - Ireland



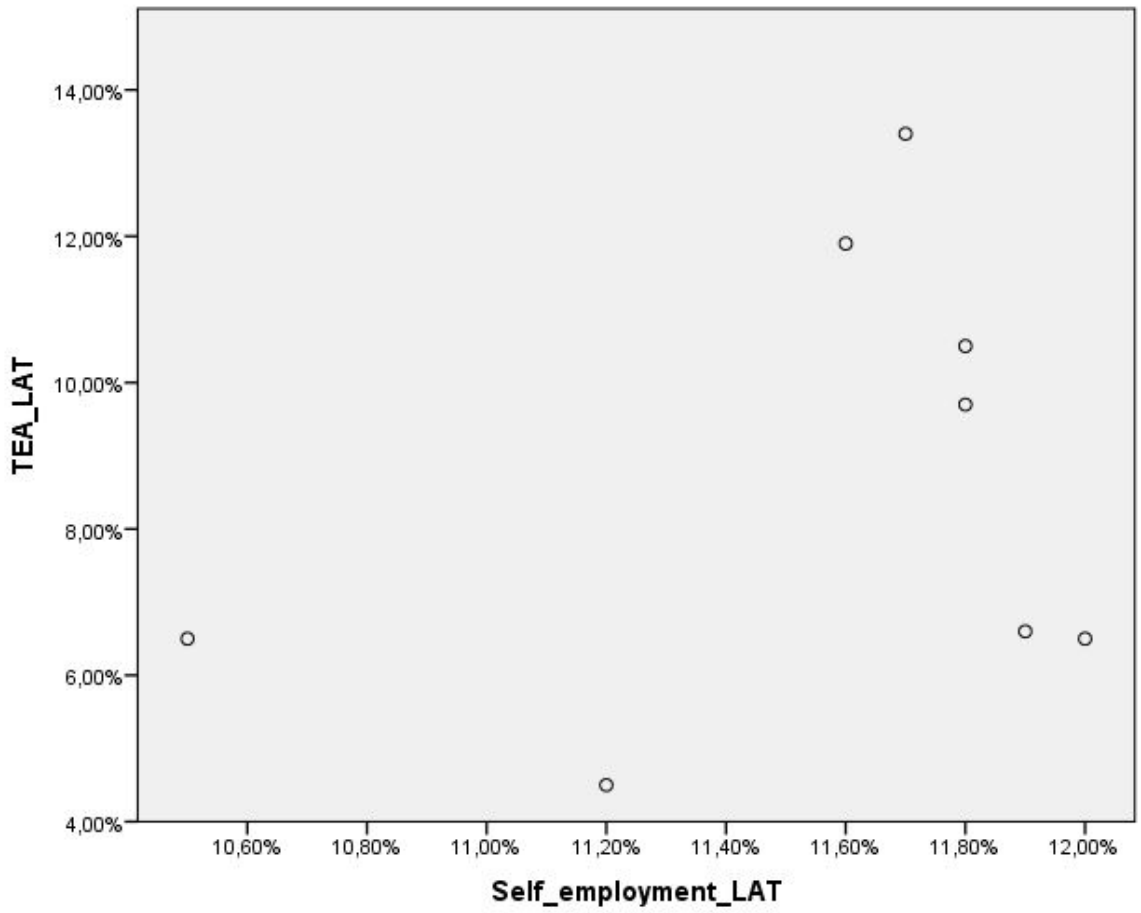

```
CORRELATIONS
  /VARIABLES=TEA_IT Self_employment_IT
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Correlations

Correlations

		TEA_IT	Self_employment_IT
TEA_IT	Pearson Correlation	1	,465
	Sig. (2-tailed)		,150
	N	11	11
Self_employment_IT	Pearson Correlation	,465	1
	Sig. (2-tailed)	,150	
	N	11	12

SPSS output 9 - Italy



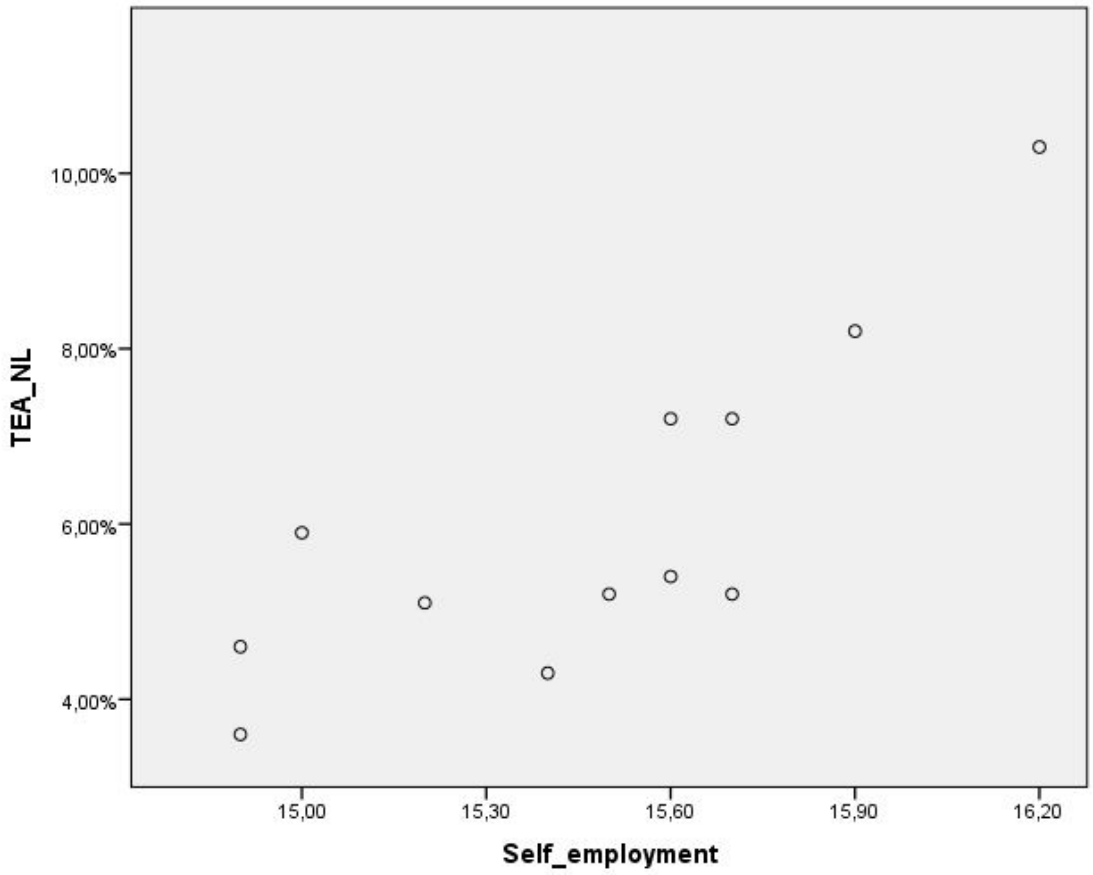

