Emerging Markets Queries in Finance and Business

Labour market dynamics as time-lagged effect of entrepreneurship in the case of Central and Eastern European countries

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Abstract

In order to ensure the innovation-based competitiveness of the Central and Eastern European economies, in each one a more efficient exploitation of human capital is required, through the cultivation and by getting the utmost of the entrepreneurial spirit in conjunction with the active population’s creative and innovative features, as it appears in the objective of New Lisbon and Europe 2020 strategies. Based on the entrepreneurial process research model, considering the economical development stage and competitiveness level of Romanian, Hungary, Latvia and Croatia, the paper aims to identify the short-, medium- and long-term effects of entrepreneurship upon the labour market, at the level of each selected country.

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Keywords: entrepreneurship/ entrepreneurial behaviour; entrepreneurial process; labour market; employment.

1. Introduction

One of the most noteworthy objectives of the New Lisbon Strategy concerns a more efficient capitalisation on human resources in the economies, by highlighting active populations’ entrepreneurial, creative and
innovative qualities. Moreover the Europe 2020 Strategy aims to guarantee a high level of employment in the EU member states. In these conditions, arise the challenge to identify factors that influence entrepreneurial behaviour and its’ potential impact on the labour force market within the EU member states. The results of a previous study Nitu-Antonie and Feder, 2012 emphasized that in the case of four Central and Eastern European CEE country, with the similar economical development levels, namely Romania, Hungary, Croatia and Latvia, a positive significant relation is present between the general conditions of the national framework, respectively of the entrepreneurial framework efficiency enhancers and innovation sophistication factors and entrepreneurial behaviour. However, the entrepreneurial behaviour stimulated by the conditions and factor endowments of national and entrepreneurial frameworks, does not generate, always simultaneously, positive effects on the labour market, as for the employment rate and the number of newly created jobs. Consequently, research extension and furtherance using time-lagged indicators, may lead to clearer results about the role of entrepreneurship in the labour market dynamics at the level of the four particular countries. The paper is structured in the next parts: section 2 includes a concise literature review on the impact of entrepreneurial framework upon entrepreneurship and of entrepreneurial behaviour effects on labour market dynamics, the conceptual model of entrepreneurial process and research assumptions, section 3 shows the variables, data used in and results of econometric analysis, whereas section 4 deals with conclusions and research limitations.

2. Literature review and research problem

Entrepreneurial behaviour is the process highlighting the ability and manifested willingness of individuals, on their own account or in teams, within and outside the existing organisations to perceive and create new economic opportunities new products, new production methods, new organisational structures and new product-market vectors, to flourish their marketable ideas, despite the uncertainty and other obstacles, by deciding upon the location, structure, variety and use of resources and institutions Wennekers and Thurik, 1999. Entrepreneurship is the behaviour, characteristic for individuals, emphasized either only in a certain phase of their development as active individuals within the labour market, or just for certain types of activities Caree and Thurik, 2005. Skills generating entrepreneurial spirit, in different extents, exist at the level of each individual occurring whenever incentives arise. Therefore, entrepreneurial motivations and actions are influenced by cultural and institutional factors, via the business environment and macroeconomic conditions enjoyed at a given moment in time.

