

## Growth aspirations of early-stage entrepreneurs: Empirical investigation of South-Eastern and Western European countries\*

Dijana Močnik, Karin Širec\*\*

*We aimed to 1) estimate the associations between innovation and international orientation of early-stage entrepreneurs and their growth aspirations and 2) determine whether these associations differ across south-eastern European countries (SeECs) and western European countries (WECs). We used the data from the 2003–2008 Global Entrepreneurship Monitor Adult Population Survey for 3,098 SeEC and 3,626 WEC entrepreneurs. The results show that 1) a firm's high level of competition inhibits its growth aspirations in both regions, albeit more so in SeECs; 2) innovative products/services stimulate firm growth aspirations in WECs only; and 3) international orientation stimulates firm growth aspirations in both regions, albeit more so in WECs.*

*Key words:* early-stage entrepreneurs, Global Entrepreneurship Monitor (GEM), growth aspirations, innovation orientation, international orientation (JEL: M13, L25, L26)

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\*\* Dijana Močnik, Full Professor, University of Maribor, Faculty of Electrical Engineering and Computer Science, Smetanova ulica 17, 2000 Maribor, Slovenia. E-mail: [dijana.mocnik@um.si](mailto:dijana.mocnik@um.si).

Karin Širec, Associate Professor, University of Maribor, Faculty of Economics and Business, Razlagova 14, 2000 Maribor, Slovenia. E-mail: [karin.sirec@um.si](mailto:karin.sirec@um.si).

## Introduction

Firm growth is critical to economic development and the creation of wealth and employment. Although the EU policy strives to unify the EU market as much as possible, extensive country as well as regional differences in economic growth and the prosperity between them still exist. Therefore, investigating determinants of entrepreneurship over regions (in our case, between south-eastern European countries [SeECs] and western European countries [WECs]) enables us to disentangle specific regional attributes.

The current paper stemmed from the desire to explore the perceived difference in growth aspirations among early-stage entrepreneurs<sup>1</sup> in SeECs and WECs as new firms might directly impact economic performance of a country/region with their successful development and job creation. Exploring early-stage entrepreneurs' aspirations (in our case, measured by their expectation about future employment) in relation to their innovation and international orientation might offer valuable insights into the issues and challenges they are facing. Although not all expectations materialize, growth aspirations have proven to be a good predictor of eventual growth (Davidsson/Wiklund 1999; Liao/Welsch 2003). One of the few theories incorporating entrepreneurs' growth intentions when attempting to explain variations in actual firm growth is the theory of planned behaviour (Ajzen 1991). Central to this theory is an individual's intentions to perform a given behaviour. Intentions or aspirations are assumed to be accurate predictors of actual behaviour. Their main disadvantage lies in the fact that they combine elements of growth willingness and growth ability. A firm's innovation activity and international orientation are assumed to have stimulating effects on eventual firm growth and have recently attracted increased interest among policymakers, researchers and business leaders (Obeng/Robson/Haugh 2014; Millán/Congregado/Román/van Praag/van Stel 2011; Williams/Shaw 2011; Andersson/Lööf 2009; Koellinger 2008).

Data for our research are derived from the Global Entrepreneurship Monitor (GEM) research for years 2003–2008. The SeECs that participated in the GEM and in which we were interested included Bosnia and Herzegovina, Croatia, Greece, Hungary, Macedonia, Romania, Serbia and Slovenia. For the same period, we analysed the following WECs: Belgium, France, Germany, Switzerland and the Netherlands. GEM focuses on individual as well as the entire spectrum of factors influencing relationships among entrepreneurs, entrepreneurship and society and their development. In our research, we were primarily interested in finding the relationship between the potential growth of the firm (observed

<sup>1</sup> Early-stage entrepreneur is either a nascent entrepreneur or owner–manager of a new business (i.e., owning and managing a running business that has provided salaries, wages or any other payments to the owners for more than three months, but not more than 42 months) (GEM Key Indicators and Definitions; <http://www.gemconsortium.org/docs/download/414>)

through the early-stage entrepreneur's growth aspirations) and its innovation as well as international orientation. According to the GEM data, innovation activity is measured through early-stage entrepreneurs' opinions on whether potential customers consider their products/services to be new or unfamiliar as well as through the extent of other businesses offering the same products/services to potential customers. A proxy used for international orientation is the presence of a firm's customers from other countries. The emphasis is on the influence of individual-level factors as firm growth aspirations are dependent on individual entrepreneurs.

