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Does Population Ageing ImpactEntrepreneurial Activity? The Evidence FromSlovenia

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ABSTRACT:*In this paper we present our investigation of impact of population ageing on entrepreneurial activity in Slovenia. Population ageing has many implications for economic and non-economic welfare. First, we introduce the phenomenon of population ageing and provide some literature review on population ageing impact on entrepreneurial activity.Second, we employ multiple regression analysis on cross-section data for Slovenian municipalities.We use secondary data collected from databases of Statistical Office of Republic of Slovenia and Employment Service of Slovenia on demographic and economic variables by 210 municipalities for the year 2009. The regression analysis results confirm ourhypothesis. Municipalities with higher average age also have lower number of enterprises per 100 population. If average age is higher by 1% (by 1 year), the number of enterprises per 100 population is lower on average by 1.7 % (by 0.182 enterprises), ceteris paribus.We may conclude that population ageing without properly addressing it, consequently leads into lower entrepreneurial activity and thus lower economic welfare. That additionally highlights the importance of aproper demographic and social policywhen governing labour market policy.*

Key Words: *entrepreneurship; population ageing; labour market; Slovenian municipalities*

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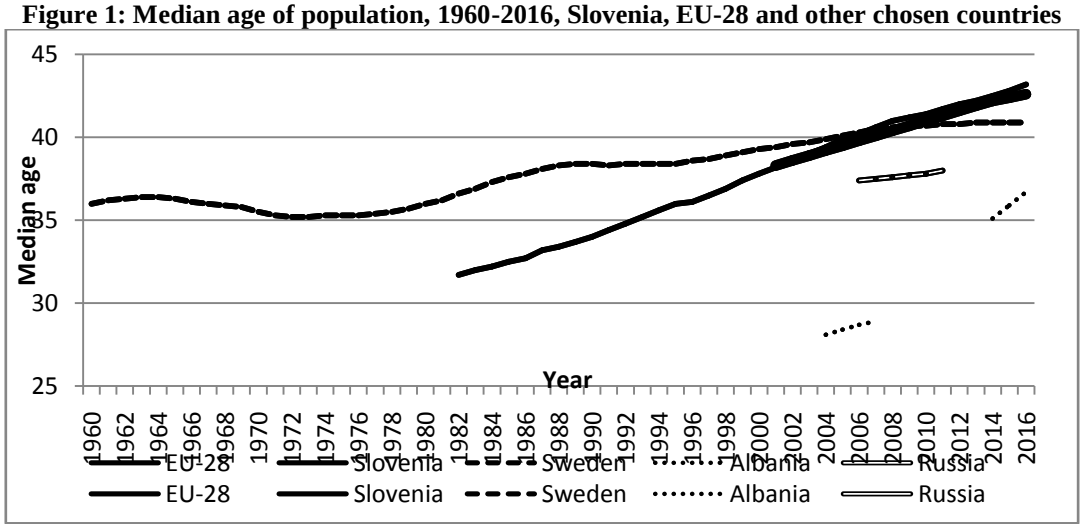
1. Introduction

The significant and mostly unfavourable process of population ageing in Slovenia, across Europe and also in many other countries as well as various economic consequences that arise from those demographic changes are thefundamental motivation for our research. Moreover, the evident population ageing has not only economic consequences, but also social, psychological, cultural, institutional and political consequences (Malačič, 2008, 795) and therefore requires changes and adjustments in many different fields of some country's system. We found investigation of population ageing consequences especially important since population ageing affects living standard of some country, the quality of life or welfare, which however are quite a complex concepts (Mandič and Filipovič-Hrast, 2011, 16-17; Dubska, 2010, 5; Osberg and Sharpe, 2011, 1-5; Watson et al., 2010, 1-3).

The extent of population ageing in Slovenia can be briefly illustrated by having a look at the average age of Slovenian population which rosefrom 35.9 years in the year 1991 to 43.2 years in the year 2017 and ageing index from 53.6 to 127.8 in the same time period. Similarly, the share of old people (people who are 65 years old or more) in total Slovenian population increased from 12.6 % in the year 1991 to 19.1 % in the year 2017 (SORS, 2018a). The long run projections forecasts natural increase in Slovenian population to be -0.9 in the year 2050 (U.S. Census Bureau, 2011), which will further increase the share of old and decrease the share of young people in Slovenian population. According to UN projections, in the year 2050, the share of old people in total Slovenian population will reach 33.1 %, while median age will rise up to 52.2 years (United Nations, 20011).