Table 1. Review of the existent empirical studies

<table>
<thead>
<tr>
<th>Analysis level</th>
<th>Relationship</th>
<th>Impact</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country level, simple effect</td>
<td>economical development level → entrepreneurial activity (level and type)</td>
<td>direct relationship</td>
<td>Global Entrepreneurship Monitor</td>
</tr>
<tr>
<td></td>
<td>inception of new firms → employment rate</td>
<td>positive</td>
<td>Ashcroft and Love, 1996; Baptista et al., 2005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>negative</td>
<td>Baptista and Thurik, 2005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>not significant</td>
<td>Fritsch, 1996; Audretsch and Fritsch, 2002; Carod et al., 2008</td>
</tr>
<tr>
<td>Country level, time lagged</td>
<td>firms market entry → employment rate</td>
<td>short term</td>
<td>Folster, 2000; Audretsch and Fritsch, 2002; Ács and Armington, 2004; Van Stel and Storey, 2004; Fritsch, et al., 2005</td>
</tr>
<tr>
<td></td>
<td>entrepreneurship → newly created jobs</td>
<td>direct link</td>
<td>Nitu-Antonie et al., 2010</td>
</tr>
<tr>
<td></td>
<td>necessity-driven entrepreneurship → self-employment</td>
<td>present in recession periods</td>
<td>Mandelman and Montes-Rojas, 2009; Congregado et al., 2010; European Employment Observatory Review, 2010</td>
</tr>
<tr>
<td></td>
<td>self-employment → new firm survival formation of new firms → employment rate</td>
<td>diminishes at economic recovery</td>
<td>Millán et al., 2010</td>
</tr>
<tr>
<td>Regional level</td>
<td>self-employment rate → employment rate</td>
<td>negative, temporary effect</td>
<td>Reynolds, 1999; Ács and Armington, 2004</td>
</tr>
<tr>
<td></td>
<td>self-employment rate → employment rate</td>
<td>positive</td>
<td>Folster, 2000; Brixey and Grotz, 2004</td>
</tr>
</tbody>
</table>
Aiming to assess the universal role of entrepreneurship on economic growth, the Global Entrepreneurship Monitor GEM consortium underlined a direct bond between a country’s economic development stages, respectively the type of entrepreneurial activity. Because of the variety of approaches, the empirical studies on the existing relationship between the emergence of new firms and job creation identified diverse results. Accordingly to Table 1, the highlighted contradictions suggest that such a dynamic relationship between firms’ market entry and employment rates should be analysed with time-lagged effects and considering longer time-series. A conceptual model of entrepreneurial process proposed for Romania, Croatia, Hungary and Latvia starts from the had the GEM benchmark model, to which several amendments were added from the World Economic Forum’s Global Competitiveness Report 2009-2010, from the GEM’s 2008 Executive Report. Starting from the major economic development stages and competitiveness level of the selected CEE economies, the entrepreneurial process model propose to highlight the cause-effect relationships, on one hand between the requirements and conditions of the national, respectively entrepreneurial framework and entrepreneurship, on the other hand between entrepreneurial behaviour and labour market Fig. 1.

Fig. 1. The time-lagged entrepreneurial process model

The model considers a synonymy between entrepreneurship and entrepreneurial behaviour, moreover it includes solely the entrepreneurial behaviour of those individuals who are starting and managing their businesses. By transforming the proposed model in a time-lagged, implicitly permits a better operationalisation of the entrepreneurial behaviour by including entrepreneurial aspirations, therefore consenting the identification of time-lagged effects upon the labour market within the selected countries.

Table 2. Indicators incorporated in the statistical analysis

<table>
<thead>
<tr>
<th>Construct</th>
<th>Variable</th>
<th>Items/ Indicators</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurship</td>
<td>Entrepreneurial attitudes and perceptions</td>
<td>Perceived capabilities</td>
<td>Entrepreneurial intentions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Perceived opportunities</td>
<td></td>
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<td></td>
<td></td>
<td>Entrepreneurship as desirable career</td>
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<td></td>
<td></td>
<td>Nascent entrepreneurship rate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Entrepreneurial activity</td>
<td>New business ownership rate</td>
<td>Overall entrepreneurial activity rate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Early-stage entrepreneurial activity</td>
<td>Necessity-driven / Opportunity-driven entrepreneurial activity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Established business ownership rate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Entrepreneurial aspirations</td>
<td>Growth expectation early-stage entrepreneurial activity</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>New product early-stage entrepreneurial activity</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>International orientation early-stage entrepreneurial activity</td>
<td></td>
</tr>
<tr>
<td>Labour market growth</td>
<td>Employment rate growth</td>
<td>ILO</td>
<td></td>
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</tbody>
</table>

According to the particular national contexts in Romania, Hungary, Croatia and Latvia, the justification of the applied statistical indicators is required for the correct understanding of entrepreneurship, of factors
influencing the entrepreneurial behaviour and the direct impact that this behaviour may have on the labour market Table 2. Established within the entrepreneurial process model, the next hypothesis can be considered for validation to underline the time-lagged outcomes: H1: Entrepreneurship has a positive influence on the labour market growth; H2: Entrepreneurial perceptions and attitudes have positive outcomes regarding labour market growth; H3: Entrepreneurial activity has positive effect on labour market growth; H4: Entrepreneurial aspirations have positive effect on labour market growth.

