YOUTH UNEMPLOYMENT AND SELF-EMPLOYMENT: TRENDS AND PERSPECTIVES

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Abstract: *The main aim of this article is to research the relationship between youth unemployment and self-employment in the EU and categorise particular EU countries as the countries with youth self-employment driven by push factors or pull factors. It has been revealed that statistically significant relationships between unemployment and self-employment among young people from the 28 EU countries, in only 7 countries have been identified. Of these, Greece, Italy and Cyprus, the unemployment rate among young people would decrease if national governments were to reduce unemployment through self-employment support measures. In other countries such as Germany, Sweden, the Czech Republic and Malta, it would be inappropriate to reduce unemployment through support for self-employment. In other EU countries, fighting youth unemployment requires addressing other labor market issues, such as the reluctance of businesses to employ unqualified or low-skilled young people, reducing the chances of reducing the tax burden when hiring young people, making flexible use of education opportunities with employment. The fact was confirmed that is inappropriate for all countries (in this case EU countries) to apply universal strategies to combat unemployment, because by means of theories and pilot studies on the establishment of statistically significant relationships, it is possible to avoid mistakes by directing support to the needs of target groups.*

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Introduction

As it was noted by Manyande (2006), "a typical characteristic of most labor markets around the world is that the youth unemployment rate is much higher than that of adults" (p. 3). Youth unemployment is sensitive to the changes in general economic conditions, fluctuations in aggregate demand and minimum wages. Youth are often the first to be laid off when companies downsize and are not eligible for redundancy payments. Even higher education does not guarantee a decent job. If left uncared, high youth unemployment rates can negatively affect the economic growth potential of a country and create the conditions for social unrest (Burchell et al., 2015).

Self-employment is often advocated as a potential remedy for the perennial problem of youth unemployment (Williams, 2004; Manyande, 2006; Sheehan & Mc Namara, 2015; Dvouletý et al., 2018; etc) because it helps a person to enter the labour market despite limited work experience, low qualifications, caring responsibilities, health conditions, etc (Walsh, 2011; Dimian et al., 2018). What is more, self-employment provides a high degree of autonomy and flexibility (Jones et al., 2016). Nevertheless, it is also the case that self-employment is related to the risk of earning low financial returns (in comparison to the earnings in similar employee jobs), limited access to social protection and/or social insurance coverage, and limited opportunities of self-improvement. In such contexts, the issue of whether the young unemployed should be encouraged to engage in self-employment is still debatable, and in order to assess whether or not self-employment is simply lesser of two evils, it is important to know more about the links between youth unemployment and self-employment.

Thus far, the studies on the relationship between youth unemployment and self-employment have mostly covered assessment of the individual level factors that lead previously unemployed young people to engage in self-employment (Williams, 2004; Dvouletý et al., 2018; etc), the policy measures that help young unemployed into self-employment (Manyande, 2006; Walsh, 2011; Sheehan & Mc Namara, 2015; Burchell et al., 2015; Jones et al., 2016; Sasongo & Huruta, 2019) and the impact of the recession *push* and entrepreneurial *pull* factors (Frankjović et al., 2015; Sechele, 2016; etc). However, hardly any study categorises particular countries as the ones with youth self-employment "driven by *push* factors" or "driven by *pull* factors". The primary purpose of this article is to research the relationship between youth unemployment and self-employment in the European Union (further – EU) and categorise particular EU countries as the countries with youth self-employment driven by *push* factors or *pull* factors. For fulfilment of the defined purpose, the following objectives were raised: 1) to review the statistical data on youth unemployment and self-employment in the EU; 2) to review the literature on the links between youth unemployment and self-employment; 3) to select and substantiate the methodology of the research; 4) to introduce the results of the empirical research. The methods of the research include literature analysis, statistical data analysis, correlation and multiple regression analysis.