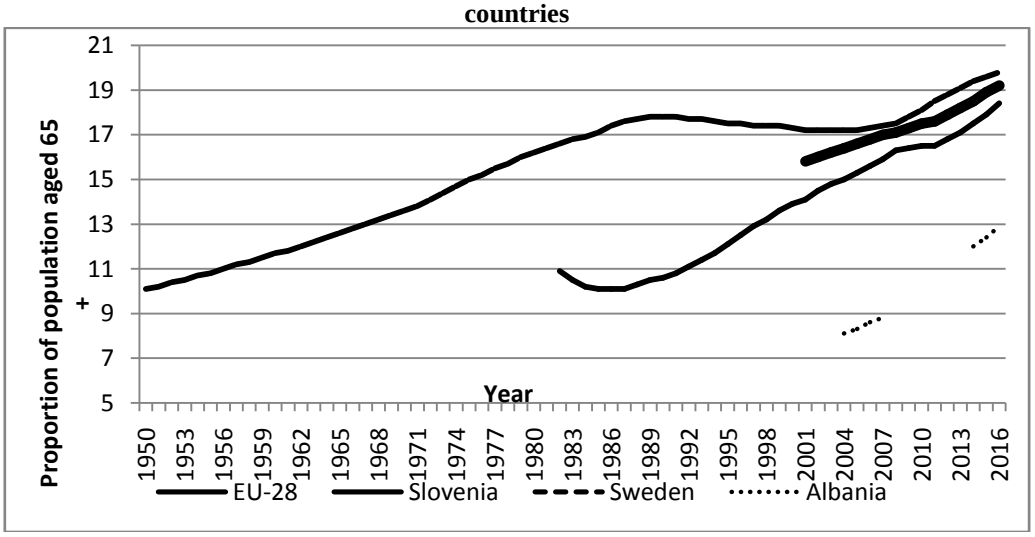
Figure 1: Median age of population, 1960-2016, Slovenia, EU-28 and other chosen countries



Source: own calculation based on data obtained from Eurostat (EUROSTAT, 2018)

According to Eurostat data (Figure 1 and Figure 2), we can see not only that population of Slovenia has been ageing but in general also population of European Union as a whole. Here we separately also present data for Sweden, and non EU countries like Russia and Albania.Median age (the age that splits population in two equal groups), which is sometimes used instead of average age has been increasing in all the EU countries in the last decades. For example in EU-28 it had increased from 38.3 in the year 2001 to 42.6 in the year 2016 (Figure 1).

Figure 2: Proportion of population aged 65 years and more, 1950-2016, Slovenia, EU-28 and other chosen countries



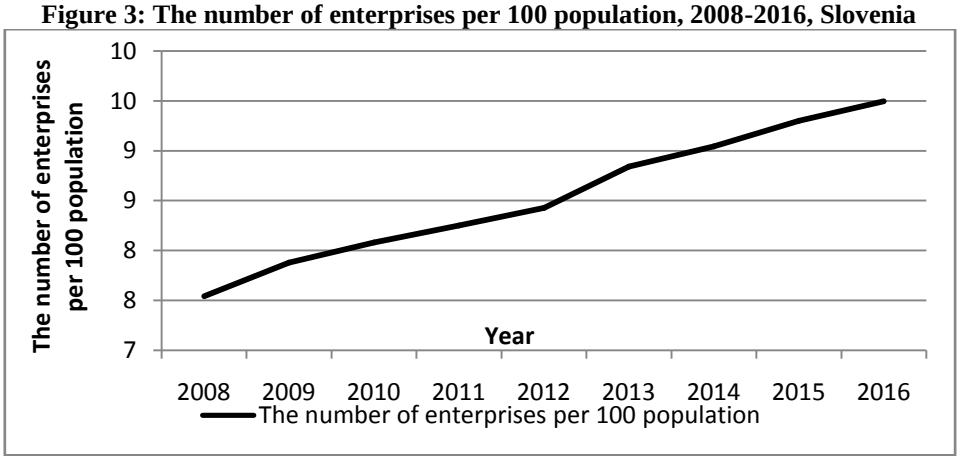
Source: own calculations based on data obtained from Eurostat (EUROSTAT, 2018)

Similarly proportion of population aged 65 years and more has also been increasing in Slovenia, EU-12 and many other countries in the last decades. As a comparison we present here also data for Sweden and Albania as an example of a country which has normallybeen considered as one of the European countries with highest fertility. But even there, population is ageing.In EU-28 proportion of population aged 65 years and more had increased from 15.8 % in the year 2001 to 19.2 % in the year 2016 (Figure 2).

