



Review of Empirical Studies on Self-Employment out of Unemployment: Do Self-Employment Policies Make a Positive Impact?

Ondřej Dvouletý¹ and Martin Lukeš

University of Economics in Prague

Abstract. The role of self-employment policies as a way out of unemployment has been challenged. Shane (2009) stated that incentives for starting low growth companies should be eliminated as they attract the worst entrepreneurs. However, scientific evidence analysing outcomes of self-employment policies is, with the exception of Germany, scarce. We review 18 empirical studies published in the past ten years that focus on self-employment out of unemployment and summarize the applied approach, used data, variables, control groups and reported findings. Most studies find positive effects of self-employment policies on employment status and personal income of former unemployed individuals and increased survival rates of subsidized businesses. On the other hand, subsidized businesses underperform regular ones. We emphasize that growth cannot be taken as an all-embracing policy goal. There are other goals such as maintaining work-related skills. We suggest avenues for future research and policy recommendations including comparison of effects of various active labour market policies and taking into account local conditions.

Keywords: entrepreneurship policies, self-employment policies, start-up subsidies, counterfactual evaluation, quantitative review, evidence based policies.

Funding/Acknowledgements: This research is funded under the EU collaborative research project CUPESSE (Cultural Pathways to Economic Self-Sufficiency and Entrepreneurship; Grant Agreement No. 613257). An earlier version of the paper was presented at the 16th Annual Conference of the European Academy of Management (EURAM), held in Paris in June, 2016.

JEL Codes: H81, J68, L26, L53

1. Introduction

Scholars investigating the relationship between the economic performance of the country and entrepreneurship are in consensus, that entrepreneurship plays an important and contributing role in the country's economic development (e.g. Carree and Thurik, 2010; Klapper et al., 2015 or Dvouletý and Mareš, 2016a).

1. **Address:** Department of Entrepreneurship, Faculty of Business Administration, University of Economics in Prague, W. Churchill Sq. 4, 130 67 Prague 3, the Czech Republic, **Emails:** ondrej.dvoulety@vse.cz, martin.lukes@vse.cz, **Mobile:** +420 728 431 027

Policy makers shape the business environment not only with the legislation framework, but they also actively support new and existing business entities through various entrepreneurship policies (Minniti, 2008). These can be defined as “policy measures taken to stimulate entrepreneurship that are aimed at the pre-start, the start-up and post-start-up phases of the entrepreneurial process.” (Stevenson and Lundström, 2001, p. 23). Entrepreneurship policies utilise loans, soft-loans on investments, guarantees, government equity, non-repayable grants, interest rate grants, incentives, tax deductions, entrepreneurial trainings or capital transfers to current or future entrepreneurs (Pergelova and Angulo-Ruiz, 2014). Because of many types of policies, it is important to clearly categorize them and set up clear goals for them with respect to the local entrepreneurial ecosystems (Terjesen et al., 2016).

Positive outcomes of policies focused on self-employment were however strongly criticised by Shane (2009) who concluded that supported businesses ran by formerly unemployed are marginal, describing them as wage substitutes, having little impact on economic performance and overall employment. He even suggested that these policies attract the worst entrepreneurs. Similar arguments are given by Mason and Brown (2013) who comment on the importance of aiming entrepreneurship policies towards high-potential new ventures that may increase employment, create new jobs and bring desired economic growth. In line with these arguments, there is a visible shift in entrepreneurship policies towards identification and support of “gazelles” and “unicorns” – highly scalable start-ups with global ambition that became a focus of policy-makers’ dreams (Autio and Rannikko, 2016; Henrekson and Johansson, 2010; Council of the European Union, 2010).

On the other hand, one can perceive 1) the increased role of self-employed professionals in the society of 21st century (Burke, 2015) and 2) that unemployment, especially youth unemployment and long-term unemployment, becomes a significant issue in many European countries and has many negative economic and social outcomes (Jones et al., 2015; Eurofound, 2012; Mroz and Savage, 2006). Congregado et al. (2010) found that the number of self-employed goes up during recession and self-employment thus serves as a way out of unemployment. Current entrepreneurship scholars continue in empirical investigations of the relationship between entrepreneurship and business cycle to support Congregado et al.’s findings across countries (e. g. Cueto et al., 2015; Fritsch et al., 2015 or Dvouletý and Mareš, 2016b). Evidence from the analysis of European Commission Household Panel (Román et al., 2013) shows that start-up incentives increase the likelihood to become self-employed out of unemployment.

Therefore, some countries apply, as a part of active labour market policies (ALMPs)², specific self-employment policies (Månsson and Delander, 2011;

2. Active labour market policies are usually defined as government programmes that intervene in the labour market to help the unemployed find work, e.g., Hörisch et al. (2014).

Eurofound, 2016) that can be defined as government programmes that support unemployed individuals to enter self-employment. Self-employment policies have the potential of “double dividend”, because once unemployed receive the capital grant and establish their own business, they are out of unemployment and may also create new jobs from their own enterprise and further reduce the unemployment rate. These positive spillover effects may lead to lower unemployment rate, indicating higher aggregated demand and result in higher economic growth (Caliendo and Künn, 2014).