This paper proceeds as follows. First the theoretical foundations are presented, followed by an outline of the research method. Then the results of the research are presented. The paper concludes with a discussion of policy implications arising from the results.

## Theoretical background and proposed hypotheses

Firm growth is neither a self-evident phenomenon nor a matter of chance. According to the literature, firm growth depends upon various factors. In line with the Penrosean theory of growth (Penrose 1959), it is widely agreed that growth occurs when – in addition to motivation and opportunity – a proper strategy and corresponding resources are also in place (Gilbert/McDougall/Audretsch 2006). Cassar (2007) showed that an entrepreneur's growth aspirations are influenced by opportunity costs related to the use of human and financial capital. Some recent studies (Autio/Acs 2009) have also suggested that the deployment of human and financial capital is influenced by national conditions that regulate the appropriateness of expected returns from capital deployment.

The choice of firm growth is a complex issue for new ventures (start-ups) because of the absence of certain resources (Penrose 1959), environmental uncertainty and the different perceptions of entrepreneurs (Chen/Zou/Wang 2009). Earlier studies have focused on contextual influences, such as industry globalization, product/market life cycle stages and government regulations that affect new venture growth strategies and their different levels of success. From the resource-based view, firms' tactical and strategic decisions are influenced by their specific resource endowments. Thus, the configuration of a new venture's resources and capabilities enables the firm to efficiently and effectively pursue its growth objectives (Chen et al. 2009). Previous research has also demonstrated that growth intentions and likely eventual growth impact are not evenly distributed across entrepreneurial firms' populations. The GEM research on high-expectation entrepreneurship has indicated that high-growth entrepreneurs represent only 4% of all entrepreneurs, yet the businesses they have founded or co-own account for close to 40% of total jobs generated by all entrepreneurs (Morris 2011). Research in the field of high-growing firms (Storey 1994; Delmar/Davidsson/Gartner 2003; Autio 2007; Henrekson/Johansson 2009,

2010) clearly suggests that the capability of an economy to grow and employ is significantly dependent on the capability of that economy to create fast-growing firms.

Thus, it can be assumed that entrepreneurs' aspirations (in addition to the already described encouragements) are highly dependent on the impact of external environmental influences. Park (2005) identified the external environment as a key influencing factor in the process of new firm foundation. Individuals' behaviours often change as they gain experience and knowledge by interacting with the world around them. A stepwise process is proposed – involving innovation, a triggering event, implementation and growth – to outline how the combined interactions of both individual personality and external environment factors can influence each of these stages. National economies with more generous welfare schemes that do not put the responsibility for the survival in the hands of an individual might also impede early-stage entrepreneurs to be more ambitious in the sense of growing their business through innovation and internationalisation. Entrepreneurial innovativeness depends on both individual factors and the environment in which the individual acts. The distribution of innovative and imitative entrepreneurship varies across countries. Entrepreneurs in highly developed countries are significantly more likely to engage in innovative rather than purely imitative activities (Koellinger 2008). As necessity-motivated entrepreneurs are more likely to be found in lower-income regions, they are likely to be constrained in their access to human capital, financial capital, technology and other resources, thereby inhibiting their potential for generating innovations and job growth and for building the competitive advantages needed for export. Thus, although these types of entrepreneurs are often highly dependent on their firms, they lower their expectations for innovation and growth in terms of jobs and exports as they expect or acknowledge that such ambitions might be difficult for them to realize. They might also be forced, because of their situation, to act on less promising opportunities (Hessels/van Gelderen/Thurik 2008). The objective existence of business opportunities in general, whether innovative or imitative, is influenced by environmental factors such as changes in technology, politics, regulation and demographics or other trends in society, such as changes in culture, fashion or urbanization (Koellinger 2008). These factors vary across countries and industries, and significant changes in one or more of these factors are likely to generate opportunities for entrepreneurship (Koellinger 2008). Our research follows the typology of Porter, Sachs, and McArthur (2002) which divides countries into factor-driven, efficiency-driven and innovation-driven economies based on their state of economic development. All the investigated WECs in our sample are innovation-driven economies, whereas among SeECs only Greece and Slovenia belong to this same group and the rest of the SeECs are efficiency-driven economies. In line with the discussed circumstances, we decided to estimate whether a considerable difference exists in growth aspira-

tions among early-stage entrepreneurs from SeECs and WECs deriving from their innovation and international orientation.

