
**THE DEVELOPMENT OF ADULTS'
ENTREPRENEURIAL COMPETENCE FOR THEIR
SUCCESSFUL CAREER**

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Abstract: Key competences underlying lifelong learning are particularly important in the knowledge society as they may guarantee more flexibility in the labor market and better adjustment to the permanent change. Entrepreneurial competence is one of the fundamental components for human employability and self-employment, often in conjunction with the ability to create and maintain jobs for themselves and others. Development of key skills and competences, as well as entrepreneurial competence, presents by itself potentially effective measure in coping with the existing skills mismatches, which is not sufficiently analyzed and considered in the current active labor market policies. The main research question: What is the role of the development of entrepreneurial competence in striving for employability and successful career? The aim of this paper is to identify the importance of entrepreneurial competence in job related activities: job search, keeping the job place, professional career. The object of the paper – entrepreneurial competence of adults seeking employability and successful career.

Keywords: key competences, entrepreneurial competence, entrepreneurial scales, labor market, employment, employability, job search, job place, career

1 Introduction

Education is increasingly penetrating into society and influencing many important areas. Education system must respond promptly to the changes in labor market, to help people orient themselves quickly, identify their strengths and use them to find and keep job, to be able individually manage their career or to choose promising career direction. Young and Popadiuk (2012) argued that although there are many approaches, theories and paradigms within the career field, it is important that they are recognized as “important ways to both: organize our thinking about career intervention and at the same time critique that organization”. In this paper career is important as organizational part and as the continuing process of adult’s life.

The purpose of this paper is to identify the importance of entrepreneurial competence in job related activities: job search, keeping the job place, professional career. The object of the paper – entrepreneurial competence of adults seeking employability and successful career.

The structure of the paper. The authors start with introducing career concept and meaning of the career in adult’s lifetime. Importance of entrepreneurial competence for employment and successful career is emphasized. The paper also considers the concept of entrepreneurial competence. Finally, research methodology and main results of the empirical study are presented.

2 Theoretical foundation

Career and entrepreneurial competence in adult’s life. Career could be described as a sequence of work-related jobs or positions that an individual experiences in his or her lifetime. Career development traditionally has been conceptualized in a broader context and career is also shaped by the broad social, family and employment context which provides individuals with scripts of expected actions and guidelines to follow (Dany, Louvel & Valette, 2011). However, much of the existing research on career development remains limited by outdated conceptualizations of employees and unemployed people. M. Coetzee & M. de Villiers (2010) agrees with the researches completed by Schein (1978, 1990, 1996) where he suggests that most people’s career self-concepts (motives and values) are grounded in categories of career orientations or anchors, such as technical functional competence; managerial competence; security and stability; autonomy and independence and entrepreneurial competence, entrepreneurial creativity. There are important differences between a person's initial choice of occupation and the subsequent formation of a career identity.

In this paper, the authors focused on entrepreneurial competence,

looking at that competence as a very important element to the choice of occupation or career development. Concept of successful career is closely related to employment which is represented in this paper by importance of job search, keeping the job place and professional career development.