3. Research methodology and empirical findings

Data for the statistical analysis is of external secondary type, for entrepreneurship data collected for 2007-2011, due to the inexistence of data before 2007 for the selected CEE countries, respectively for employment rate figures were collected for the 2006-2020 period in order to determinate the relative growth of the indicator as proxy for the labour market growth. For the empirical analysis, linear regression equations were applied, based on proposed independent and resulting variables, cause-effect relations were pursued between entrepreneurship independent variable and labour market growth dependent variable.

In conformity with the correlation matrix of the main variables and considering their sign, for the selected economies within the 2007-2011 time-lapse, several significant patterns can be observed:
- negative correlations between entrepreneurship and employment rate growth: in the 3 year lagged model for Croatia -0.713 and Hungary -0.506; in the 5 year lagged model for Latvia -0.578 and Romania -0.894; respectively in the 9 year lagged model for Croatia -0.884, Latvia -0.764 and Romania -0.726;
- positive correlations between entrepreneurship and employment rate growth: in the 1 year lagged model for Romania 0.536; respectively in the 3 year lagged model for Hungary 0.859 and Latvia 0.830.

Data processing and analysis was realised by using IBM SPSS 20 software. In order to test the validity of the research hypotheses linear regressions were applied tracking for each country the significance level p, the unstandardized value of the regression coefficient \( \beta \), calculated value of the t test. In all the cases, a hypothesis is considered valid only if \( p < 0.05 \), \( \beta \) has relatively high scores and \( t \) exceeds the critical value of the Student repartition, in our case 2.77645 connected with the five year time-series data availability.

In the case of Model 1, the data analysis highlighted lack of support for the hypotheses, in all the selected countries. The reason for insignificant influences rely mainly on the small values of the calculated Student test and on the lack of significance level \( p > 0.20 \) for Croatia, \( p > 0.48 \) for Hungary, \( p > 0.81 \) for Latvia, \( p > 0.15 \) for Romania. Consequently, both entrepreneurship \( H_1 \) and its components entrepreneurial perceptions, attitudes-H2, entrepreneurial activity-H3 and entrepreneurial aspirations-H4 does not influence significantly the employment rate growth after 1 year. Furthermore, in all the above mentioned cases, just over the 28% for Croatia, 4% for Hungary, 0.02% for Latvia and 33% Romania of the dependent variable variation owes to the cumulated influence of the independent variables, underlying the existence of a number of other factors directly acting upon the labour market growth.