## Research propositions

The growth aspirations of early-stage entrepreneurs are their goals; as the entrepreneurs estimate such goals themselves, they are not necessarily objectively possible. As such, it is very likely that entrepreneurs in the early stages of entrepreneurship are subjectively projecting higher potential growth than those who have been entrepreneurs for a longer period. Research results indicate that some early-stage entrepreneurs estimate that their businesses have high growth potential for the wrong reasons (e.g., incompetence, over-optimism) whereas others are more modest. It is also more likely that the first group will abandon their start-up business sooner than the latter one (Davidsson 2006).

We build our model on the growth aspirations of early-stage entrepreneurs as the main drivers of firm future growth, which is closely related to innovation activities that reflect firms' endeavours to utilize unexploited opportunities by developing new products and business models, improving processes or generating novelty by creating "new combinations" from existing components. Likewise, internationalisation could be regarded as a strategy enabling the firm to exploit new profitable opportunities outside its domestic market as well as enlarge its market. Hence, both innovation activity and firm internationalisation could be interpreted as Schumpeterian entrepreneurial activity driven by the skills, routines and capabilities vested in the firm on the real-options-based strategy view in this context (Kyläheiko/Jantunen/Puumalainen/Saarenketo/Tuppura 2011).

The most prevalent theory of innovation in the economic literature suggests that opportunities are, in fact, endogenous. They are more prevalent in some industries than in others; thus, particular characteristics tend to be associated with locations where opportunities are found. In particular, most innovation takes place in high-technology opportunity industries, not in low-technology opportunity industries (Acs/Audretsch/Braunerhjelm/Carlsson 2005). On the other hand, the ability of a firm to export (in our case, a proxy for early-stage entrepreneurs' international orientation) a proportion of its sales abroad is increasingly regarded as an important measure of competitive performance at both the national and regional levels (Westhead/Wright/Ucbasaran 2001). Furthermore, the ability to engage in exporting activities is purported to be a necessary ingredient for ensuring the survival and growth of new and small firms (D'Souza/McDougall 1989). We included international orientation in the model because exporting firms have been shown to record significantly higher levels of absolute growth (Westhead et al. 2001), which we will empirically assess. Terjesen and Szerb (2008) found that aspirations for growth are consistent with aspirations in terms of innovation, exports, outside investment and the estimated size of the start-up capital required for starting the firm.

### ***Innovation orientation hypothesis***

Innovation activity in a given economy depends not only on individuals (entrepreneurs), networks of innovative enterprises and research organisations, suppliers and customers, but also on various institutional factors, such as the public financing system of research, the nation's system of schooling, training and financial establishments. Such innovation can be seen as the outcome of mutual activities of various members of the whole system (OECD 1997). Thus, the functioning of these joint constituencies of the system, whose outcome is represented by innovation, is greatly dependent on economy-specific formal (e.g., regulatory frameworks) and informal (e.g., rules, conventions and norms) institutions (Acs/Anselin/Varga 2002). As a result, innovation activities are not equally distributed in space (i.e., Sweeney 1987; Stohr 1986; Hall/Markusen 1985; Malecki 1981), and we are faced with different development levels of regional innovation systems (i.e., Acs 2000; Braczyk/Cooke/Heidenreich 1998; De la Mothe/Pacquet 1998).

The distribution of innovative entrepreneurship activity varies across countries. Entrepreneurs in highly developed countries are significantly more likely to engage in innovative rather than purely imitative activities (Koellinger 2008). Thus, both innovativeness and growth aspirations depend on individual factors and the environment, such as changes in technology, politics, regulation and demographics or other trends in society, such as changes in culture, fashion and urbanization in which an entrepreneur is situated. Significant factors associated with entrepreneurial innovativeness at the individual level include high educational attainment, unemployment and a high degree of self-confidence (Koellinger 2008). As the SeECs' entrepreneurs are less likely to have any level of post-secondary education and the fear of failure is very prevalent in this region, in addition to the fact that most of these early-stage entrepreneurs started their businesses because they felt they had no other choice (Makó/Csizmadia/Illéssy/Iwasaki/Szanyi 2013; Morris 2011), we assume that their aspirations for growth will be weaker compared to their western counterparts who, according to Morris (2011), tend to start their businesses not to increase their incomes, but rather to become more independent.