The concept and the structure of Entrepreneurial competence

Entrepreneurship is a topic of educational and economic interest at the present time. When researchers are discussing about entrepreneurial competencies it is necessary at least to strive towards definition of the terms entrepreneur and entrepreneurial. Early researchers understood entrepreneurs by seeking to identify the traits and characteristics of entrepreneur. But very few entrepreneurs have all the traits and attributes presented in the literature. Man et al. (2002) described entrepreneurial competence as the key skill and implicit knowledge the entrepreneur possess, including personality, skills and knowledge, which are regarded as the overall capability of the entrepreneurs to successfully fulfill their duties. Mitchelmore and Rowley (2010) agree with the Bartlett and Ghoshal, that entrepreneurial competence consists of three categories: 1) Attitudes / traits; 2) Knowledge / experience; 3) Skills / abilities. All these categories are used to describe an entrepreneur, who recognizes new (market) possibilities, using intuition, creativity and analytical skills. The most common is a focus on results, self-control, and tendency to take a risk. Skills are dynamic and educated part of entrepreneurial competence, unlike the personal characteristics, which in many cases are stable and it is difficult to change them. In addition to the already mentioned elements of entrepreneurial competence, certain moral values are also attributed to this competence: commitment to work, assuming responsibility for the business and initiatives, word compliance (e.g. by setting deadlines), seeking for quality and competent activities performance, readiness to sacrifice the welfare of the current and short-term results in order to achieve long-term goals and projects. Thus, entrepreneurial competence can be seen as one of the most important issues of the day, which must be imparted to the public, targeted groups (e.g. businessmen, employers and the unemployed) in order to identify the characteristics of entrepreneurship and entrepreneurial understanding of each person, contribute to the success of employment and successfully develop their capacity to successful results and successful career. Entrepreneurship is very important for economic development today, but not only for that. Entrepreneurship has been studied from the perspectives of different disciplines: economy, business, industry, agriculture, education, psychology, social work. McBer's and his company's (1989) wide definition of entrepreneurial competence you can see in Figure 1. (See Figure 1). In this paper the authors concentrate on the education field trying to find out and identify the importance of entrepreneurial competence in job related activities: job search, keeping the job place, professional

career when striving for better employability and successful career development.

Figure 1. Components of entrepreneurial competence according to McBer and his company, 1989.



3 Research Methodology

Empirical data of the research were obtained as a part of the nationwide survey, which was conducted in the year 2014 in the frame of the research project funded by the European Social Fund under the Global Grant measure “Research and Development Platform for Adult Training of Generic Competences”. One of the instruments in this survey was a questionnaire on entrepreneurial competence consisting of 168 questions. After deleting a few invalid responses, 857 valid questionnaires were used for the analysis described in the current paper.

Statistical analysis methods.

The main statistical data processing program used in the analysis was IBM SPSS Statistics, 16 and 22 versions. Mplus program, version 7.3, was used for confirmatory and exploratory factor analyses. Other important statistical methods used were cluster analysis and logistic regression analysis.

Developing entrepreneurship scales. Exploratory and confirmatory factor analyses were used in order to develop entrepreneurship scales from the initial pool of the 68¹ entrepreneurship questionnaire’s items. The number of factors was determined using Mplus program and parallel analysis method (Tabachnik, Fidell, 2007, p. 645). Only factors with eigenvalues not less than 95-th percentile of the random eigenvalues obtained from 200 bootstrapped random samples with the same number of variables

¹ Two questionnaire items were rejected because of their dubious face validity in Lithuanian version.

and the same sample size as original data were retained. Factor model parameters were estimated using robust maximum likelihood method (MLR). Extracted factors were rotated using Direct Oblimin method. Scales were based on the obtained factors. All items with statistically significant loadings in the factor were included into the scale. Scale scores were calculated as averages of the scale items. When calculating scores for cases with some missing values of the items of the scale, these missing values were replaced by averages of items without missing values of the scale, however, only if proportion of missing values in the score did not exceed 25% of the number of items in the scale.

Reliability of the developed entrepreneurship scales was also tested using Cronbach alpha reliability coefficients, average, minimal and maximal correlations between items of the scale.

Cluster Analysis. IBM SPSS Statistics program's two-step cluster analysis method was used to find out clusters of similar respondents according to their answers to questions how entrepreneurship competencies help in searching for job, retaining it, striving for professional career (SPSS Inc., 2004). Number of clusters was determined using Bayesian Information Criterion (BIC). Log-likelihood was used as a distance measure. Variables were standardized before clustering.

Logistic regression analysis was used to explore relationships of entrepreneurship scales and competencies with importance of the three main areas of activity in the research: searching for job, retaining it and striving for professional career. Age, sex, education, type of habitat (city, town, village) were included as control variables in these regressions.