If we have a look at the data on entrepreneurship for Slovenia (figure 3), we can see that the number of enterprises per 100 population has been increasing throughout the observed period. Since population has also been ageing in the last decades, it might seem at the first sight, that population ageing results in greater entrepreneurial activity. We believe that it is not the case and that it is a mere association between the higher population's age and greater entrepreneurial activity. However that association is no proof at that moment for the causal relationship. We believe in that case, that there many other factors that work through time and have a positive impact on entrepreneurship through time and that it is not due to higher population's age. In order to

really test the direction of influence of population ageing on entrepreneurship, we will exclude the time dimension by using cross section data for the chosen year 2009.

Figure 3: The number of enterprises per 100 population, 2008-2016, Slovenia



Source: own calculations based on data obtained from SORS (SORS, 2018a; SORS, 2018b)

In Slovenia, there were 210 municipalities in the year 2009. The municipality with the lowestnumber of enterprises per 100 population had 2.7 enterprises per 100 population, while the municipality with the highestnumber of enterprises per 100 population had 20.9 enterprises per 100 population. On the other hand the municipality with the lowestproportion of population aged 65 years and more had 12 % of people aged 65 years and more, while the municipality with the highest proportion of population aged 65 years and more had 27.05 % of people aged 65 years and more.

However the municipality with the lowest number of enterprises per 100 population (SvetiTomaž) among all the 210 municipalities, with only 2.7 enterprises per 100 population is not the youngest municipality according to theproportion of population aged 65 years and more. It is only on the 101stplace, with the value of 16.15 % ofpopulation aged 65 years and more. Similarlyfor example the municipality with the third lowest number of enterprises per 100 population (Grad) among all the 210 municipalities, with only 3.1 enterprises per 100 population is not the third youngest municipality according to theproportion of population aged 65 years and more. It is only on the 196th place, with the value of 19.75 % ofpopulation aged 65 years and more. Or vice versa, the municipality with the highest number of enterprises per 100 population (Trzin) among all the 210 municipalities, with 20.9 enterprises per 100 population is not the oldest municipality according to theproportion of population aged 65 years and more. It is already on the 9th place, with the value of 12.7 % ofpopulation aged 65 years and more which makes it one of the youngest municipality in that year.

That initial look at the data suggests that older municipalities might thus even have lower and not higher entrepreneurial activity.

There are quite some studies on impact of population ageing on entrepreneurship – in some cases proving a negative and in the other casesa positive impact of population ageingon entrepreneurship. We present some of those studies in the next section. Of course a variety of factors, including those related to the global economic slowdown, may affect the entrepreneurial activity, so population ageing is definitely not the primary or the only factor of population ageing. Some of these other factors are briefly discussed in the next section. However our focus in this study is particularly on population ageing.

The main motivation and reason for our own research in this field is therefore to provide new empirical evidence which would support the first or the second group of researchers and to provide some original specific findings about the relationship between population ageing and entrepreneurship based on cross section data in the case of Slovenian municipalities, which has not been done yet in any other study. The results of our research and answers to our research questions contribute to the existing body of research about impact of population ageing on entrepreneurship; yet again it is worth exploring that subject since population ageing implications directly and indirectly impact the quality and standard of our lives.

We would like to address the following question. What can be found out about the impact of population ageing on entrepreneurial activity in case of Slovenia? Entrepreneurial activity is an important labour market. Higher level of entrepreneurial activity also means higher number of enterprises, higher number of new workplaces which finally impact unemployment and the demand and supply side of the labour market.Entrepreneurial activity is a very complex concept with many different aspect and dimensions (Wach, 2015), however in this study, entrepreneurial activity is interpreted in a narrow sense and is measured with the relative number of enterprises.

In the next section we review some previous research about effects of population ageing on unemployment and entrepreneurial activity which is also the focus of our own investigation.