We estimated whether early-stage entrepreneurs form their growth aspirations about future employment on their perceptions of the competitiveness level (whether many, few or no businesses offer the same products/services) as well as on the newness of the products/services they are offering. It is expected that countries with high levels of R&D activity generate more opportunities for innovation and should, accordingly, exhibit higher prevalence rates of innovative entrepreneurs, *ceteris paribus*. Countries will also vary in their level of economic development and technology usage. To summarise, the individual's probability to exploit an innovative business idea is a function of various factors that influence the objective existence and distribution of business opportunities in the

environment, individual creativity and the alertness to business opportunities – all of which are related to the question “where do business opportunities come from?” In addition, individual preferences, opportunity costs, cognitive styles and the use of particular decision heuristics influence the probability that someone who perceived an innovative business idea actually decides to exploit it (Koellinger 2008). In wealthier regions, entrepreneurs have better access to resources, knowledge, and technology and, therefore, might be better equipped for innovation and firm growth. We expect that individuals who express a higher level of innovation activity will be more likely to have higher growth aspirations. In line with this understanding, we formed the following hypothesis:

*Hypothesis 1: The likelihood that an early-stage entrepreneur has firm growth aspirations is higher if (s)he is innovatively oriented in comparison to one who is not, more so in WECs, compared to SeECs.*

### ***International orientation hypothesis***

Several theories from the international business literature have been presented to explain why firms engage in international operations. First, the monopolistic advantage theory suggests that firms will internationalise when they can use their established advantages in foreign countries at little or no additional cost. Second, product cycle theory suggests that firms internationalise in an attempt to protect their existing markets of mature products. Third, the stage theory of internationalisation suggests that a firm’s international operations will gradually increase as it gains knowledge and experience in the international arena and as it develops relationships that cross international boundaries (Westhead et al. 2001). Previous theoretical approaches do not take into account the aspirations of entrepreneurs or the resource needs of smaller and newer firms. The resources and capabilities mobilized by an entrepreneur can have an important impact on the ability to enter export markets. Firm performance is a function not only of the accessibility to resources, but also of an entrepreneur’s managerial competence. A start-up’s ability to enter foreign markets is directly related to its accumulated tangible and intangible resource stocks. Firms with resources stocks, which are valuable, inimitable and non-substitutable, have an advantage over their competitors in domestic and foreign markets. Firms with unique bundles and combinations of these resource stocks might have a greater proclivity toward internationalisation (Westhead et al. 2001).

For example, it is well known that, in some high-tech industries, a firm producing innovative products that has only a few (if any) potential domestic clients must internationalise if it is to stay in business. The argument of Kafouros, Buckley, Sharp, and Wang (2008: 63) goes further and state that “firms need to have a sufficient degree of internationalisation, i.e., be active in many markets, to capture successfully the fruits of innovation”. The literature indicates that

technological resources could also significantly influence firms' internationalisation (Kyläheiko et al. 2011).

In the ever more globalizing economy, economies' global trade becomes increasingly important. Multinational enterprises are not the only ones to have international orientations; new and smaller firms are using the latest technologies to become better equipped to broaden the scope of their business. Entrepreneurs seek international markets for a variety of reasons. They might have products or services that are more suitable for international markets. Their internal markets might be too small or immature. They might face intense local competition that motivates them to pursue customers outside their country borders. Alternatively, internationalisation might be motivated by a desire to more broadly leverage substantial investments in businesses. Geographic factors, like country size or location, as well as connections with strategic partners in new locales can also affect entrepreneurs' cross-border activities (Močnik/Širec 2010, Kelley/Bosma/Amoros 2011). Verheul and Van Mil (2011) found that international orientation is significantly correlated with growth ambition. A specific GEM measure assesses the extent of sales that businesses sell to customers outside their economies. Internationalisation is – on average – lowest in the factor-driven economies, increasing with the economic development level (Močnik/Širec 2010; Bosma/Wennekers/Amorós 2012). Sometimes internationalisation is assumed to be the most important dimension of growth aspirations (Tominc/Rebernik 2007).