*Characteristic of respondents*². Age of respondents was 18 – 74 years, 37.6 on the average. 55% of them were women, 45% man. Most of them (68%) lived in cities, other lived in small towns and rural areas. 56% of them had at least higher education; only 5.5% had education below secondary school level. 44% of them were employed, 52% unemployed (one of the goals of the project was comparison between employed and unemployed), 4% were pensioners.

Respondents were asked four specific questions, how entrepreneurship competency helps them in: searching for information about jobs; preparing necessary documents for a new job; communicating with employers; presenting themselves to the employers during the selection. All these questions were of „Yes/No“ type. Similarly, they were asked if it is important to them to keep the current job and how entrepreneurship competency helps them to do this (7 specific questions); if it is important to them to strive for professional career and how entrepreneurship competency helps them to do this (6 specific questions).

² These data are approximate, because 22% of respondents did not answer general information about the respondent questionnaire which was separate from the entrepreneurial competence questionnaire.

4 Main results of the empirical study

Before starting the research, the valid instrument to measure the entrepreneurial competence of the participants was needed for the study. The authors decided to choose the „Test for personal entrepreneurial competence“ (McBer and Company, 1986), because the instrument was exhaustive, understandable and not too long.

The test was developed in 1986, by UP Institute of Small-Scale Industries (UP-ISSI)

by McBer and his company (See:

<http://www.scribd.com/doc/39034324/Test-for-Personal-Entrepreneurial-Competencies>).

Instrument consists of 70 statements that assess a person's entrepreneurial competence. On the basis of this instrument, personal entrepreneurial characteristics are described and identified, i.e., a respondent had to assess how well a particular statement corresponds to his or her own characteristics. Subjects had to evaluate the statements by a 5-point Likert scale, where 5 means "very suitable", 1 - "completely not suitable". For example: "I've been looking for, what I can do"; "I like challenges and new opportunities".

Our data rejected the original factor model (as by McBer and Company, 1986) by chi-square test of model fit: $\chi^2(1885) = 4515.5$, $p < .0001$, although values of two other widely used fit measures were good: RMSEA³ = 0.042, 90 Percent C.I. of RMSEA was from 0.041 to 0.044, SRMR = 0.032. However, CFI was only 0.865, i.e. considerably lower than the usually recommended level 0.95. Generally, models with such a fit are considered unsatisfactory, they require additional diagnostics and possibly modifications. Analysis of correlations between items of the original entrepreneurship questionnaire, as well as loadings in the pattern matrix show the most probable source of the model misfit: there are many loadings which are statistically significant and even of the similar size in two or more factors. This indicates that many items of the questionnaire do not belong unambiguously to only one factor, instead, they are distributed between two or more factors. Simple factor model does not hold; more complex models are needed in order to describe relationships between the items properly; more and better discriminating different aspects of the entrepreneurship concept items are probably needed. However, the available data of the current research did not allow using more items, therefore it was decided to construct and use entrepreneurship scales based on the current data. Exploratory factor analysis was performed, six factors were extracted, rotated and had sufficiently clear interpretation. Six entrepreneurship scales were developed based on these factors. The results are summarized in Table 1 (See Table 1).

³ RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Square Residual; CFI = Comparative Fit Index.

Table 1. Reliability analysis of the entrepreneurial scales

Scale	Number of items	Cronbach alpha coefficient	Inter item correlations		
			Minimal	Maximal	Average
Seeing new opportunities	11	0.89	0.23	0.43	0.64
Persuasion	8	0.83	0.18	0.39	0.55
Pursuit of quality	13	0.90	0.24	0.40	0.65
Initiative and activity	11	0.76	0.01	0.22	0.47
Relations (in activities)	15	0.89	0.15	0.34	0.56
Planning and organizing	10	0.85	0.20	0.38	0.69

Importance of entrepreneurial competence for various activities in job search, keeping the job and professional career

The study results show that entrepreneurial competence is important for activities in all domains: a) job search; b) keeping the job; c) professional career. 75.8% of respondents answered that searching for job is important for them, even more of them acknowledge importance of keeping the job (87.3%) and professional career (81.0%). As to the importance of entrepreneurial competence in these activities, the vast majority of the respondents agree on it, as it is demonstrated in Table 3 (See Table 3). Table 2 (See Table 2) details the role of this competence in more specific job-related activities.