2. Literature Review on Impact of Population Ageing onEntrepreneurship

In order to provide some theoretical discussion and background on which we build our hypothesis we here first review some basic unemployment theories and later on findings of the studies on impact of population ageing on entrepreneurship. We focus here not only on entrepreneurship but partially also on unemployment, since (un)employment impacts aggregate demand which further on stimulates entrepreneurial activity.

Theories of Unemployment

Unemployment occurs when people are without work and are actively seeking work. It is measured by the unemployment rate, which is calculated as a percentage by dividing the number of unemployed individuals by all individuals currently in the labour force (employed and unemployed).Theories of unemployment explain causes, consequences and offer solutions for unemployment. *Classical* economics, *New classical* economics, and the *Austrian School* of economics argue that market mechanisms are reliable means of resolving unemployment – no government intervention is needed. *Keynesian* economics emphasizes the cyclical nature of unemployment and recommends government interventions in the economy that is supposed to reduce unemployment during recessions (Layard et al. 2005).

According to the different reasons why unemployment occurs, labour market theory most commonly lists structural, frictional, cyclical and classical unemployment. *Classical* or real-wage unemployment occurs when real wages for a job are set above the equilibrium level, causing the quantity of labour supplied to exceed the quantity of labour demanded.*Cyclical or Keynesian*unemployment occurs when there is not enough aggregate demand in the economy to provide jobs for everyone who wants to work. Due to the decrease in aggregate demand, less production and consequently fewer workers are needed. Because wages are sticky and do not fall to meet the equilibrium level *cyclical* unemployment occurs.*Structural* unemployment focuses on structural problems in the economy and inefficiencies such as a mismatch between the supply and demand of workers with necessary skill sets. *Frictional* unemployment depends on the time period between jobs when a worker is searching for or transitioning from one job to another. It focuses on voluntary decisions to work based on each individual's valuation of their own work and how that compares to current wage rates plus the time and effort required finding a job. Voluntary unemployment -most of the frictional unemployment - is attributed to the individual's decisions, whereas involuntary unemployment - most of the cyclical, structural and classical unemployment - exists because of the socio-economic environment (Layard et al. 2005). Population ageing can trigger some changes in causes for unemployment which is further discussed in the next section.

InfluenceofPopulationAgeingOn Entrepreneurship

Literature review reveals that there is no general consensus on whether population ageing increases or decreases entrepreneurial activity. There are many channels through which population ageing impacts entrepreneurial activity.

Some studies show that population ageing might negatively affect entrepreneurial activity, sinceage is supposed to negatively affect entrepreneurial activity.Liang (2014) argues that creativity may decline with age, but business skills increase with experience in high level positions. However, having too many older workers in society slows entrepreneurship. Not only are older workers less innovative, les flexible (Dixon, 2003), less motivated (Chéron et al., 2013) and less educated (Čepar and Bojnec, 2008; Dolado, 2000; Dimovski and Žnidaršič, 2007, 2-15). Whenolder workers occupy key positions, they block younger workers from acquiring business skills (Eriksson and Dan-Olof, 2014; Weber and Lehtinen, 2014). In his study, Liang (2014) found out that a one-standard deviation decrease in the population median age increases the new business growth by 2.5 percentage points. Besides, older societies have lower rates of entrepreneurship at every age.Many different researches also confirm the close interrelation between entrepreneurship and unemployment. New enterprises create new jobs and consequently reduce unemployment (Startiene and Remeikiene, 2009).

Population ageing will in its final stage result in shrinking labour force when most of the baby-boomers will exceed their retirement age and exit labour force (Penger and Dimovski, 2007, 42). Eventually, there will come to a labour force shortage and shortage in critical organisational knowledge and managerial experience and other competences important for entrepreneurship (CEDEFOP, 2012), which will result in reduced unemployment and increased labour cost (Jackson, 2011). Lisenkova et al. (2010) already noticed that the fall in population, and particularly working-agepopulation in Scotland, has a depressing impact on economic activity and consequently on entrepreneurial activity. The required size of the annual net-migration needed to neutralize the adverse natural demographic changes is even higher than the current trends.