1. Links between Youth Unemployment and Self-employment: Literature Review

Youth unemployment is considered to be caused by numerous micro- and macro-economic factors. The main micro-economic factors include the lack of skills and experience (Páleník, 2011; Sechele, 2016; Jones et al., 2016; OECD, 2017; etc), family background (people from poorer families are more likely to have lower education and enter the labour market prematurely, while people with self-employed parents and higher parental incomes are more likely to become self-employed) (Hout & Rosen, 2000; Mlatsheni & Rospabe, 2002; Manyande, 2006; Hundley, 2006), and in rarer cases – gender (male are more likely to engage in self-employment than female) (Manyande, 2006). The main macro-economic factors cover the mismatches between the educational system and the labour market (Manyande, 2006), the aggregate demand (Páleník, 2011; Frankjović et al., 2015), wages (in particular, minimum wages) (Walsh, 2011; OECD, 2017), and the size of the youth labour force (Manyande, 2006; Escudero & López Mourelo, 2013). The mismatches between the educational system and the labour market cause higher supply of than the demand for labour, which, in its turn, ends in higher unemployment rates. The aggregate demand reflects the state of the general economic system, so a fall in the aggregate demand causes a subsequent fall in the demand in the labour force, i.e. a rise in the rate of unemployment. Manyande (2006) notes that youth unemployment is even more sensitive to the fluctuations in the aggregate demand than adult unemployment since the interests of young employees are less likely to be protected by legislation or trade unions. The fluctuations in the minimum wage significantly affect youth unemployment as young people with lower skills and limited work experience commonly do the lowest paying jobs. Finally, a greater size of the youth labour force means that a higher number of jobs need to be created (Perugini & Signorelli, 2010; Escudero & López Mourelo, 2013).

The interest in the relationship between youth unemployment and self-employment has remarkably increased over the last ten years, and this increase has been mainly determined by recognition of a small business as of a source of economic growth in both developing and developed economies. The findings from previous studies on the links between youth unemployment and self-employment have been reviewed in Tab. 1.

Literature analysis reveals that youth self-employment is caused by two opposing sides

Tab. 1: The review of previous findings on the links between youth unemployment and self-employment – Part 1

Author(s), year	Purpose	Method(s)	Findings
Williams, 2004	To examine the content of self-employment, characteristics of the self-employed and the returns to self-employment experience for a sample of teenagers and young adults in the USA.	National longitudinal survey of youth	Self-employment is quite rare among young people, but they are much more likely to become self-employed in early adulthood.
Frankjović et al., 2015	To research whether youth self-employment is promoted by high youth unemployment in the EU.	Descriptive statistics, linear regression analysis	An increase in youth unemployment does not lead to an increase in youth self-employment.
Sechele, 2016	To reveal why unemployed young people are not entering self-employment in Botswana.	Analysis of documentary sources, focus groups, semi-structured interviews (methodological triangulation)	Young people find self-employment unfeasible due to their low skills and lack of work experience; self-employment is treated as an insecure and indecent employment opportunity.
Páleník, 2011	To assess the policy measures to help young unemployed into self-employment in Slovakia.	Statistical data analysis, case analysis, systematic and comparative literature analysis	The lack of long-term business opportunities in regions with high unemployment and low population's purchasing power discourage young unemployed from self-employment.
Walsh, 2011	To review the pathways to support young people into self-employment in Spain.	Statistical data analysis, systematic and comparative literature analysis	Under the conditions of high youth unemployment, the main way to support young people into self-employment is through creating a start-up favourable climate with low bureaucracy and entry cost.
Dvouletý et al., 2018	To research the individual level factors that lead previously unemployed young people to engage in self-employment in 11 European countries.	Survey	Previous unemployment has a significantly moderating effect on the individual characteristics that increase the likelihood of self-employment.

Tab. 1: The review of previous findings on the links between youth unemployment and self-employment – Part 2

Sheehan & Mc Namara, 2015	To overview the policy literature on self-employment and entrepreneurship with a particular focus on six EU member states.	Statistical data analysis, systematic and comparative literature analysis	Youth unemployment may promote youth self-employment under the conditions of the appropriate support (financial support, coaching, counselling, building the entrepreneurial mind-set).
Manyande, 2006	To investigate how entrepreneurship can be promoted amongst the youth in South Africa.	Labour force surveys, cross-sectional data analysis	African and Coloured youth are particularly disadvantaged when it comes to participation in self-employment.
Jones et al., 2016	To investigate self-employment and enterprise as a route into work for young unemployed people.	Evidence review, case studies, interviews with stakeholders	Self-employment does not function as an alternative to waged employment for most young people; self-employment success depends on capital, experience and skills.
Burchell et al., 2015	To provide a comprehensive analysis of the key issues surrounding the use of self-employment interventions as labour market attachment mechanisms for young people.	Statistical data analysis, case studies	No clear evidence that the self-employment and entrepreneurship schemes actually create new jobs was found.