Table 2. Respondents' opinions on importance of entrepreneurial competence for activities in job-related domains.

Domain	Activities	Agree, %	95% confidence interval	
			Lower	Upper
Job search	It helps to find information on jobs	50.9	47.5	54.3
	It helps to cooperate with the employers or their representatives finding a job	42.5	39.1	45.9
	It helps to prepare the necessary documents for employment (CV, cover letter, etc.).	40.4	37.1	43.8
	It helps to present	38.0	34.8	41.4

	themselves to employers during the selection process			
Keeping the job	It helps to achieve significant results during the work day	51.9	48.5	55.3
	Helps to save time and effort	49.1	45.7	52.5
	Helps improve communication and collaboration with colleagues	44.4	41.1	47.8
	Helps to deal with work-related issues and problems	44.3	40.9	47.7
	Helps to comply with the requirements of quality	43.4	40.0	46.8
	Helps to create new solutions and ideas in the workplace	36.8	33.6	40.1
	Helps to defend their rights	28.6	25.6	31.8
Professional career	Helps to plan careers	50.3	46.9	53.7
	Helps to find information about career opportunities	46.8	43.4	50.2
	Helps to interact with human resources specialists career counseling issues	41.9	38.5	45.2
	Helps to assess proposals to get a promotion and a higher position	36.0	32.8	39.3
	Helps to provide their advantages to employers	35.4	32.2	38.7
	Helps to create and develop own business.	34.9	31.7	38.2

Note. These results are based on answers of all 857 respondents. Table's 3 data suggest that the respondents find entrepreneurial competence as most useful in finding information (on jobs and career opportunities), in achieving better results at work, saving time and effort, in career planning.

The relationship of entrepreneurial competence aspects to the importance for the respondents in job search, keeping the job and professional career

This part of the study aimed to determine, how demographic variables (age, gender, education, place of residence), employment status (unemployed (1) vs. employed (0)) and entrepreneurial competence aspects (the six developed scales) are related to three employment dimensions: job search, keeping the job and professional career. Three logistic regressions were used with dependent variables indicating importance of a domain for the respondent: important (1) vs. unimportant (0). The results show the role of entrepreneurial competence in the importance of these three domains.

Job search. Only for this dimension all entrepreneurial scales were found statistically non-significant when controlled for demographic differences.

Keeping the job. The results show that increasing scores of pursuit for quality (odds ratio, abbr. OR = 1.06), initiative and activity (OR = 1.10), and planning and organization skills (OR = 1.08) mean increasing of the probability that keeping workplace is important⁴. Increasing scores of seeing the opportunities (or = 0.94) and entrepreneurship relations (or = 0.90) reduce the probability that keeping workplace is important. $p < 0.01$ in all these cases.

Professional Career. Statistically significant regression coefficients were found for age, education, planning and organizing scale. Higher educational level (OR = 1.22, $p < .001$) and better planning and organization skills (OR = 1.03, $p = .03$) increase the probability of importance of the professional career. With increase of age (OR=0.97, $p = .013$) the probability that professional career is important decreases.

An interesting question is how importance of entrepreneurial competence differs in these three areas of job related activities that were analyzed in the paper. It is not possible to observe these differences directly, because there were no such questions in the questionnaire used in the study. However, some attempt to elucidate these possible differences are possible using answers of the respondents to questions about specific activities related to these domains (how entrepreneurial competence helps them in these activities) and using the results of logistic regressions described in *Importance of entrepreneurial competence for various activities in job search, keeping the workplace, professional career part*.