Following Model 2, data analysis highlighted lack of support for all hypotheses, for Croatia, Hungary and Latvia, while validating them in the case of Romania. The reason for insignificant influences for the first category of countries rely mainly on the small values of the calculated Student test and on the shortfall in significance level \( p > 0.39 \) for Croatia, \( p > 0.23 \) for Hungary, \( p > 0.40 \) for Latvia, whereas for Romania \( p < 0.05 \), \( \beta \) was relatively high and positive, \( t > 2.776 \), as appropriate validating criteria. Consequently, both entrepreneurship \( H_1 \) and its components \( H_2, H_3, H_4 \) does not influence significantly the employment rate growth after a 3 year period for Croatia, Hungary and Latvia, but the entrepreneurial behaviour perform significant and positive results on employment rate growth for Romania. Moreover, about 16% for Croatia, 40% for Hungary and 0.08% for Latvia of the dependent variable variation owes to the cumulated influence of the independent variables; although in Romania it reaches over 95%.
Within Model 3, data analysis emphasized support for all the hypotheses in all the selected countries. The significant influences rely on the cumulated criteria of $p<0.05$, $\beta$ having relatively high values and $t>2.776$: $p<0.046$ for Croatia, $p<0.03$ for Hungary, $p<0.006$ for Latvia, $p<0.002$ for Romania; $\beta>0.04$ for Croatia, $\beta>0.36$ for Hungary, $\beta>2.08$ for Latvia, $\beta>1.51$ for Romania; $t>2.85$ for Croatia, $t>3.27$ for Hungary, $t>5.24$ for Latvia and $t>6.94$ for Romania. Additionally, in all the above mentioned cases, around 67% for Croatia, 72% for Hungary, 87% for Latvia and 92% Romania of the dependent variable variation owes to the cumulated influence of the independent variables. Similarly, within Model 4, data supported all the hypotheses in all the selected countries, having $p<0.016$ for Croatia, $p<0.006$ for Hungary, $p<0.04$ for Latvia, $p<0.002$ for Romania; $\beta>0.09$ for Croatia, $\beta>0.23$ for Hungary, $\beta>0.69$ for Latvia, $\beta>0.95$ for Romania; $t>3.98$ for Croatia, $t>5.30$ for Hungary, $t>2.97$ for Latvia and $t>6.51$ for Romania. Additionally, in all the mentioned cases, more than 83% for Croatia, 87% for Hungary, 76% for Latvia and 91% Romania of the dependent variable variation owes to the cumulated influence of the independent variables. Consequently both for Model 3 and 4, both entrepreneurship $H_1$ and its components $H_2$, $H_3$, $H_4$ does influence significantly and positively the employment rate growth on the medium term of 5 years and on long term as after 9 years.

4. Conclusions and research limitations

The present research consolidated the presumption that, in Romania, Hungary, Croatia and Latvia the entrepreneurial behaviour stimulated by the general conditions of the national and entrepreneurial framework does not generate simultaneously positive effects on the labour market. Only for a time-lag of at least three years, entrepreneurship remains an employing factor for labour force. Outcomes on the labour market are set by the interaction effects of firms' market entries and exists Carod et al., 2008. The emergence of new firms, encouraging entrepreneurship due to opportunity- and necessity-driven entrepreneurship, are at the same time creating and destroying jobs, because they encourage competition and have as finality the exit of less efficient firms from the market. The analysed period included also the beginning economic recession, characterized by an increase in the number of unemployed population. The first years of the recession led to a necessity-driven self-employment, rather as “disguised form of unemployment” than as a result of a true entrepreneurial spirit manifestation, with simultaneous negative effects on labour force market. At the same time, the transition of entrepreneurs to employee status is less likely, while people with entrepreneurial skills who created new firms from necessity, have had in time a positive impact on employment rates on the labour market. Besides, prior to the economic recession, the micro-enterprise sector from the selected countries included also qualified individuals with entrepreneurial skills, who voluntarily have chosen self-employment, generating in time, through the newly created firms, a growth in the employment rate.

Research outcomes demonstrated that the objective of Europe 2020 Strategy referring to a high level labour employment assurance in the EU member states is feasible only in the conditions when public authorities from the selected countries stimulate the entrepreneurial behaviour, through improving the institutional framework in which it manifests, through reduced taxation and review of national regulations for employed workforce.

Finally, it should be underlined that the inclusion in the research model and analysis of entrepreneurial behaviour manifested by the domestically and internationally active large and established firms, known as entrepreneurship, as well as describing the labour market through multiple growth indicators could provide supplementary information and explanatory power to the conducted research. The development of the research model by eliminating these research limitations and the identification of entrepreneurial influences on the labour market at the level of all EU member states with the same level of economic development stage, in the conditions of necessary data publishing, constitutes the future research directions.
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References

Audretsch, D., Fritsch, M., 2002, Growth Regimes over Time and Space, Regional Studies, 36(2), pp. 113-124;
Nițu-Antone, R., Feder E-Sz., 2012, The Impact of Small and Medium-Sized Firms’ Entrepreneurial Behaviour on Labour Market Dynamics in Central and Eastern Europe, unpublished;