Source: own

– *push* and *pull* factors (Frankjović et al., 2015). The effect of *push* factors, also known as the refugee effect, desperation effect, recession push or unemployment push, means that when unemployment rate is rising (commonly under the conditions of an economic recession and a fall in the aggregate demand), an increasingly higher number of young people may start seeing self-employment as an attractive alternative to a wage job (Özerkek & Doğruel, 2015), although some authors (Constant & Zimmerman, 2014) treat unemployment-driven self-employment (or self-employment out of necessity) as destructive and destined to fail because an individual decision to start-up a business in this case is a consequence of limited opportunities. The effect of *pull* factors, also known as the prosperity pull or entrepreneurial effect, means that since self-employment promotes entrepreneurship, it stimulates business activities, which, in its turn, leads to a decreased unemployment rate and higher minimum wages in subsequent periods (Özerkek & Doğruel, 2015; Blattman & Dercon, 2016). In other words, "pull factors are represented by entrepreneurs who are credited with stimulating job growth and encouraging innovation" (Frankjović et al., 2015, p. 248).

Nevertheless, the theoretical links between youth unemployment and self-employment are not always confirmed by empirical research. For instance, by applying the methods of descriptive statistics and linear regression, Frankjović et al. (2015) found some correlation between youth unemployment and self-employment in Nordic countries (Finland, Denmark, Sweden, Estonia, Latvia and Lithuania), but did not confirm that an increase in youth unemployment necessarily leads to an increase in youth self-employment. By employing evidence review, case studies and interviews with stakeholders, Jones et al. (2016) came to the conclusion that self-employment does not function as an alternative to waged employment for most young people

because the success of self-employment depends on capital, experience and skills. Páleník's (2011) study showed that high rates of youth unemployment not necessarily lead to higher rates of youth self-employment due to the negative effects of the current tax system, insufficient unemployment benefits, which do not provide enough resources to promote self-employment start-up, and most of all, due to the lack of long-term business prospects and low population's purchasing power in economically weak and/or crisis-affected regions. In other words, poor market opportunities limit the establishment of new small enterprises as any business is believed to be condemned without a boost in the local economy that would ensure a long-term stability. Dvouletý et al. (2018), who researched the individual-level factors that lead previously unemployed young people to engage in self-employment in eleven European countries, found that previous unemployment has a significant moderating effect on the individual characteristics which are related to a higher likelihood of starting-up a business (engagement in self-employment), i.e. young people who have previously been unemployed lose their individual characteristics that may push them into self-employment. This proposes that there might exist an inverse relationship between unemployment and self-employment, although the overall propensity of self-employment was found not to be affected by one's unemployment experience. The study carried out by Walsh (2011) revealed that under the conditions of high unemployment rate, self-employment is still more common among older (15–64 year old) rather than younger (15–24 year old) population, although the proportion of 15–24 year olds becoming self-employed in the UK increased from 2.6% in 2000 to 4.3% in 2010. IT advancement and start-up cost reduction are seen as the key reasons of this increase. The author supports the general approach following which youth self-employment should be encouraged by creating a start-up favourable environment whereby self-employment is facilitated through low bureaucracy and low entry costs (wage subsidies, training and individual pathways are considered to be less effective).