First, it seems logical to assume that, if a respondent thinks that entrepreneurial competence helps in at least one activity of a domain (e.g. it helps to improve collaboration and communication

⁴ i.e. probability of answer “yes“ to this question by the respondent.

with colleagues at work) then it is generally important for this domain (it helps to keep job, in this example). Table 3 (See Table 3) presents percentages of respondents, who think that entrepreneurial competence helps in at least one domain related activity for all three domains.

Table 3. Percentages of respondents who think that entrepreneurial competence helps in at least one domain related activity

Domain	Percentage (N-857)
Job search	88.5
Keeping the job	87.8
Professional career	89.8

The domains seem very similar by these percentages. Approximately 9 out of 10 respondents acknowledge at least some importance of entrepreneurial competence in each of these three domains. Another way to compare importance of entrepreneurial competence in different domains is to ask how much predictive power entrepreneurship scales add when added to other variables, first of all demographic, in predicting importance of specified activity domain to the respondents. The authors use Nagelkerke's R^2 for this purpose which is a usual measure of predictive strength for dependent binary variables. Results are summarized in Table 4 (See Table 4).

Table 4. Difference of the predictive strength in predicting importance of domains from demographic variables only and from demographic variables together with entrepreneurship scales

Domain	R^2 with demographics only	R^2 with entrepreneurship scales added	R^2 increase
Job search	0.286***	0.294***	0.008
Keeping the job	0.031	0.090**	0.059**
Professional career (N-	0.080***	0.220***	0.140***

Note 1. * – $p < .05$, ** – $p < .01$, *** – $p < .001$.

Note 2. Due to some missing answers, these results are based on sample sizes 852-853.

These results show that changes in entrepreneurial competence of respondents' would mostly influence the importance of professional career for them; they would less influence importance

of keeping the job and especially searching for a job.

One possible explanation could be that such activities as searching for job and keeping it are more vital for the most people, therefore their importance is less dependent on entrepreneurial (and probably other) competences.

Clustering respondents according to their opinions about the importance of separated activities of different domains.

This analysis aimed to find out distinctive groups of respondents according to their opinions on how entrepreneurship competence helps in specific activities of each of the three employability dimensions analyzed in the research. For example, there were 644 respondents who said that searching for job is important to them. Two-step cluster analysis was performed, separately for each of the three employability domains being researched. The results of cluster analyses for all these three domains are similar: four clusters emerged; respondents who considered that entrepreneurial competence helps in all presented activities constituted one cluster; another cluster combined respondents who considered that this competence doesn't help at all; the third cluster was formed by those respondents who selected mostly just one and the same activity; the fourth cluster contained all the other respondents who could not be reliably assigned to any of the three previous clusters. These results are summarized in table 5:

Table 5. Clusters of respondents according to their answers about the importance of entrepreneurial competence for specific activities in the three job related domains and percentages of their sizes.

Cluster	Job search	Keeping the job	Professional career
1 – important for all activities	32.5	20.9	21.1
2 – important for none activity	11.5	12.1	10.2
3 – important for one activity:	11.6 - searching for information on jobs	9.4 -achieving better results during the work-day	6.1 -independent career planning
4 – remaining respondents	44.4	57.5	62.6
Total number in clusters	644	742	688

These results are not quite satisfactory because about half or more of the respondents remain unclassified. Probably answers of many

respondents were influenced by their general positive or (in less cases) negative attitude to entrepreneurial competence, therefore they didn't try (or were not able) to differentiate the importance of entrepreneurial competence for specific job-related activities.