Despite the fact that subsidized entrepreneurs are perceived as born out of necessity (Caliendo and Kritikos, 2010) the main purpose of self-employment policies as a part of ALMP may be to maintain employment habits and skills of unemployed during the times of higher unemployment and prevent most endangered groups of individuals on the labour market from permanent unemployment and loss of further employment opportunities, regardless of the fact that they have often lower levels of education, contacts, skills and lack of experience and knowledge, compared to regular entrepreneurs (Congregado et al., 2010; Niefert, 2010).

Twenty years ago, Meager (1996) created a literature review summarizing empirical findings from Denmark, France, West Germany, United Kingdom and United States and concluded, that evidence obtained by him does not present a conclusive assessment of the overall effectiveness of self-employment programmes. A new report by the European Foundation for the Improvement of Living and Working Conditions (2016) focuses specifically on youth programmes and discusses three empirical studies evaluating youth entrepreneurship programmes. Authors conclude that the more sophisticated the approach that is used in the evaluation, the lower is the found effect of the policy. Results differed across the implemented methodology. More effort needs to be put into efficiency analysis and quantification of deadweight loss. Only partially promising and mixed results were also reported in the most recently published review of empirical studies investigating outcomes of youth ALMP by Caliendo and Schmidl (2016).

This review aims to identify and analyse empirical studies published in the past ten years that deal with the issue of self-employment out of unemployment, with a special focus on evaluation of respective start-up support policies. The increasing role and spread of econometric tools necessary for evaluation of self-employment programmes allow us to present the findings of eighteen published studies that are based on data from France, Germany, Poland, Romania, Spain and Sweden to enrich academia with the knowledge regarding their applied data, methodology, procedures and findings. Another purpose of this study is to encourage national teams to conduct empirical counterfactual evaluations with respect to the national and regional conditions (Preuss, 2011), sharing their experience and forming the best policy practices as highlighted by Atherton and

Price (2008). Besides the research community, the outputs of this review are interesting also for policy makers and governmental authorities.

The upcoming section describes the selection of papers listed in the review. The subsequent review of empirical studies is divided into two subsections, the first presenting a summary of research designs, variables, methods and control groups and the second presenting empirical results of the analysed studies. Policy recommendations based on the outcomes from the review are then formed together with suggestions for future research. The final part concludes and summarizes the obtained findings.

2. Selection of Articles

Systematic reviews are important, because they provide empirical researchers with strategies for future research based on the analysed literature (Ginsberg and Venkatraman, 1985). The articles selected for the review were searched through the databases Web of Science (WoS) and Scopus with a condition to be published in the past ten years to ensure time relevancy of presented outcomes. Search strategy was based on one of the following keywords:

Unemployed subsidies entrepreneurship, unemployment policy entrepreneurship, unemployment business policy, active labour market policy start up, start up subsidies unemployment, enterprise subsidy unemployment; enterprise policy unemployed, new business programme unemployment, new business formation unemployed, self-employment programme.

A broad search revealed 446 articles listed in WoS and 508 articles listed in the Scopus database. These articles have been carefully inspected and also, out of the selected articles, references were taken into account, making a final 18 studies selected for this review, focused on the analysis of self-employment out of unemployment, with a special focus on the impact of self-employment programmes. Out of the selected articles, papers most frequently appeared in *Small Business Economics*, *Oxford Bulletin of Economics and Statistics* and in *International Journal of Manpower*, however the articles were spread in various journals.

One outcome of this searching is the fact, that the majority of researchers dealing with the evaluation of self-employment policies are associated with the Institute for the Study of Labor in Bonn (IZA) and they publish studies focused mainly on evaluations in Germany. A significant research gap is hence perceived within the other European countries.

3. Review of Empirical Studies

As already mentioned in the introduction, this review does not only aim to summarize findings of previous studies, but also to provide extensive information about the applied methods, sample sizes and framework that can be implemented by researchers from countries where such evaluations have not taken place so far. Results of the review of eighteen empirical studies are reported in Table 1 below, containing information about authors and year of publication, focus of the study (research question), type of used data (cross-sectional/time series/longitudinal) and details about the collected sample. Additional columns contain information about used variables (both dependent and explanatory), control groups, implemented methods of evaluation and obtained results.