The significance of the role of the public and state sector, i.e. of public policies, in youth self-employment promotion was also highlighted by Manyande (2006), Sechele (2016), Sheehan and Mc Namara (2015), Hinks et al. (2015) and many others. As it was noted by Sechele (2016), a large number of unemployed young people are disadvantaged in the labour market due to their low levels of skills and work experience, which makes it difficult to them to enter either wage or self-employment sectors. For this reason, appropriate public policies (i.e. provision of financial support, coaching, counselling, building the entrepreneurial mind-set (Sheehan & Mc Namara, 2015)) may serve as an additional factor *pushing* young people to self-employment. What concerns the types of the support provided, Sheehan and Mc Namara (2015) revealed that a lack of the access to financial resources is a very significant barrier for the youth to start-up a business. Having investigated the situation in six EU member states (Germany, Estonia, Ireland, Poland, Spain and the UK), the authors found that thirty-two percent of the policies (i.e. 65 out of the 203 policies examined) in the countries under consideration specifically target the issue of financial constraint. Apart from that, the programs focus on young people's financial education (sources, risks, availability, suitability) (OECD/European Commission, 2014). Nevertheless, it is recognized that the most effective self-employment promotion programs should include both financial *(hard)* and education *(soft)* support (OECD/European Commission, 2012) because the combination of them (the hybrid approach) may significantly contribute to a more sustainable long-term effect (Sheehan & Mc Namara, 2015; Hinks et al., 2015). This approach is supported by Manyande (2006) who states that the development of entrepreneurship through the provision of financial support, mentoring and entrepreneurship skill training assist the youth in transferring from unemployment to self-employment.

Summarising, the links between youth unemployment and self-employment to a large extent depend on a stage of an economic cycle (recession or boost) and public policies. High rates of youth unemployment may promote self-employment in economically stable regions, where long-term business prospects are envisaged and the population has sufficient purchasing power, whereas the lack of long-term business opportunities in economically unstable regions and low population's purchasing power discourage young unemployed from self-employment. Appropriate public policies

(reduction of bureaucracy, lowering of taxes, provision of financial support, coaching, counselling, building the entrepreneurial mind-set) may serve as an additional factor pushing young people to self-employment.

2. Youth Unemployment and Self-employment in EU: Review of the Statistical Data

In the European Union, youth unemployment rate refers to unemployed persons from 15 to 24 years of age. This population group is considered as an at-risk population since the

Tab. 2: Youth unemployment figures in the European Union between 2007 and 2017, percent

Country	Youth unemployment rate			
	2007	2015	2016	2017
Belgium	18.8	22.1	20.1	19.3
Bulgaria	14.1	21.6	17.2	12.9
Czech Republic	10.7	12.6	10.5	7.9
Denmark	7.5	10.8	12.0	11.0
Germany	11.8	7.2	7.1	6.8
Estonia	10.1	13.1	13.4	12.1
Ireland	9.3	20.5	17.0	14.5
Greece	22.7	49.8	47.3	43.6
Spain	18.1	48.3	44.4	38.6
France	19.5	24.7	24.6	22.3
Croatia	25.4	42.3	31.8	27.0
Italy	20.4	40.3	37.8	34.7
Cyprus	10.2	32.8	29.1	24.7
Latvia	10.6	16.3	17.3	17.0
Lithuania	8.4	16.3	14.5	13.3
Luxembourg	15.6	16.6	9.1	15.3
Hungary	18.1	17.3	12.9	10.7
Malta	13.5	11.8	11.0	10.4
Netherlands	9.4	11.3	10.8	8.9
Austria	9.4	10.6	11.2	9.8
Poland	21.6	20.8	17.7	14.8
Portugal	21.4	32.0	28.2	23.8
Romania	19.3	21.7	20.6	18.3
Slovenia	10.1	16.3	15.2	11.2
Slovakia	20.6	26.5	22.2	18.9
Finland	16.5	22.4	20.1	20.1
Sweden	19.2	20.4	18.9	17.8
United Kingdom	14.3	14.6	13.0	12.1
EU-28	**15.8**	**20.3**	**18.7**	**16.8**
Euro area	**15.6**	**22.3**	**20.9**	**18.8**

Source: Eurostat, 2018

general trend is that the youth unemployment rate is higher than the unemployment rate for other age groups. As for the rate of the total population, the youth unemployment rate in the EU-28 has taken an upward trend peaking in 24.0 percent in January of 2013 and receding to 16.8 percent in 2017 (see Tab. 2).