On another hand population ageing might positively affect entrepreneurial activity. That could be a consequence of the new business opportunities arising from the particular demand and needs of the growing population of people who are over 50 years old. These new market opportunities are also referred to as silver economy which is related not only to private consumer expenditure but also to public expenditure. In any case, the silver economy, which provides opportunities for new jobs alsointhe field of healthy ageing, senior tourism and age-friendly housing,has been growing substantially (European Commission, 2015).

Obviously population ageing indirectly influences entrepreneurship through the change in demand structure. Each age group has its specificities in demand; we say that demand is also age specific. Young people tend to demand for some goods that are less interesting for old people and vice versa. We may expect an increasing demand for services in health care sector (Lešnik-Hren, 2003, 887), in education of adults and life-long learning and in leisure related sectors like tourism. Consequently demand in these sectors will expand and so will the demand for labour in these sectors. So, changes in age structure result in changes in the demand structure (Aigner-Walder and Döring, 2015), which will also impact entrepreneurial activity following from the supply side. Furthermore, as the demand structure of the economy changes, a shift in labour force between industries should occur to meet the demand shift, but due to various labour market frictions, structural and frictional unemployment rates are likely to increase during that shift (Borsch-Supan, 2003; Fougere et al., 2007; Rausch, 2009). In Japan study, Katagiri (2012) also presents some evidence of the inability of labour force to adapt immediately to the changes in labour demand.

Since we know that population ageing might increase unemployment, we can observe impact of population ageing on entrepreneurship also indirectly through changes in unemployment. In some cases, the state supports the foundation of businesses by the unemployed (Hinz and Jungbauer-Gans, 1999), so we might find a positive impact of unemployment on entrepreneurship through government incentives for the unemployed who decide to start their own business as also through some other channels like increased motivation to find a way out of unemployment(Thurik, 2003; Thurik and Verheul, 2003; Thurik et al., 2008; Rabarijaona, 2015). Thus, population ageing might indirectly (through an increased unemployment) increase entrepreneurial activity.Yet, on another hand,Marič et al. (2013) in their regression analysiscannot confirm that unemployment rate has statistically significant influence on entrepreneurial activity.

Obviously there is a vast body of empirical research which has been published so far presenting various examples of population ageing impact on entrepreneurial activity. Some investigations prove that influence of population ageing on entrepreneurship is found to be positive in some cases and negative in the others. Depends on the sum of all the effects working through different channels and specific socio-economic circumstances a particular population is faced with.

Based on evidence derived from our own quantitative study on data for Slovenia, we wanted to test whether we can present additional evidence which would support those who prove the positive or those which prove the negative impact of population ageing on unemployment and/or entrepreneurial activity.

There are also many other different consequences of population ageing, apart from those mentioned in that literature review and that have also been explored in different contexts and different relations (Obadić and Smolić, 2008; Pešić, 2009). Population ageing affects public as well as private sector which further on affects investment, pension system, public health care system, tax rates and wage growth. Countries with older workforce and higher share of retired people have lower rate of savings which lowers the real value of money paid out from pension funds. Therefore, pension reform is urgently needed (Miles, 2005, 1-3). However, in the rest of the paper we are focusing on the empirical investigation of influence of population ageing on unemployment and entrepreneurial activity only.

3. Methodology

Here we present the research hypotheses and the methodology which was used to achieve the goals of the research and to test the research hypotheses. Next we present the assumptions on which our research is based as well as its limitations in a sense of its scope, geographical limits and time frame. Finally the most important data used in this investigation is explained.

The Hypothesis

It is obvious from the studies mentioned atthe beginning of the paper in Introduction and especially from the review of the relevant recent studiesthat there are many different consequences of population ageing for some economy, labour market and particularly for entrepreneurial activity. In our research we wanted to statistically test the effects of population ageing on entrepreneurial activity, using cross section data about 210 Slovenian municipalities in the chosen year 2009. Our main research hypothesis is: Older populations have lower entrepreneurial activity.

In our investigation, the expression “older population” is not used to describe some chosen age group of people in a static way. It is used in a comparative way in the following sense.A population of some

municipality is older than the other if it has higher ageing index or higher average age. How are these two population ageing indicators calculated is shown in section "Data used". We simply wanted to empirically test if municipalities with higher ageing index or higher average age (municipalities which are older) also have lower relative number of enterprises and how strong is this effect.An observation unit in our case is a Slovenian municipality, a population which can be older or younger than the other and also different in the entrepreneurial activity than the other. We can see from the review of the recent studies about the impact of population ageing on entrepreneurship, in section which addresses literature review,that that impact could be very different. We believe that there is an unfavourable impact of population ageing on entrepreneurship; and this is why we set the research hypothesis. Using the regression analysis presented in the next section, we were able to test our hypothesis.