Table 1: Review of empirical studies on self-employment out of unemployment

Authors	Focus of the study	Data	Sample	Dependent Variables	Explanatory Variables	Control Group	Method	Results
Andersson and Wadensjö (2007)	To analyse economic outcomes for unemployed who become self-employed	Longitudinal	1,441,798 men in Sweden for period of years 1998-2002	Income, probability of becoming self-employed	Age, education, marital status, place of residence, being a second-generation immigrant, start-up subsidy	Comparing participants and non-participants with group of employed wage earners	Probit and multinomial logit regression model estimates	The economic outcomes of self-employment were inadequate for many who were unemployed earlier. Unemployed who got a start-up subsidy were doing better than unemployed without a subsidy in different aspects (income, number of employees, exit).
Baumgartner and Caliendo (2008)	To evaluate effectiveness of two ALMP programmes on self-employment	Longitudinal	3,100 individuals in Germany tracked from 2003 to 2006	Employment status (employed, self-employed or unemployed), personal earnings	Gender, age, marital status, number of children, nationality, health restrictions, education, work experience, earnings, unemployment benefits and its duration	Matching unemployed participants and non-participants with propensity score based on covariates	Difference in Differences approach (DID) calculating average treatment effects (ATT) and accumulation of outcomes	22 months after the programme participants had lower unemployment rate and higher personal income compared to non-participants. Better results were observed for men in comparison with women.
Caliendo (2009)	What is the impact of start-up subsidies for unemployed on earnings and unemployment?	Longitudinal	1,300 individuals starting business in Germany 1994-2004	Employment status (employed, self-employed or unemployed), personal earnings	Gender, age, marital status, number of children, nationality, health restrictions, education, work experience, earnings, unemployment benefits and its duration	Matching unemployed participants and non-participants with propensity score based on covariates	DID approach calculating average ATT and accumulation of outcomes	Positive impact of the programme on earnings and employment rates in comparison with control group 22 months after the end of programme. Larger effects on employment status were observed for women, however not for their earnings.
Caliendo and Kritikos (2010)	What is the impact of start-up support programmes for unemployed on earnings, employment status and number of employees according to their characteristics?	Longitudinal	3,100 start ups founded by unemployed in Germany from 2003 to 2006	Survival rate, personal income, number of employees	Gender, relationship status, health restrictions, FTE, age, children, experience, education, type of industry, programme, motivation (push and pull)	Comparing participants within the programme according to individual characteristics	Differences quantified using cross-tabulations, t-tests and descriptive statistics	Results showed that the majority of new businesses were solo entrepreneurs, male earnings were higher than before participation in the programme, and survival rate after 2.5 years was 70 %. Bridging allowance had bigger effects than start-up subsidy in terms of jobs created.

Authors	Focus of the study	Data	Sample	Dependent Variables	Explanatory Variables	Control Group	Method	Results
Congregado et al. (2010)	To analyse long-term relationship between self-employment, own-account workers and employers in terms of ALMP	Time series	Quarterly data for period 1987-2004 in Spain	Entrepreneurship rate, solo entrepreneurship rate	Entrepreneurship rate, solo entrepreneurship rate		Vector Error Correction Models (VECM) estimated with maximum likelihood	Authors cannot confirm efficiency of the entrepreneurship policy in Spain, however they argue that the number of solo entrepreneurs finding safer jobs during boom periods is smaller than the supply of new solo entrepreneurs during recessions and argue in favour of self-employment policies in Spain.
Niefert (2010)	To assess the overall economic effects of start-ups from unemployment and to form expectations about this kind of firms.	Longitudinal	877 German individuals over years 2003-2004	Probability of becoming self-employed, probability to have employees	Age, sex, household income, education, residence in eastern Germany, funding, industry, number of employees	Employed persons, unemployed and engaged in business activity	Probit model estimates	Start-ups from unemployment had fewer employees on average and results showed that they were mostly one-man firms. A large proportion of start-ups from unemployment were in less capital-intensive sectors characterized by a high level of competition. Individual unemployment was found to encourage the transition to self-employment.
Rodríguez-Planas (2010)	To evaluate public employment services and small business programmes for unemployed individuals.	Longitudinal	1,311 observations over 2000-2002 in Romania	Employment status (employed, self-employed or unemployed), personal income	Age, gender, education, region, work experience, earnings, unemployment history	Matching unemployed participants and non-participants with propensity score based on covariates	DID approach calculating ATT, estimated separately for age, region and education groups	Participation in the programme, compared to non-participants, led to increased income and reduced probability of becoming unemployed for participants.
Caliendo and Künn (2011)	What is the impact of start-up subsidies for unemployed on employment?	Longitudinal	2,081 individuals participating in two programmes during period 2003-2008 in Germany	Employment status (employed, self-employed or unemployed), personal earnings, occupational satisfaction	Age, sex, marital status, number of children, health restriction, education, nationality, work experience, income, previous unemployment	Matching unemployed participants and non-participants with propensity score based on covariates	DID approach calculating ATT and accumulation of outcomes	Both programmes had positive impact on employment status (employed or self-employed) of participants and their income after five years. Participants also were much more satisfied with their occupational situation.
Månsson and Delander (2011)	To evaluate start-up subsidies allocated to unemployed with respect to gender differences	Longitudinal	14,358 participants over years 2003-2007 in Sweden	Employment status (employed, self-employed or unemployed)	Age, sex, marital status, education, immigration, experience and business experience, activity in job searching, parents experience, unemployment history	Matching unemployed participants and non-participants with propensity score based on covariates	DID approach calculating ATT	The start-up grant is successful for both females and males as regards employment outcome, however, the result for male participants is significantly better than for females.
Bernat and Korpysa (2013)	To analyse if financial support granted to the unemployed to start business activity is used effectively	Time series	Administrative data for years 2008-2011 for Poland	Business survival rate, number of employees			Descriptive analysis only	Authors conclude that firms established by the unemployed have effectively used the support they have received since everyone has set up their own firms and over 13% employ more than one person.