Although between 2007 and 2010 the EU-28 youth unemployment rate was close to that in the euro area, in 2012 the euro area youth unemployment rate overtook the EU-28 rate, and the gap became even larger in 2013 and during 2014. In 2015, 2016 and 2017 the gap between the EU-28 and the euro area youth unemployment rate was close or equal to 2 percentage points. As of May 2018, the highest rates of youth unemployment in the EU-28 were suffered by Greece (43.2%), Spain (33.8%) and Italy (31.9%), while Malta, Germany and Estonia had the lowest youth unemployment rates (4.8%, 6.1% and 6.8%, respectively) (Statista, 2018).

The statistical data on the EU-28 youth self-employment reveals that only about 4.1% of working youth in the EU are self-employed (see Tab. 3).

Tab. 3: Youth self-employment figures in the European Union between 2007 and 2016, percentage of employment

Age group	2007	2015	2016
Total (15–64 year-olds)	14.4	14.1	14.0
Youth (15–24 year-olds)	4.0	4.2	4.1

Source: OECD, 2017

The EU-28 youth self-employment rate dropped to 3.8% in 2008 and reached its highest value of 4.3% in 2012. In 2016, the EU-28 had 30.6 million self-employed people, of which nearly 763,300 were youth (OECD, 2017). In 2017, the number of unemployed young people in the EU decreased to 3.37 million, i.e. below the pre-crisis (2008) level (European Commission, 2018).

Summarising, in spite of the fact that the number of unemployed young people in the EU has recently been decreasing, the statistical data indicate that there exists an unrealised entrepreneurial potential among the age group under consideration that appropriate public policies, designed to eliminate the barriers impeding business start-up, can help to unlock.

3. Research Results and Discussion

To achieve the purpose of the article – to research the relationship between youth unemployment and self-employment in the EU and categorise particular EU countries as the countries with youth self-employment driven by *push* factors or *pull* factors, the Spearman's correlation coefficient (rS) is chosen to investigate the strength of the phenomena in question in terms of linearity. The calculations include the unemployment rate of people aged 15 to 24, expressed in thousands of people (y) and self-employment between the ages of 15 and 24 (x), expressed in thousands of individuals in the EU-28 countries in the period 2007–2017.

Spearman's correlation coefficient is a statistical measure of the strength of a monotonic relationship between paired data. In a sample it is denoted by and is by design constrained as follows and its interpretation is similar to that of Pearsons, e.g. the closer is to the stronger the monotonic relationship. Correlation is an effect size and so we can verbally describe the strength of the correlation using the following guide for the absolute value of: .00–.19 "very weak"; .20–.39 "weak"; .40–.59 "moderate"; .60–.79 "strong"; .80–1.0 "very strong".

The linear multiply regression model is used to investigate the impact of youth self-employment on trends in youth unemployment rates. Multiple linear regression attempts to model the relationship between two or more explanatory variables and a response variable by fitting a linear equation to observed data. Every value of the independent variable x is associated with a value of the dependent variable y. The population regression line for p explanatory variables x_1, x_2, ..., x_p is defined to be $\mu_y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + ... + \beta_p x_p$. This line describes how the mean response μ_y changes

with the explanatory variables. The observed values for y vary about their means μ_y and are assumed to have the same standard deviation σ. The fitted values b_0, b_1, ..., b_p estimate the parameters β_0, β_1, ..., β_p of the population regression line.

In the first stage of the empirical study, calculating Spearman's correlation coefficient for the EU-28 countries, where Yt is the unemployment rate for people aged 15–24 years in the period 2007–2017, the number of self-employed persons of X–15–24 years of age, thousand, can be concluded:

1. Of the 28 EU countries, statistically significant moderate-intensity relationships were only obtained in 7 EU countries: in Cyprus (r_S = −0.772, p = 0.05), in the Czech Republic (r_S = 0.724, p = 0.012), in Germany (r_S = 0.627, p = 0.039), in Greece (r_S = −0.609, p = 0.047), in Italy (r_S = −0.618, p = 0.043), in Malta (r_S = 0.695, p = 0.018), in Sweden (r_S = 0.706, p = 0.015).
2. Medium-strong positive relationships established in the Czech Republic, Germany, Greece, Malta and Sweden suggest that these countries are classified as *pull* theories, i.e. the unemployment rate in these countries tends to increase as the youth self-employment rate increases. Hence, in these groups of countries self-employed persons become faster not because of absence of the possibility of finding a job, but due to motivation and desire to create their own business.
3. The establishment of moderate negative correlations in Cyprus and Italy allows these countries to be categorized as *push* theories, when young people start to create their own business due to a lack of employment opportunities in the country or young people's limited opportunities to find a job.
4. In the remaining 21 EU countries, there were no statistically significant correlations