Terjesen, Hessel, and Li (2013: 10), who systematically examined comparative international entrepreneurship research, clearly stated that "internationalization decisions are based on features of the entrepreneur, firm, and external environment". International markets may speed up the growth process of a start-up company as they offer new business opportunities. Terjesen and Szerb (2008) and Kolvereid (1992) confirmed a positive relationship between export and growth ambition. In light of the described circumstances early-stage entrepreneurs are facing, as well as previous research findings, we presuppose a positive association between their growth aspirations and international orientation, as stated in the following hypothesis:

*Hypothesis 2: The likelihood that an early-stage entrepreneur has firm growth aspirations is higher if (s)he is internationally oriented in comparison to one who is not, more so in WECs, compared to SeECs.*

## **Data, variables and models**

### **Data**

Research data were derived from the GEM research. Bosma et al. (2012) fully explained the GEM study's content and procedures. GEM is a large-scale entrepreneurship research program launched with ten countries in 1997. In 2014, the coverage was extended to 73 countries. Our research data were derived from the

GEM's pooled Adult Population Survey for 2003–2008. Table 1 indicates the total number of interviewed adults, 18 to 65 years old, in selected countries. Interviews were conducted using the computer-assisted telephone interviewing (CATI) method. Our analysis is based on a sample of 3,098 cases from eight SeECs and 3,626 cases from five WECs. Table 1 presents the data for the criterion variable and predictors of early-stage entrepreneurs by country and region.

**Table 1: Sample data for criterion variable and predictors across SeEC and WEC region, 2003 – 2008**

Country	Expects more than 5 employees in next five years			How many businesses offer the same product?				Product is new to all or some customers			At least some customers come from other countries		
	No	Yes	Total	Many	Few	None	Total	No	Yes	Total	No	Yes	Total
Bosnia and Herzegovina	114	29	143	84	44	15	143	117	26	143	45	67	112
Croatia	431	192	623	318	252	54	624	456	168	624	163	360	523
Greece	727	120	847	505	268	73	846	516	331	847	365	371	736
Hungary	718	150	868	467	176	49	692	713	155	868	348	175	523
Macedonia	172	81	253	126	96	31	253	184	68	252	93	139	232
Romania	97	39	136	95	34	7	136	88	48	136	20	94	114
Slovenia	530	268	798	373	336	89	798	392	406	798	222	453	675
Serbia	219	70	289	144	97	48	289	228	61	289	198	60	258
<b>Total SeECs</b>	<b>3008</b>	<b>949</b>	<b>3957</b>	<b>2112</b>	<b>1303</b>	<b>366</b>	<b>3781</b>	<b>2694</b>	<b>1263</b>	<b>3957</b>	<b>1454</b>	<b>1719</b>	<b>3173</b>
Belgium	533	160	693	364	222	56	642	421	272	693	157	368	525
France	408	93	501	241	182	38	461	274	226	500	92	292	384
Germany	1625	518	2143	981	758	95	1834	1401	742	2143	227	968	1195
Netherlands	731	231	962	428	357	103	888	652	310	962	384	356	740
Switzerland	536	177	713	372	274	66	712	398	314	712	236	300	536
<b>Total WECs</b>	<b>3833</b>	<b>1179</b>	<b>5012</b>	<b>2386</b>	<b>1793</b>	<b>358</b>	<b>4537</b>	<b>3146</b>	<b>1864</b>	<b>5010</b>	<b>1096</b>	<b>2284</b>	<b>3380</b>
<b>Grand Total</b>	<b>6841</b>	<b>2128</b>	<b>8969</b>	<b>4498</b>	<b>3096</b>	<b>724</b>	<b>8318</b>	<b>5840</b>	<b>3127</b>	<b>8967</b>	<b>2550</b>	<b>4003</b>	<b>6553</b>

### Variables

This section describes measurements for all investigated categories drawn from the GEM research. We presented the criterion variable (i.e., firm growth aspirations) and three predictors (i.e., number of competitors, innovative product and

international orientation). We built three models for early-stage entrepreneurs from the sampled regions: SeECs, WECs and combined SeECs and WECs.

### ***Criterion (or response) variable***

*Firm growth aspirations.* Respondents were asked to indicate whether they expect to hire more than five employees in the next five years. Possible answers were no or yes, with the latter serving as the reference category.