Authors	Focus of the study	Data	Sample	Dependent Variables	Explanatory Variables	Control Group	Method	Results
Román et al. (2013)	To investigate the determinants of the transition from unemployment to own-account work or employership in Europe with a special focus on the role of social capital, business cycle and labour market regulation.	Longitudinal	25,694 individuals from EC Household Panel for years 1994-2001 (EU 15)	Employment status (employed, self-employed or unemployed)	Age, sex, number of children, social capital and networks, relationship status, unemployment benefits, start-up incentives, previous experience, unemployment duration, education, income, country specific variables		Multinomial Logit estimates	Results confirm the existence of different responses of employers and own-account workers to the three key elements within the macro-environment considered in this analysis. In this sense, the coexistence of recession periods, start-up incentives, and strict employment protection increases the likelihood of becoming an own-account worker from unemployment
Caliendo and Künn (2014)	What are the effects of start-up subsidies for unemployed males across German regions with regards to labour market conditions?	Longitudinal	2,427 males from East and West Germany 2003-2008	Employment status (employed, self-employed or unemployed), personal earnings	Regional unemployment rate and productivity (GDP per capita), age, marital status, children, nationality, unemployment benefit level, education, parents employment and education, motivation, capital intensity of subsidy	Matching unemployed participants and non-participants with propensity score based on covariates	DID approach calculating ATT, specific models were estimated for different regional and economic conditions.	Both programmes reported positive impact on employment status and working income, however in some model specifications the results were found to be insignificant. Positive coefficients were observed regardless of age and education of participants.
Caliendo and Künn (2015)	What are effects of start-up subsidies for unemployed females?	Longitudinal	2,466 females in Germany over years 2003-2008	Income, probability of becoming self-employed or employed or on maternity leave	Age, marital status, children, nationality, unemployment benefit level, education, parents employment and education, motivation to become self-employed, capital invested to start-up, household-income	Matching unemployed participants and non-participants with propensity score based on covariates	DID approach calculating ATT	Analysed programmes lead to positive increase of employment chances and increase of working income of participating females. Participation in the programme indicated negative impact on fertility.
Caliendo et al. (2015)	Testing difference between nascent subsidized unemployed entrepreneurs and regular business founders	Cross-sectional	2,408 male respondents from East and West Germany 2009	Survival in self-employment, income, innovation and business growth	Age, nationality, education, children, marital status, previous income, sector of business, unemployment history, and details about start up	Matching unemployed participants and regular business founders with propensity score based on covariates	Calculation of conditional counterfactual outcome based on PSM and decomposition	Previously unemployed entrepreneurs reported lower entrepreneurial ability and access to capital. 19 months after start-up, the supported enterprises had higher survival rates, but had lower income, business growth and innovation rates compared to regular entrepreneurs.
Duhautois et al. (2015)	To evaluate the effect on firm survival and performance of the programme supporting start-ups created by jobless people	Longitudinal	9,359 observations in France over years 1998-2006	Survival in self-employment, number of employees, value-added, capital productivity, profit rate	Age, nationality, gender, age, education, previous occupation, subsidy size, other source of funding, number of employees, sector of business, dummy for Paris	Matching unemployed participants and non-participants with propensity score based on covariates	DID approach calculating ATT	Results show that the supported entrepreneurs participating in the program have a higher survival rate after their second year of existence compared to non-supported. However supported businesses reported lower economic performance.

Authors	Focus of the study	Data	Sample	Dependent Variables	Explanatory Variables	Control Group	Method	Results
Caliendo et al. (2016)	To evaluate start-up subsidies allocated to unemployed.	Longitudinal	1,288 observations in Germany over years 2009-2012	Employment status (employed, self-employed or unemployed), personal income	Age, nationality, education, children, marital status, previous income, sector of business, unemployment history, subsidy and details about start up, big five personality traits, risk aversion	Matching unemployed participants and non-participants with propensity score based on covariates	DID approach calculating ATT	Authors found strong and positive effects of the programme on employment rates and income of participants 40 months after the support, even when taking into account individual personal traits. Authors discuss that personal traits could be controlled by already implemented control variables. Lower outcomes were reported for women.
Wolff et al. (2016)	To evaluate start-up subsidies allocated to unemployed.	Longitudinal	225,847 observations in Germany over years 2005-2011	Probability of non-receiving unemployment benefits	Age, nationality, education, marital status, unemployment history	Matching unemployed participants and non-participants with nearest neighbour based on covariates	DID approach calculating ATT	Results of the analysis show positive outcomes both in the short and long run on probability of non-receiving unemployment benefits. Based on qualitative research, several recommendations have been written.
Zouhar and Lukeš (2015)	To explore the role of active and passive labour market policies on nascent entrepreneurship of the unemployed	Cross-sectional cohorts	36,030 unemployed in 33 countries over years 2006-2012	Entrepreneurial state (nascent entrepreneur planning to be solo vs. to employ others vs. non-entrepreneur)	Individual level (gender, education, age) and country level (GDP per capita, unemployment rates, expenditures on active and passive LMP)		Multinomial logit and fixed effects regressions	Unemployment benefits decrease nascent solo entrepreneurship. Positive influence of active labour market policies on entrepreneurial activity that plans to employ other people was found.