```
CORRELATIONS
  /VARIABLES=TEA_LAT Self_employment_LAT
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Correlations

Correlations

		TEA_LAT	Self_employment_LAT
TEA_LAT	Pearson Correlation	1	,336
	Sig. (2-tailed)		,416
	N	8	8
Self_employment_LAT	Pearson Correlation	,336	1
	Sig. (2-tailed)	,416	
	N	8	12

SPSS output 10 - Latvia




```
CORRELATIONS
  /VARIABLES=Self_employment TEA_NL
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

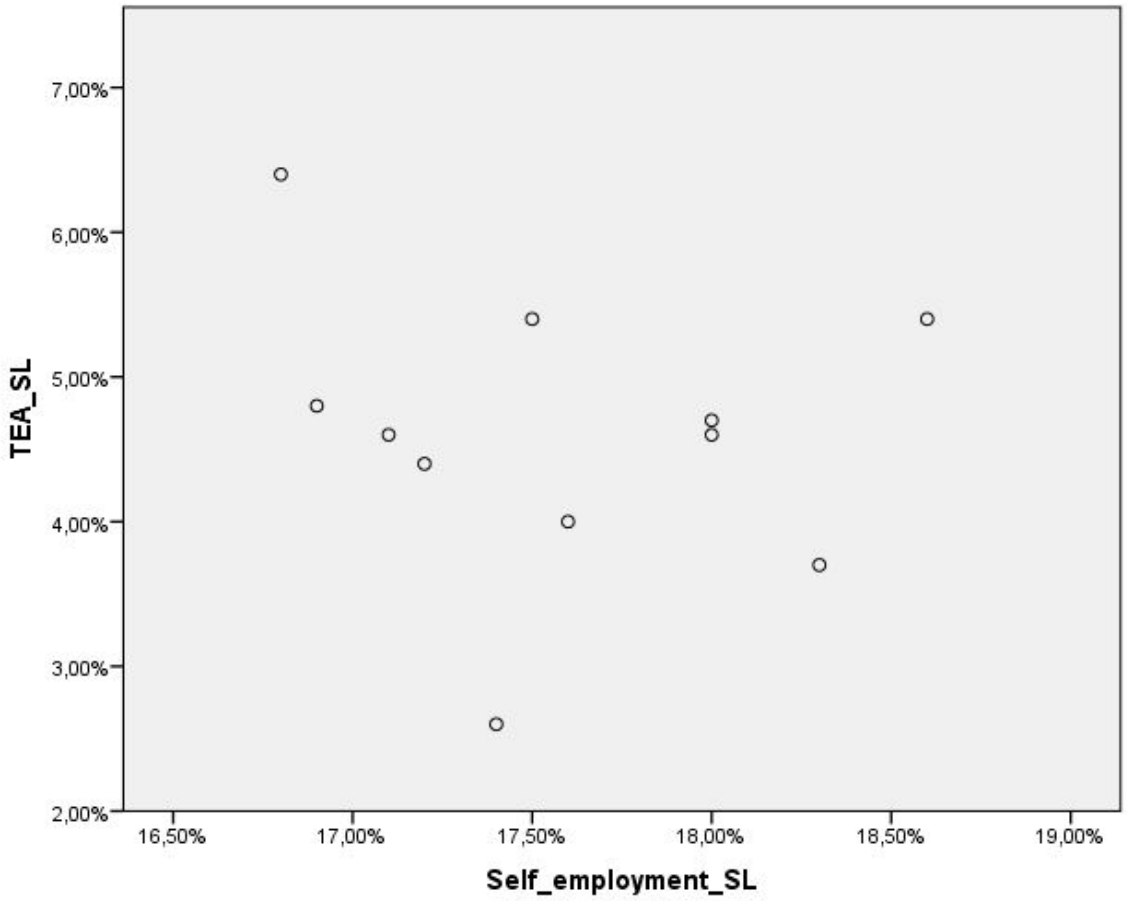
Correlations

Correlations

		Self_employment	TEA_NL
Self_employment	Pearson Correlation	1	,808**
	Sig. (2-tailed)		,001
	N	12	12
TEA_NL	Pearson Correlation	,808**	1
	Sig. (2-tailed)	,001	
	N	12	12

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

SPSS output 11 - Netherlands



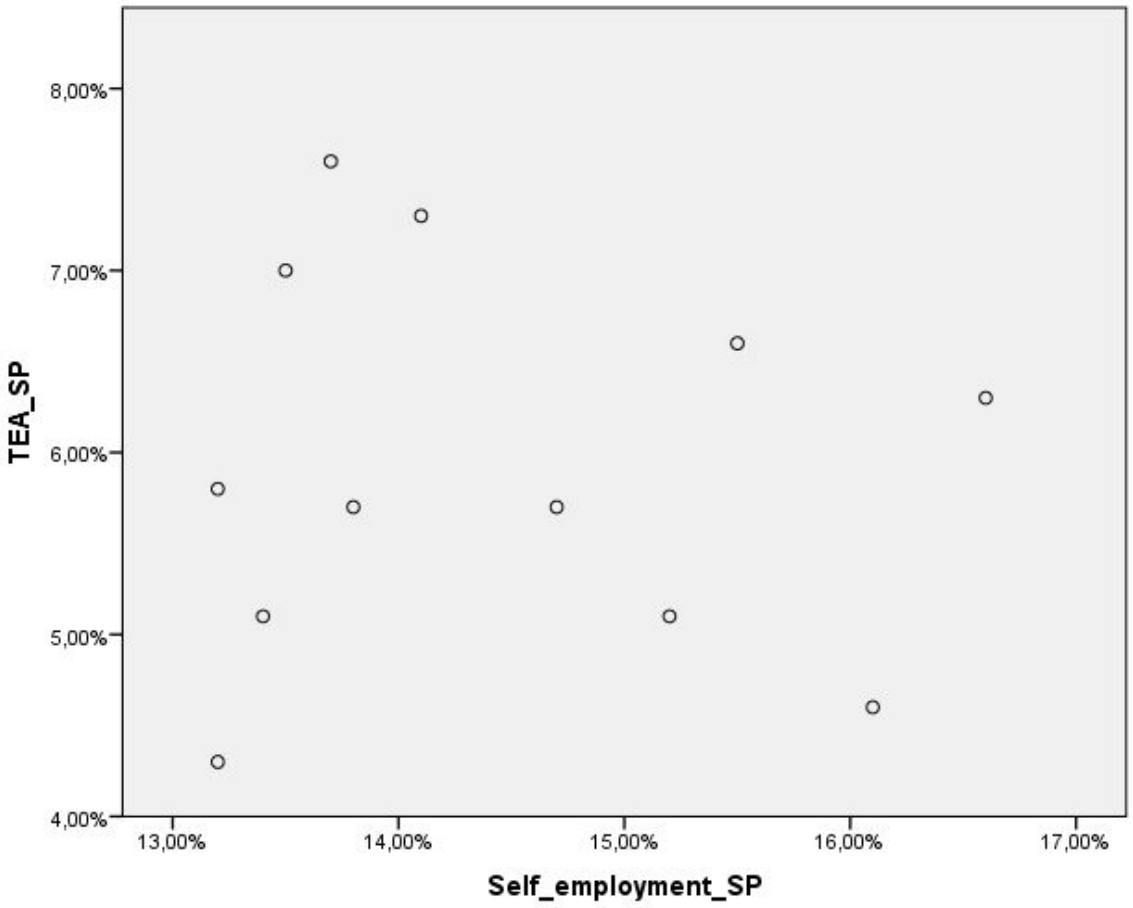