The results of the research confirm the usefulness and importance of entrepreneurial competence in searching for job, keeping it, and for professional career in general. It seems that respondents consider this competence as more important in keeping the job and striving for professional career; it is a bit less important in searching for job. Entrepreneurial competence is more or less similarly important in these three domains

Keeping the job. The results show that increasing scores of pursuit of quality (odds ratio, abbr. OR = 1.06), initiative and activity (OR = 1.10), and planning and organization skills (OR = 1.08) mean increasing of the probability that keeping job is important⁵. Increasing scores of seeing the opportunities (or = 0.94) and entrepreneurship relations (or = 0.90) reduce the probability that keeping workplace is important. $p < 0.01$ in all these cases.

Professional Career. Statistically significant regression coefficients were found for age, education, planning and organizing scale. Higher educational level (OR = 1.22, $p < .001$) and better planning and organization skills (OR = 1.03, $p = .03$) increase the probability of importance of the professional career. With increase of age (OR=0.97, $p = .013$) the probability that professional career is important decreases.

Limitations

In this research, one of the limitations was not sufficient representativeness of the sample, the usual plague of "big" social surveys. The authors cannot support this by exact numbers, but it seems very likely that approximately half of the possible respondents did not agree to participate in the study, and of those participating not all answered all the questions. By research design, the sample of the study differed from Lithuanian adult population in some important aspects: too many females; education level was higher than the average population level; there were big percentage (around 50 %) of jobless respondents; participation of younger respondents was higher compared to senior respondents.

In this research the authors used the scales, which were not tested in Lithuania before. The authors used as a base McBer's (1989) questionnaire's scales however these scales were reconstructed using current data and factor analysis. The choice of questions for new scales was limited by questions available in McBer's questionnaire; it was not possible to have more questions to replace not very suitable questions in the entrepreneurship scales or to enhance the scales by new questions. Typically during the creation

⁵ i.e. probability of answer "yes" to this question by the respondent.

of new scales researchers should have the initial set of questions several times larger than it remains at the end.

It is very likely that results of the study were influenced by the fact that entrepreneurship competence was analyzed as a separate competence without paying attention to the other key competences. Analyses of entrepreneurship competence as a part of a larger system of all key competences should provide more realistic and useful results. However such study would be much more complicated and would require much more resources.

Conclusions and the further research recommendation

The data analyses shared in this paper could be seen as an attempt to explore entrepreneurial competence and to identify its components and their importance for better employability and successful career.

In the empirical research the authors found that the probability of importance of keeping the job increases with increasing pursuit for quality, initiative and activity, planning and organization abilities; this probability decreases with increasing ability to see the opportunities and with improving relations with other people necessary for entrepreneurship. As to the probability of importance of professional career, the authors found that it increases with increasing ability of planning and organization. When added to demographic variables, entrepreneurial competency abilities (in total) improved prediction of importance of professional career the most; to a lesser extent, they also improve prediction of importance of keeping the job.

The data of the research showed that the majority of the respondents agree that entrepreneurial competence is important in job search, keeping the job, professional career. From 87.8% (keeping the job) to 89.8% (professional career) of the respondents think that entrepreneurial competence helps at least for one activity: in searching for job, keeping the job or professional career. The research also showed that the importance of entrepreneurial competence for every activity in all three job-related dimensions (searching for job, keeping the job, professional career) was acknowledged by the substantial parts of respondents, 28% to 52%. For example, 51% of respondents say that entrepreneurial competence is important in searching for information on jobs; 52% say that this competence helps them to achieve better results during working day; 50% say that this competence helps them in independent professional career planning.

The authors found that the data of the research generally did not support McBer's (1989) defined entrepreneurial dimensions (scales). Instead, six (partially) new entrepreneurial scales emerged: Seeing new opportunities, Ability for Persuasion, Pursuit

of Quality, Initiative and Activity, Relations (related to entrepreneurial activities).

The findings show the importance of entrepreneurial competence in job search, keeping the job, professional career. Moreover, the results show that most of the respondents understand and acknowledge the importance of this competence in various job-related activities.

The authors recommend for future studies trying to analyze entrepreneurship competence in a system of all key competences with all the interrelationships among them.

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