3.1. Review of Research Designs, Variables, Methods and Control Groups

Out of eighteen selected articles, fourteen studies were based on longitudinal/panel data sets which may be considered as an optimistic finding, allowing to analyse the outcomes of individuals over time and accounting for their heterogeneous personal and demographic characteristics. The best practise during the data collection process, based on the analysed studies, consists of a combination of administrative data with collection of own survey data through personal, electronic or phone interviews. Unfortunately, studies using other data types (cross-sectional/time series) commonly come from countries, where the evidence related to the outcomes of self-employment policies is still relatively scarce (e.g., Poland, Spain). However, it is important to point out that even aggregated data could bring an initial insight into the outcomes of policies, especially in countries, where no evaluations have been conducted so far, and one should welcome such initiatives as a good starting point for further investigations.

Fundamental outcome variables are in line with the main purpose of self-employment policies and captures the survival rate of subsidized enterprises or the employment status of supported individuals. Other frequently used dependent variables include earnings of self-employed/unemployed and the number of employees in supported new firms. Inspiring dependent variables for future

research may be occupational satisfaction (Caliendo and Künn, 2011), productivity (Duhautois et al., 2015) or level of innovation (Caliendo et al., 2015).

The methodological approach commonly starts with the descriptive analysis of the outcome variables with respect to the treated (subsidized) and control group consisting most frequently of other unemployed (non-subsidized) individuals. A more demanding approach, at least for the data collection, implemented for example in the studies of Niefert (2010) or Caliendo et al. (2015), assesses the outcomes of the programmes compared to regular employees or regular business founders. What has not been, according to our knowledge, analysed so far, is the comparison of cost/benefit effects of self-employment policies vs. other active labour market policies, such as training, employment incentives, or direct job creation, on long-term employment and job creation.

Availability of longitudinal data further determines, whether more sophisticated econometric techniques may be implemented. If so, treated and non-treated individuals are then matched under the conditional independence assumption (CIA) with matching techniques (propensity score matching – PSM, kernel matching or nearest neighbour matching) based on the selection of covariates (mainly demographic characteristics; e.g. age, gender, nationality, education, work experience and unemployment history). Finally the average treatment effect (ATT) is calculated econometrically, following the difference in differences approach. Comparison of the results of different matching and estimation techniques is highly recommended (Bondonio, 2009). This approach was implemented in eleven out of the eighteen analysed studies.

Another important step in the already demanding analysis is to track programme participants over time. Evaluation needs to be conducted once the recipients stop receiving financial support, otherwise the results would be biased due to some positive ongoing effects caused by the last subsidy payments, having potential impact on business survival (Caliendo et al., 2015). Such correct approach can be observed in the majority of studies working with the longitudinal data, especially in the most recently published studies (Caliendo et al., 2016; Duhautois et al., 2015; Wolff et al., 2016). On the other hand, in the studies based on cross-sectional data (e.g., Bernat and Korpysa, 2013), the strength of reported results may decrease. The length of the subsequent follow up could be expressed by the words “the longer, the better”, since it is important to distinguish between the short term and long term effects of the programme. Outcomes are commonly analysed right after the end of payments (after a couple of months) and, if the research design and resources allow, every year after the participation in the programme. Reported results may differ according to the time lag, after which the outcomes are observed. Researchers therefore report results for multiple lags, but the very common length of observation is around two years used for example in the studies written by Baumgartner and Caliendo (2008) or Caliendo and Kritikos (2010) and may increase up to five years (Duhautois et al., 2015).

3.2. Review of Empirical Results

Obtained results of introduced studies are generally in agreement regarding the positive outcomes of the self-employment programmes on the employment status (Månson and Delander, 2011; Wolff et al., 2016) and earnings of previously unemployed participants compared to the control group of unemployed who did not receive start-up subsidies (e.g., Andersson and Wadensjö, 2007; Baumgartner and Caliendo, 2008; Rodríguez-Planas, 2010; Caliendo and Kühn, 2011). However, when compared to wage earners, previously unemployed individuals achieve, in line with Shane's (2009) argument, rather inadequate economic outcomes (e.g., Andersson and Wadensjö, 2007). Most of them remain solo entrepreneurs (Caliendo and Kritikos, 2010) who operate in less capital intensive and highly competitive sectors and underperform when compared with regular businesses (Niefert, 2010; Duhautois et al., 2015), e.g. in terms of income, growth and innovation (Caliendo et al., 2015). They however showed higher survival rates than regular businesses (Caliendo et al., 2015; Duhautois et al., 2015). This effect may be explained by lower employability and thus missing alternative opportunities (cf. Lukeš and Zouhar, 2016).

One extension is to investigate the varying impact of the programmes according to the age groups, education level, region and gender. Such a study may reveal the differences in the outcomes of the self-employment programmes across the selected groups and may have a value for policy makers, delivering information about the most benefiting group of participants and also about the group facing the lowest outcomes of the programme. Most studies found better effects for men (Baumgartner and Caliendo, 2008; Månson and Delander, 2011; Caliendo et al., 2016), however Caliendo (2009) reported better results regarding decrease of unemployment rate for women participants. Caliendo and Kühn (2014, 2015) found that start-up subsidies increased employment likelihood and working income for women significantly whereas for men these effects were insignificant. Overall, gender related effects are not conclusive.