Regression Analysis Methodology

In order to test the hypothesis set, we run several regression models. First, we collected secondary data from the databases of Statistical office of Republic of Slovenia (SORS, 2011a; SORS, 2011b and SORS, 2011c). The data refer to several demographic and economic variables by 210 Slovenian municipalities for the year 2009. So, observation units are Slovenian municipalities. The cross section data enable us to exclude any time related effects from the analysis, like economic slowdown and other changes which occur through time. More details about the data used are given in section "Data Used" below. The cross section demographic and economic data were properly arranged, transformed and entered into a statistical computer package SPSS, which was used for regression analysis.

First, bivariate and later also multivariate linear and log-linear regression models were conducted in order to analyse the connection between variables which measure population age structure and variables which measure entrepreneurial activity in Slovenia.

Variables, which measures entrepreneurial activity in Slovenia were used as dependent variables and variables, which measure population age structure were used as explanatory variables. We set assumptions about the relationships and association among several different variables used and set regression models which were tested on the available data about the Slovenian municipalities.

Using regression analysis we estimated parameters of the models and chose the best fitting models based on the standard error of the models, adjusted determination coefficient, F-tests and t-tests. In the regression analysis, some control variables were employed too, in order to eliminate their effects from the explanatory power of the demographic variables.

In order to test the hypothesis the following general regression model was tested: *number of enterprises per 100 population= f(constant; population ageing indicators; control variables; error term μ)*

Assumptions and Limitations

Assumptions of our investigation are mostly related to the indicators which are used to measure population ageing and labour market conditions. We also assume that relative number of enterprises is positively associated with labour market conditions.

Limitations of our investigation narrow the scope of investigation and address some methodological problems. Most important limitations are the following. The research is conducted using data for all Slovenian municipalities; consequently, the results of the research are valid for the whole Slovenia. However, generalisation of those results on other countries is limited due to the specificities of those other countries.When we used control variables, the size of a municipality was measured by the number of its population and the gross investment by the number of enterprises. Due to the data confidentiality, the data on gross investment by municipalities were not available. Entrepreneurial activity is interpreted in a narrow sense only and is quantified with the relative number of enterprises. There are many other factors of entrepreneurial activity apart from those analyzed in our study. However in this study we focus on population ageing only as a factor of entrepreneurial activity.

Data Used

All secondary data were collected from the databases of Statistical office of Republic of Slovenia (SORS, 2011a; SORS, 2011b and SORS, 2011c). The data refer to several demographic and economic variables by 210 Slovenian municipalities for the year 2009. The exact web links to the statistical databases are in the reference list at the end of the paper next to the corresponding reference.

Demographic data

Demographic data were mostly used to measure population ageing. Below is a list of demographic data used in regression analysis.

Average population age is defined as a weighted arithmetic mean of a certain group of people (SORS, 2002). It is calculated as:

$$X = \frac{\sum (x + 0{,}5) * P_x}{\sum P_x}$$

where:

X – average population age

x – age or one-year age group

P_x – number of people who are x years old

*Ageing index*is calculated as the number of persons 65 years old or over per hundred persons under age 15 (SORS, 2002):

$$A_I = \frac{P_{(65+)}}{P_{(0-14)}} * 100$$

where:

A_I –ageing index

$P_{(65+)}$ – population 65 years old or over

$P_{(0\text{-}14)}$ = population under age 15

Natural population increase per 1,000 populationis the rate between the difference between the number of live births and the number of deaths of a chosen area in a chosen calendar year in a numerator and the number of population in the middle of the same year and of the same area in the denominator multiplied by 1,000 (SORS, 2002):

$$ni = \frac{NI}{P_{(30.6.)}} * 1000$$

where:

ni - natural population increase per 1,000 population

NI – absolute natural increase (difference between number of live births and deaths)

$P_{(30.6.)}$ -the number of population on June the 30th of a chosen year

Data on entrepreneurial activity

Thedata below were used in a regression analysis to measure labour market conditions.