### ***Predictors***

The estimation models for binary logistic regressions included three predictors and the country control variable:

1. *Number of competitors.* Respondents were asked “How many businesses offer the same product?” Possible answers were many, few or none (reference indicator).
2. *Innovative product.* Respondents were asked “Is the product new to all or some customers?” Possible answers were no or yes (reference indicator).
3. *International orientation.* Respondents chose from five categories of exporting share: 76%–100%, 26%–75%, 11%–25%, 1%–10% or none. We coded all the respondents with at least some customers from other countries as “yes” (reference indicator) and those with no exporting as “no”.
4. *Countries in the sample.* Eight SeECs and five WECs (indicated in Table 1) were added as the country control variable representing countries’ environmental factors.

### ***Binary logistic regression models***

We built a binary logistic regression model for the years 2003–2008. Based on the model, we assumed that the criterion variable is a linear combination of the three predictors and country control variable. The model for estimation reads:

$$\text{Logit } [P(y=1)]_{ik} = a_k + b_{1k} \text{Number of competitors}_{ik} + b_{2k} \text{Innovative product}_{ik} + b_{3k} \text{International orientation}_{ik} + d_{jk} \text{Country}_{ijk} + e_{ik} \quad (1)$$

where  $\text{Logit } [P(y=1)]$  is the criterion variable (i.e., the binary logit estimate for firm growth aspirations);  $a$  is the binary logit for the regression constant;  $b_1$  is the binary logit estimate for the number of competitors regression coefficient;  $b_2$  is the binary logit estimate for the innovative product regression coefficient;  $b_3$  is the binary logit estimate for the international orientation regression coefficient;  $d_j$  is the binary logit estimate for a country dummy regression coefficient;  $k$  is the index for the number of a group of countries ( $k = 1$ , SeECs,  $k = 2$ , WECs,  $k = 3$ , SeECs and WECs);  $i$  is the index for the number of cases ( $N_{\text{SeECs}} = 3,098$ ;  $N_{\text{WECs}} = 3,626$ ;  $N_{\text{united}} = 6,724$ );  $j$  is the index for the number of a country; and  $e_{ik}$  is the binary logit estimate for the error term.

## Results

First, we checked standard errors of all three models to uncover possible numerical problems. As all standard errors (not included in Table 3, but accessible on request) are less than two, there is no problem interpreting the results. Sample size requirements are not a problem because the minimum number of cases per predictor (10 to 20) is exceeded. The significance test for the final models' chi-square (after adding the predictors) is our statistical evidence of the presence of a relationship between the criterion variable and the combinations of the predictors. In addition, the models' classification accuracy shows that predicted group membership based on the logistic model reflects the actual group membership.

Let us analyse the results in more detail, starting with the correlation matrix (Table 2).

**Table 2: Nonparametric correlations (Spearman's rho), 2003-2008**

		Firm growth aspirations (1)			Number of competitors (2)			Innovative product (3)			International orientation (4)		
		S	W	S&W	S	W	S&W	S	W	S&W	S	W	S&W
$\Xi$	S	1											
	W		1										
	S&W			1									
$\Xi$	S	0.132**			1								
	W		0.089**			1							
	S&W			0.108**			1						
$\Xi$	S	0.076**			0.267**			1					
	W		0.086**			0.309**			1				
	S&W			0.082**			0.291**			1			
$\Xi$	S	0.156**			0.142**			0.184**			1		
	W		0.101**			0.021			0.098**			1	
	S&W			0.124**			0.085**			0.150**			1

\*\* Correlation is significant at the 0.01 level (2-tailed). S = SeECs; W = WECs; S&W = SeECs and WECs

As can be seen from Table 2, collinearity between variables is not a problem as correlation coefficients are weak (0.1–0.3).

In the following, we analyse the results presented in Table 3, in which we put the odds (calculated by exponentiating the binary logit  $b_j$  coefficients from model (1)) of firm growth aspirations. We start with the SeEC model.

### ***Results for SeECs***

The results show that the statistically significant predictors in the SeEC model are many competitors and international orientation. The odds ratio [Exp(b)] of 0.599 ( $p = 0.000$ ) in the third column of Table 3 indicates that the likelihood of having firm growth aspirations is 40% smaller for an early-stage entrepreneur when (s)he is facing many competitors than for an early-stage entrepreneur without competitors. Few competitors and innovative product predictors did not prove to be significant predictors in SeECs. The odds ratio of 0.584 ( $p = 0.000$ ) for international orientation indicates that the likelihood of having firm growth aspirations is 42% smaller for an early-stage entrepreneur from an SeEC who does not have at least some of the customers from abroad than for an early-stage entrepreneur who has at least some foreign customers. Regarding the significant odds ratios of SeECs in Table 3, we can see that the likelihood that an early-stage entrepreneur has firm growth aspirations is 60% and 43% smaller in Greece and Hungary, respectively, compared to Macedonia. The predictors for competition and international orientation and the country control explain 8.8% of the variability of firm growth aspirations in SeECs, with 75% overall predictive accuracy (see Table 3).