Differences in implemented programmes with respect to the size of the grant allow researchers to compare outcomes according to the intensity of subsidy and to observe whether the more capital intensive programmes deliver better outcomes (Caliendo and Kritikos, 2010). Caliendo and colleagues tested in a variety of studies the effect of two forms of support – bridging allowance and start-up-subsidies, usually confirming the positive effect of both forms (Caliendo and Kritikos, 2010; Caliendo and Kühn, 2011). And finally, a recommendable option would be to compare the outcomes of the self-employment programme with the outcomes of other ALMPs. Such evaluation would lead to evidence based recommendations for increasing or decreasing the share of self-employment policies in the mix of ALMPs.

4. Implications for Policy and Future Research

First, we start with policy recommendations. The cornerstone of the evaluation process is the *strong cooperation between the research community and public sector institutions* as can be seen from outputs of presented studies. Counterfactual analysis requires substantial, structured and detailed data about participants of assessed programmes and members of a control group. In addition, the evaluation team is demanded to have strong econometric skills, scientific background and information about the regional labour market conditions. Empirical practise shows that officers of public authorities are not very often equipped with those needed skills. Therefore, national public authorities should create, develop and support evaluation teams at research institutions that are capable to conduct counterfactual analysis despite the fact that self-employment policies are often only a small part of the whole system of ALMP. We call for larger availability of anonymized data researchers might work with. The access to data is nowadays very limited.

Furthermore, *cost-benefit analysis* needs to become a part of the evaluation process, informing policy makers and stakeholders about the costs per one created job (unit of analysis), preferably in the long run, compared to the alternative of paying unemployment benefits, direct job subsidies or other comparable indicators. This fundamental step, often based on descriptive evidence, would serve as a supportive argument for efficiency discussions, which is still considered as a challenge of these evaluations (Duhautois et al., 2015). The risk lies in the potential clash between research based evidence and political decisions often motivated by other than efficiency factors.

Assessing separately *different groups of individuals* according to their gender, age, education or place of living would help in the continuous development of knowledge about the outcomes for different groups (Preuss, 2011), which may further lead to better targeting of self-employment policies (Rodríguez-Planas, 2010). Previous research also does not bring answers to the *amount of resources* that should be allocated to unemployed through subsidy and leaves this question for empirical experiments of national evaluators and research teams. Such a process of optimization covering different schemes of subsidies would also lead to increased efficiency of implemented policy.

Shane (2009) pointed out that encouraging more people into entrepreneurship is bad public policy. Results of this review also show that we cannot really expect the creation of high growth enterprises and new jobs by former unemployed. However, it does not mean that policies supporting self-employment out of unemployment are bad. Rather, both scholars and policy makers should *review the original purpose of self-employment policies*. If the main purpose of self-employment policy is to maintain employment habits and skills of unemployed, especially during times of higher unemployment (Caliendo and Kritikos, 2010), then it looks that the policies fulfill this task well. More attention should therefore

be put towards the differences among growth-oriented entrepreneurship policies on the one hand and active labour market policies and their outcomes on the other hand (Terjesen et al., 2016). Careful distinction would provide policy makers overview and guidelines for realistic expectations and future policy adjustments.

Coordination of different entrepreneurship and active labour market policies would complementarily bring higher outcomes for supported individuals. The most frequently investigated German experience combines the self-employment financial support with the additional subsidy called “bridging allowance” that supports formerly subsidized self-employed who ran into troubles, once they are on their own, and brings them resources to cover operational costs (Wolf et al., 2016). Supported self-employed would also benefit from the further development of their knowledge and skills through the system of entrepreneurial trainings and coaching sessions potentially leading to increased survival rates of subsidized businesses (Oberschachtsiek and Scioch, 2015). Finally, careful *piloting* of individual policies and / or their mix is needed in order to be able to evaluate them empirically and decide whether to abandon, modify or strengthen them before the full launch.

Future research should work more on the assessment of economic efficiency of self-employment policies, develop evaluation indicators and enrich empirical reports with a cost benefit analysis. The comparisons should be made especially between unemployed individuals who received support from different ALMP programmes, i.e. to compare in the long run those who received start-up subsidy with those who were supported through training, employment incentives or other forms. Employment status, job stability and earnings would then be the most recommended outcome variables.

Another potential of future counterfactual analysis is to integrate into evaluation established entrepreneurs and ordinary employees as an additional control group. Continuous assessment of the outcomes on various groups of individuals with respect to their gender, age or education is also welcome, as well as the investigation of the differences in the outcomes after the allocation of various intensity of financial subsidies or other forms of support. More outcome variables apart from employment status, earnings and survival rate should be considered too, such as occupational satisfaction (Caliendo and Künn, 2011), social capital or self-efficacy. However, variables such as the level of innovation (Caliendo et al., 2015) imply rather growth oriented entrepreneurship outcomes that, on average, cannot be expected from previously unemployed individuals. Supplementary arguments for the debate started by Shane (2009) could be brought, once researchers attach to their studies outcome variables measuring entrepreneurial growth, such as turnover, profit or number of employees. We however perceive these variables as more appropriate for studying the effects of growth-oriented entrepreneurship policies (Autio and Rannikko, 2016). For studying the effects of self-employment policies (as a part of ALMP), the

programme is effective if it increases employment status, employability and human capital of participants (Månsson and Delander, 2011).