*The number of enterprises per 100 population in a municipality.*In bigger municipalities one would expect more enterprises than in smaller municipalities. We measured the size of a municipality by the number of population in a municipality. In order to eliminate the effect of different sizes of municipalities on the number of enterprises, we calculated a relative measure so that we divided the absolute number of enterprises in a chosen municipality by the number of total population that municipality and multiplied the ration by 100.

$$\text{ENT per 100 pop.} = \frac{ENT_x}{P_{(x,31.12.)}} * 100$$

where:

ENT per 100 pop.- the number of enterprises per 100 population in a municipality x

ENT_x– the number of all enterprises in a municipality x

$P_{(x,\ 31.12.)}$– the number of total population in a municipality x

ControlVariables

In our regression analysis, we included additional independent variables in order to control for the "size of the municipality" (measured by the number of population), "the existence of auniversity in a municipality" and "the number of enterprises in a municipality". By the size of the municipality we tried to capture the positive synergies and economies of scale that may occur in bigger municipalities. By the existence of an university in a municipality we wanted to capture the positive effects of the availability and accessibility of higher education and the many other positive effects of an university on the local environment. By the number of enterprises we wanted to capture the economic activity by municipalities. When analysing the dependence of

entrepreneurial activity on the population ageing, we wanted to test, whether the presence of the control variables changes the results of the regression analysis or not.

4. Empirical Evidence

In order to test the researchhypothesis we run several bivariate and multivariate linear and logarithmic regressions. The latter ones were actually linear regressions (linearized logarithmic regressions) too, only with logarithmically transformed data. In all the regression models we analysed the explanatory power of the independent explanatory demographic variables as well as the strength and the direction of the association between the dependent variable (indicator of entrepreneurial activity) and dependent variable (indicator of population ageing). Using regression and correlation coefficients we tested the existence and the direction (positive/negative) of the association and impact that was assumed for each factor in the hypothesis. Using adjusted determination coefficient we wanted to test the share of the variance that could be explained by the independent variables. On the basis of t-test results we tested statistical significance of each individual explanatory variable, where on the basis of F-test results we tested statistical significance of the regression model as a whole. During regression analysis we run many different models, however only those which were significant and those with highest explanatory power were selected for interpretation in this paper. A similar procedure was repeated, when also control variables were entered into the above regression models. After control variables were entered into the initial regression models, we checked if the direction of the influence or statistical significance or the explanatory power of the explanatory demographic variable were changed or not and again for final interpretation used the most appropriate models. The various theoretical views and interpretations of the other researchers were thus upgraded with our own original empirical findings regarding the interrelation between population ageing and entrepreneurial activity.

Results of the Regression Analysis

In order to test our hypothesis,that older populations have lower entrepreneurial activity, we run several regression models; however we present here only those which were most statistically significant and consistent. Model 1 is the final regression model which includes explanatory variables with statistically significant coefficients presented in the first row of table 1; model 2 is the final regression model which includes explanatory variables with statistically significant coefficients presented in the second row of table 1; and model 3 is the final regression model which includes explanatory variables with statistically significant coefficients presented in the third row of table 1.

Table 1: Regression models results

	Regression coefficient (β) (and exact significance levels in the brackets)		
	Model 1	Model 2*	Model 3
Constant	3.965 (0.005)	18.683 (0.000)	0.701 (0.000)
Logarithm of average age	-1.728 (0.025)	/	/
Average age	/	-0.182 (0.014)	/
The size of a municipality (the number of population)	/	3.239 (0.000)	/
Logarithm of the natural population increase	/	/	0.086 (0.000)
F-test	5.130 (0.025)	15,180 (0.000)	24.397 (0.000)
Adjusted determination coefficient (R^2)	0.019	0.119	0.161

Dependent variable: Logarithm of the number of enterprises per 100 population (*In model 2 dependent variable is: The number of enterprises per 100 population)
Number of units observed (N): 210
Source: own calculations based on the data collected from SORS, 2011a; SORS, 2011b; SORS, 2011c

The dependant variable is (logarithm) of the number of enterprises per 100 population. Adjusted determination coefficient (adj.R^2) tells us how much of the variation of (the logarithm of) the number of enterprises per 100 population could be explained by the variation of (the logarithms of) the in the model included population ageing indicators and control variables by the Slovenian municipalities (1.9 % of the variation in model 1, 11.9 % in model 2 and 16.1 % in model 3). Again, we expected the determination coefficients not to be too high, since there are obviously many other factors of the number of enterprises per 100 population, which were not included into the regression analysis. However our main purpose was simply to show that population ageing itself has some significant impact on the number of enterprises per 100 population even when control variable - the size of a municipality measured by the number of population - is included (model 2). According to the regression analysis results, bigger size of a municipality (measured by the number of people) increases the entrepreneurial activity (table 1).