Tab. 4: Results of multiple regression

Countries	Equation	Explanation
Positive relation		
Czech Republic	y = −8,409 + 2,737 × Self-employment	With an increase in youth self-employment by 1 thousand, the unemployment rate among young people increases by 2,737 thousand persons.
Germany	y = −138,386 + 8,678 × Self-employment	With an increase in youth self-employment by 1 thousand, the unemployment rate among young people increases by 8,678 thousand persons.
Sweden	y = 38,543 + 9,369 × Self-employment	With an increase in youth self-employment by 1 thousand, the unemployment rate among young people increases by 9,369 thousand persons.
Malta	y = 2,580 + 1,306 × Self-employment	With an increase in youth self-employment by 1 thousand, the unemployment rate among young people increases by 1,306 thousand persons.
Negative relation		
Cyprus	y = 18,620 − 6,601 × Self-employment	With the increase in youth self-employment by 1 thousand, the unemployment rate for young people is reduced by 6,601 thousand persons.
Italy	y = 941,740 − 3,244 × Self-employment	With the increase in youth self-employment by 1 thousand, the unemployment rate for young people is reduced by 3,244 persons.
Greece	y = 211,807 − 4,941 × Self-employment	With the increase in youth self-employment by 1 thousand, the unemployment rate for young people is reduced by 4,941 thousand persons.

Source: own

between the youth self-employment rate and the youth unemployment rate. It can be assumed that the calculation of statistically insignificant relationships leads to greater influence of other labor market factors on the reduction of the unemployment rate.

The results of multiple regression evaluated in the second stage of the empirical study are presented in Tab. 4.

The multi-regression analysis of the calculations revealed that (not) identifying positive or negative statistically significant relationships or assigning links to *push* and *pull* theories allows national governments to make effective strategic choices by choosing appropriate measures to tackle self-employment and unemployment.

In countries that have identified the effect of *pull* theory, reducing youth unemployment will be completely ineffective through business promotion or other self-employment support measures/programs. Meanwhile, in countries that have the effect of *push* theory, the youth unemployment rate can be effectively reduced by supporting young people's engagement in the labor market through a self-employment prism. Consequently, relationships based on correlation allow initiating further research to examine the content of self-supporting employment programs in accordance with the motives of the *push* and *pull* theory.

Conclusions

Most often, youth entrepreneurship measures or strategies are used to tackle youth unemployment, but most of the money invested in reducing the unemployment rate of young people does not produce the desired result. The theory of *push* and *pull*, which explains the emergence of the entrepreneurship concept, argues that identifying motivational causes is one of the most important determinants of the effectiveness of self-employment programs and the achievement of the target group. Hence, identifying and attributing autonomous employment motives to the aforementioned theories would make it possible to use targeted support for business start-ups by national governments. Empirically, it has been revealed that statistically significant relationships between unemployment and self-employment among young people from the 28 EU countries, in only 7 countries, have been identified. Of these, Greece, Italy and Cyprus, the unemployment rate among young people would decrease if national governments were to reduce unemployment through self-employment support measures. In other countries such as Germany, Sweden, the Czech Republic and Malta, it would be inappropriate to reduce unemployment through support for self-employment. In other EU countries, fighting youth unemployment requires addressing other labor market issues, such as the reluctance of businesses to employ unqualified or low-skilled young people, reducing the chances of reducing the tax burden when hiring young people, making flexible use of education opportunities with employment, etc. The paper confirms the fact that it is inappropriate for all countries (in this case EU countries) to apply universal strategies to combat unemployment, because by means of theories and pilot studies on the establishment of statistically significant relationships, it is possible to avoid mistakes by directing support to the needs of target groups.

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