5. Conclusions

Building upon the contribution of Meager (1996) who created a literature review of the studies analysing the outcomes of self-employment policies resulting in non-conclusive outcomes, we reviewed empirical studies published in the past ten years. Eighteen studies focusing on the issue of self-employment out of unemployment -mainly in Germany, but also in France, Poland, Romania, Spain, Sweden and OECD countries- were presented in the form of a structured review, containing information about the year of publication, focus of the study, structure of the data, used sample, applied methods, collected variables and main findings.

Depending on the selected variable indicating the effect of self-employment policy, authors based their interpretations of the particular policy success. Consensus was found in the positive results for staying in (self-) employment status and personal income when compared with unemployed individuals not participating in the programme. When compared with regular businesses, subsidized enterprises had a higher survival rate, but grew less and underperformed regular business also in most other criteria. We need to point out, that the majority of studies share a German background and that most countries have not been investigated so far. Therefore, more empirical studies, especially from under-researched countries, are needed for understanding the effects of self-employment policies better and in particular national contexts. One purpose of this review was therefore to provide empirical methodology for researchers from countries that have not been investigated so far and to encourage national teams to join the scientific debate. Several recommendations for policy makers, such as highlighting the importance of cooperation between academia and public authorities, policy efficiency evaluation, the role of regional/national conditions and coordination of various entrepreneurial policies were mentioned in the text. Overall, we conclude that self-employment policies fit well into the mix of active labour market policies and countries omitting them should take them into consideration. On the other hand, they should be distinguished from growth oriented entrepreneurship policies.

References:

- Andersson, P., & Wadensjö, E. (2007), "Do the unemployed become successful entrepreneurs?", *International Journal of Manpower*, 28(7), 604–626.
- Atherton, A., & Price, L. (2008), "Can experiential knowledge and localised learning in start-up policy and practice be transferred between regions? The case of the START network", *Entrepreneurship and Regional Development*, 20(4), 367-385.
- Autio, E., & Rannikko, H. (2016), "Retaining winners: Can policy boost high-growth entrepreneurship?", *Research Policy*, 45, 42–55.
- Baumgartner, H.J., & Caliendo, M. (2008), "Turning unemployment into self-employment: effectiveness of two start-up programmes", *Oxford Bulletin of Economics and Statistics*, 70(3), 347–373.
- Bernat, T., & Korpysa, J. (2013), "Setting up new firms as an opportunity to reduce unemployment", *Transformation in Business & Economics*, 12(1A), 381-397.
- Bondonio, D. (2009), "Impact identification strategies for evaluating business incentive programs", *POLIS Working Paper 145*, Università del Piemonte Orientale.
- Burke, A. (ed.) (2015), *The Handbook of Research on Freelancing and Self-employment*, Dublin: Senate Hall.
- Caliendo, M. (2009), "Start-up subsidies in East Germany: Finally, a policy that works?", *International Journal of Manpower*, 30(7), 625–647.
- Caliendo, M., Hogenacker, J., Künn, S., & Wießner, F. (2015), "Subsidized start-ups out of unemployment: A comparison to regular business start-ups", *Small Business Economics*, 45(1), 165–190.
- Caliendo, M., & Kritikos, A.S. (2010), "Start-ups by the unemployed: Characteristics, survival and direct employment effects", *Small Business Economics*, 35(1), 71–92.
- Caliendo, M., & Künn, S. (2011), "Start-up subsidies for the unemployed: Long-term evidence and effect heterogeneity", *Journal of Public Economics*, 95(3), 311–331.
- Caliendo, M., & Künn, S. (2014), "Regional effect heterogeneity of start-up subsidies for the unemployed", *Regional Studies*, 48(6), 1108–1134.
- Caliendo, M., & Künn, S. (2015), "Getting back into the labor market: The effects of start-up subsidies for unemployed females", *Journal of Population Economics*, 28(4), 1005–1043.
- Caliendo, M., Künn, S., & Weißenberger, M. (2016), "Personality traits and the evaluation of start-up subsidies", *European Economic Review*, 86, 87–108.
- Caliendo, M., & Schmidl, R. (2016), "Youth unemployment and active labor market policies in Europe", *IZA Journal of Labor Policy*, 5, article 1.
- Carree, M.A., & Thurik, A.R. (2010), "The impact of entrepreneurship on economic growth", In: Z.J. Acs and D.B. Audretsch, *Handbook of Entrepreneurship Research* (pp. 557-594), New York: Springer.
- Congregado, E., Golpe, A.A., & Carmona, M. (2010), "Is it a good policy to promote self-employment for job creation? Evidence from Spain", *Journal of Policy Modeling*, 32(6), 828–842.
- Council of the European Union (2010), *Conclusions on Innovation Union for Europe*. 3049th Competitiveness Council meeting, Brussels, 26 November 2010.
- Cueto, B., Mayor, M., & Suárez, P. (2015), "Entrepreneurship and unemployment in Spain: A regional analysis", *Applied Economics Letters*, 22(15), 1230-1235.
- Duhautois, R., Redor, D., & Desiège, L. (2015), "Long term effect of public subsidies on start-up survival and economic performance: An empirical study with French data", *Revue D'économie Industrielle*, 149(1), 11–41.
- Dvouletý, O., & Mareš, J. (2016a), "Determinants of regional entrepreneurial activity in the Czech Republic", *Economic Studies & Analyses/Acta VSFS*, 10(1), 31-46.
- Dvouletý, O., & Mareš, J. (2016b), "Relationship between unemployment and entrepreneurial activity: Evidence found among Visegrad countries", In: *Proceedings of the 4th International Conference: Innovation Management, Entrepreneurship and Corporate Sustainability (IMECS)*, University of Economics in Prague.