The beta regression coefficients from table 1 show the following. When average age is increased by 1 %, the number of enterprises per 100 population is decreased on average by 1.7 % (model 1). The average number of enterprises per 100 population recorded in 2009 in Slovenia was 6.4.When average age is increased by 1 year the number of enterprises per 100 population is decreased on average by 0.182, holding other variables constant (model 2). When the number of population is increase by 1 person the number of enterprises per 100 population is increased on average by 3.239, holding other variables constant (model 2). When the natural population increase per 1,000 population is increased by 1 % the number of enterprises per 100 population is increased on average by 0.86 % (model 3).The average natural population increase per 1,000 population recorded in 2009 in Slovenia was 1.479 persons (Troha&Čepar, 2015).

5. KeyFindings

Based on the results of our empirical investigation we may answer our research question about the impact of population ageing on entrepreneurial activity. If the average age is higher, the number of enterprises per 100 population is lower. Moreover, when natural population increase is higher, the number of enterprises per 100 population is higher too. We assume of course, that higher natural population increase is associated with younger populations. When the control variables are entered into the regression models, the direction of an influence of demographic variables on the number of enterprises per 100 population stays the same and the statistical significance is still ensured. The control variable the size of a municipality (measured by the number of population in a municipality) has a positive influence on entrepreneurial activity, since bigger municipalities have positive effects of economies of scale, have better developed infrastructure and have other positive externalities which encourage entrepreneurship.Obviously we may *confirm our research hypothesis* that older populations have lower entrepreneurial activity. Consequently they also have lower economic welfare.Lower entrepreneurial activity also leads into lower number of new working places in such municipalities and therefore into higher registered unemployment rate, which is also consistent with some of the previous studies mentioned in the literature review.

The results of our research might be used as an empirical argument when developing basis for governing economic policy. The findings imply, that demographic processes significantly impact labour market, meaning that proper demographic policy might also be taken into account as an instrument of a labour market policy in a wider sense.

6. Conclusion

From the literature review we can see that some studies reveal a negative and some a positive impact of population ageing on entrepreneurial activity.Yet our research confirms our*hypothesis* that population ageing is an important factor, which significantly unfavourably impacts entrepreneurial activity. Most probably that could be explained by the lower flexibility of the ageing labour force, its higher labour cost, outdated knowledge and competencies, lower level of innovativity, creativity and higher aversion to risk taking. Thus we bring forward another empirical evidence of the unfavourable impact of population ageing on entrepreneurial activity which is also consistent with some other previous research(Dixon, 2003; Conen et al. 2012; Fougere et al., 2007; Rausch, 2009; Katagiri 2012; Liang, 2014; Startiene and Remeikiene, 2009). However on the other hand we may also find studies in the literature which imply the oppostite-that population ageing increases entrepreneurial activity(Jackson, 2011;Lisenkova et al., 2010;Thurik et al., 2008; Rabarijaona, 2015). We must keep in mind that entrepreneurial activity has many partial factors in behind which work in different directions. So how will entrepreneurial activity finally change, when population is ageing, depends on the final "sum" of the different directions of impacts of all different factors.

Moreover, our findings are not only about the direction of the impact (positive/negative) but also offer detailed quantitative measures of the strength and significance of the partial influences of the population ageing on entrepreneurship.

The findings of our study is another proof, that younger populations are still more competitive in terms of human capital, compared to the old ones, meaning that population ageing, holding other things constant, is a negative process, which negatively affects a society's economic welfare and wellbeing in a long run. In this context higher fertility and higher number of children per family would mean higher and not lower prosperity and welfare in a long run as it is speculated sometimes.

Our further investigation might include methodology improvements as well as a deepened investigation of a comprehensive factor model of entrepreneurship activity

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