```
CORRELATIONS
  /VARIABLES=TEA_SL Self_employment_SL
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Correlations

Correlations

		TEA_SL	Self_employment_SL
TEA_SL	Pearson Correlation	1	-,168
	Sig. (2-tailed)		,621
	N	11	11
Self_employment_SL	Pearson Correlation	-,168	1
	Sig. (2-tailed)	,621	
	N	11	12

SPSS output 12 - Slovenia



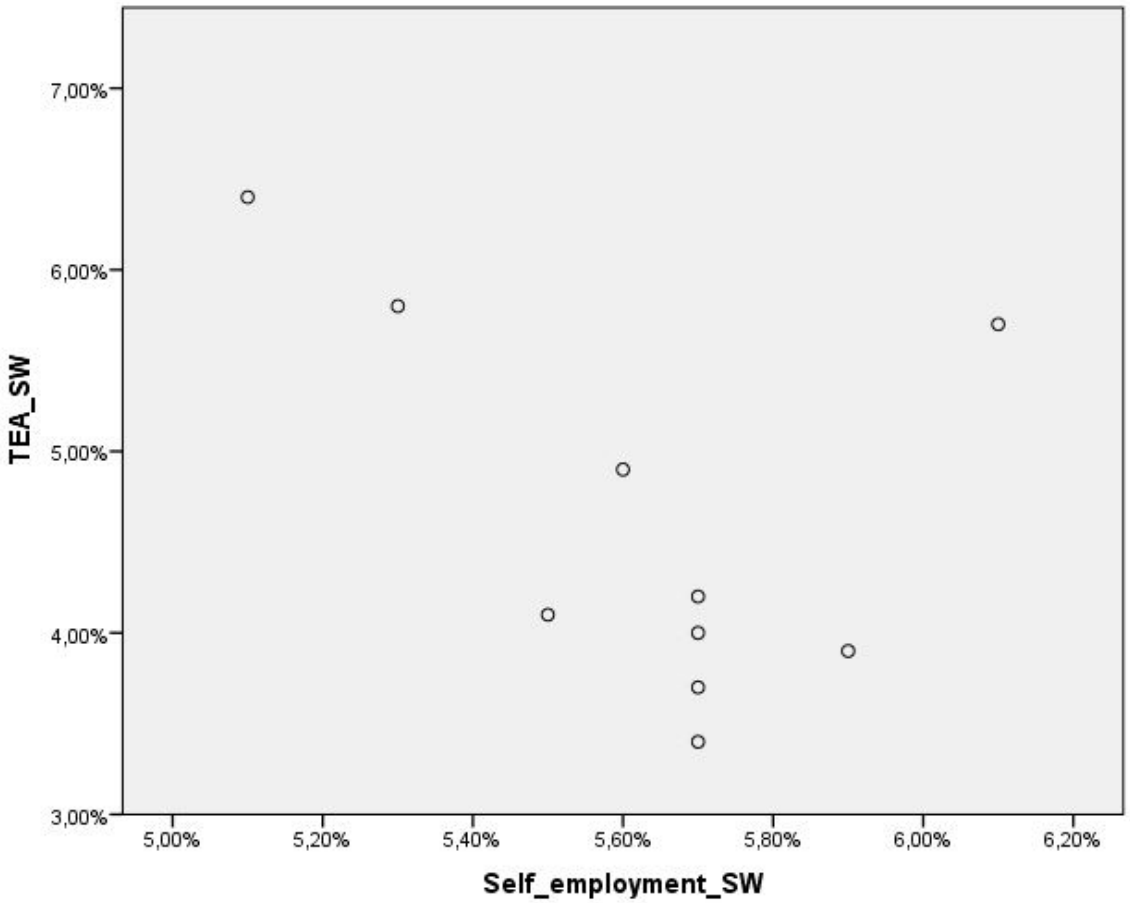

```
CORRELATIONS
  /VARIABLES=TEA_SP Self_employment_SP
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Correlations

Correlations

		TEA_SP	Self_employment_SP
TEA_SP	Pearson Correlation	1	-,066
	Sig. (2-tailed)		,839
	N	12	12
Self_employment_SP	Pearson Correlation	-,066	1
	Sig. (2-tailed)	,839	
	N	12	12

SPSS output 13 - Spain



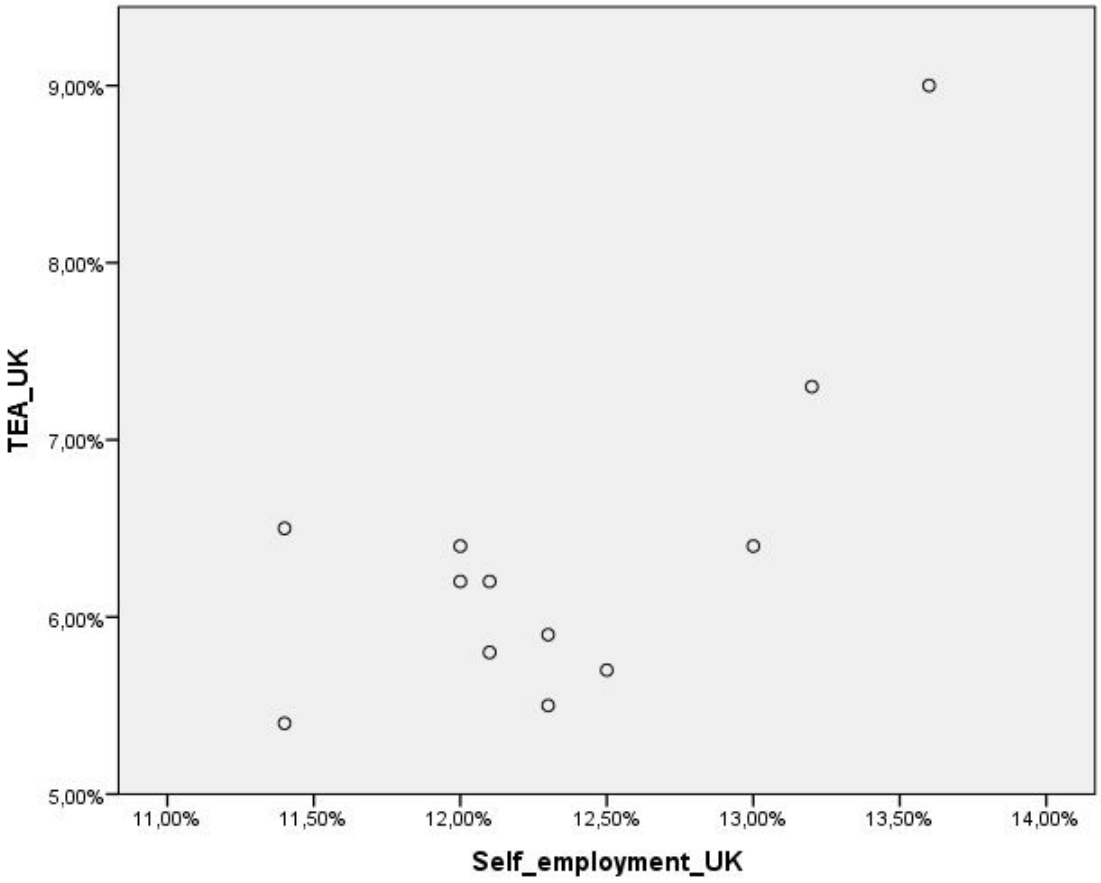

```
CORRELATIONS
  /VARIABLES=TEA_SW Self_employment_SW
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Correlations

Correlations

		TEA_SW	Self_employment_SW
TEA_SW	Pearson Correlation	1	-,452
	Sig. (2-tailed)		,189
	N	10	10
Self_employment_SW	Pearson Correlation	-,452	1
	Sig. (2-tailed)	,189	
	N	10	12

SPSS output 14 - Sweden




```
CORRELATIONS
  /VARIABLES=TEA_UK Self_employment_UK
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Correlations

Correlations

		TEA_UK	Self_employment_UK
TEA_UK	Pearson Correlation	1	,708**
	Sig. (2-tailed)		,010
	N	12	12
Self_employment_UK	Pearson Correlation	,708**	1
	Sig. (2-tailed)	,010	
	N	12	12

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

SPSS output 15 - United Kingdom