- Eurofound (2012), *NEETs – Young people not in employment, education or training: Characteristics, costs and policy responses in Europe*, Publications Office of the European Union, Luxembourg.
- Eurofound (2016), *Start-up support for young people in the EU: From implementation to evaluation*, Publications Office of the European Union, Luxembourg.
- Fritsch, M., Kritikos, A., & Pijnenburg, K. (2015), “Business cycles, unemployment and entrepreneurial entry - Evidence from Germany”, *International Entrepreneurship and Management Journal*, 11(2), 267-286.
- Ginsberg, A., & Venkatraman, N. (1985), “Contingency perspectives of organizational strategy: A critical review of the empirical research”, *Academy of Management Review*, 10(3), 421-434.
- Henrekson, M., & Johansson, D. (2010), “Gazelles as job creators: a survey and interpretation of the evidence”, *Small Business Economics*, 35, 227-244.
- Hörisch, F., Shore, J., Tosun, J., & Werner, C. (2014), *Labour market policies and youth unemployment*. CUPESS Policy brief I (University of Mannheim).
- Jones, K., Brinkley, I., & Crowley, L. (2015), *Going solo: Does self-employment offer a solution to youth unemployment?*, London: The Work Foundation (Lancaster University).
- Klapper, L., Love, I., & Randall, D. (2015), “New firm registration and the business cycle”, *International Entrepreneurship and Management Journal*, 11(2), 287-306.
- Lukeš, M., & Zouhar, J. (2016), “The causes of early-stage entrepreneurial discontinuance”, *Prague Economic Papers*, 25(1), 19-36.
- Månsson, J., & Delander, L. (2011), “Gender differences in active labour market policy: The Swedish self-employment programme”, *Equality, Diversity and Inclusion: An International Journal*, 30(4), 278-296.
- Mason, C., & Brown, R. (2013), “Creating good public policy to support high-growth firms”, *Small Business Economics*, 40(2), 211-225.
- Meager, N. (1996), “From unemployment to self-employment: Labour market policies for business start-up”. In: G. Schmid, J. O’Reilly and K. Schömann (eds.), *International Handbook of Labour Market Policy and Evaluation* (pp. 489-519), Cheltenham, UK: Edward Elgar Publishing.
- Minniti, M. (2008), “The role of government policy on entrepreneurial activity: Productive, unproductive, or destructive?”, *Entrepreneurship Theory and Practice*, 32(5), 779-790.
- Mroz, T.A., & Savage, T.H. (2006), “The long-term effects of youth unemployment”, *Journal of Human Resources*, 41(2), 259-293.
- Niefert, M. (2010), “Characteristics and determinants of start-ups from unemployment: Evidence from German micro data”, *Journal of Small Business & Entrepreneurship*, 23(3), 409-429.
- Oberschachtsiek, D., & Scioch, P. (2015), “The outcome of coaching and training for self-employment. A statistical evaluation of outside assistance support programs for unemployed business founders in Germany”, *Journal for Labour Market Research*, 48(1), 1-25.
- Pergelova, A., & Angulo-Ruiz, F. (2014), “The impact of government financial support on the performance of new firms: The role of competitive advantage as an intermediate outcome”, *Entrepreneurship & Regional Development*, 26(9-10), 663-705.
- Preuss, L. (2011), “On the contribution of public procurement to entrepreneurship and small business policy”, *Entrepreneurship & Regional Development*, 23(9-10), 787-814.
- Rodríguez-Planas, N. (2010), “Channels through which public employment services and small business assistance programmes work”, *Oxford Bulletin of Economics and Statistics*, 72(4), 458-485.
- Román, C., Congregado, E., & Millán, J.M. (2013), “Start-up incentives: Entrepreneurship policy or active labour market programme?”, *Journal of Business Venturing*, 28(1), 151-175.
- Shane, S. (2009), “Why encouraging more people to become entrepreneurs is bad public policy”, *Small Business Economics*, 33(2), 141-149.
- Stevenson, L., & Lundström, A. (2001), *Patterns and Trends in Entrepreneurship / SME Policy and Practice in Ten Economies*, Stockholm: Swedish Foundation for Small Business Research.
- Terjesen, S., Bosma, N., & Stam, E. (2016), “Advancing public policy for high-growth, female, and social entrepreneurs”, *Public Administration Review*, 76(2), 230-239.

- Wolff, J., Nivorozhkin, A., & Bernhard, S. (2016), "You can go your own way! The long-term effectiveness of a self-employment programme for welfare recipients in Germany", *International Journal of Social Welfare*, 25(2), 136–148.
- Zouhar, J., & Lukeš, M. (2015), "Factors influencing nascent entrepreneurship of the unemployed: The role of labor market policies", *Academy of Management Proceedings*, 2015(1), 18476.