### ***Results for WECs***

In the WEC model, all three predictors proved to be significantly related to firm growth aspirations. The odds ratio of 0.626 ( $p = 0.002$ ) indicates that the likelihood for an early-stage entrepreneur from a WEC to have aspirations for growth is 37% smaller when this entrepreneur is facing many competitors than when a WEC early-stage entrepreneur without competitors. Similar to the SeEC model, few competitors did not prove to be a significant predictor in this model. The odds ratio of 0.771 ( $p = 0.003$ ) indicates that the likelihood of having firm growth aspirations is 23% smaller for an early-stage entrepreneur from a WEC if s(he) does not have an innovative product compared to an early-stage entrepreneur who has such a product.

The odds ratio of 0.542 ( $p = 0.000$ ) indicates that the likelihood that an early-stage entrepreneur from a WEC would have growth aspirations is 46% smaller when this entrepreneur has no customers from other countries than when such an entrepreneur has at least some foreign customers. Among WECs, no environmental impact represented by a country control variable was present, suggesting that these countries' environments are more evenly developed. Including all three predictors in the WEC model, 3.8% of the firm growth aspiration variability is explained, with 78% overall predictive accuracy (see the fifth and sixth columns of Table 3).

### ***Results for the SeEC and WEC regions combined***

In the combined model, all the predictors proved to be significant and explained 6.3% of the variability of firm growth aspirations of early-stage entrepreneurs, with 76% overall predictive accuracy (see the last two columns of Table 3). All the predictors (competitive intensity, innovative product and international orientation) adequately explained the firm growth aspirations of early-stage entrepreneurs from SeECs or WECs.

The odds ratio of 0.617 ( $p = 0.000$ ) indicates that the likelihood of firm growth of a SeEC or WEC early-stage entrepreneur with many competitors is almost 38% smaller than an early-stage entrepreneur without competition. The predictor for few competitors proved to be insignificant. The odds ratio of 0.828 ( $p = 0.003$ ) indicates that the likelihood of having firm growth aspirations for an early-stage entrepreneur from SeECs or WECs is 17% smaller when such an entrepreneur does not have an innovative product compared to an early-stage entrepreneur who has an innovative product. Again, as in the previous two models, the likelihood for having firm growth aspirations is 44% smaller for early-stage entrepreneurs who have at least some customers from other countries, compared to those without foreign customers. Regarding the odds ratios of countries, we can see that the likelihood of having firm growth aspirations was smaller for early-stage entrepreneurs from France, Germany, Greece, Hungary, Switzerland and The Netherlands than for Macedonian early-stage entrepreneurs. Thus, among the control variable, many significant countries show differences between the regions, as hypothesised.

The empirical results of the models partially confirmed Hypothesis 1, presupposing a significant association between innovation orientation (measured by two proxy variables: level of competition and innovative products/services) and firm growth aspirations of early-stage entrepreneurs. The part of the hypothesis represented by the level of competition was confirmed in all models, whereas its second part represented by the predictor innovative products/services was confirmed in the WEC and combined models, but not the SeEC model. According to the estimated coefficient, the likelihood for firm growth aspirations is unexpectedly (slightly) bigger for the SeEC entrepreneur who faces a higher level of competition than for a WEC counterpart. The predictor measuring the innovativeness of products/services confirmed our expectation of a higher likelihood for firm growth aspirations in the WEC and combined models, but not in the SeEC model. However, we must keep in mind that the assessment of innovativeness, as implicated by these two predictors, and growth aspirations could be very subjective. This means that it is context-specific and what is regarded as competitive or innovative in one country is not necessarily regarded as such in another (Minnitti/Bygrave/Autio 2006; Hessels et al. 2008). Another part of the explanation can be found in the “quality” of the investigated entrepreneurs. In SeECs, people are less likely to start firms to increase their income; independ-

ence is more important (Koellinger 2008). The fear of failure is also very prevalent in SeECs. Research findings show that only one in five respondents started their firm in order to take advantage of an opportunity to increase incomes (Morris 2011). Such findings suggest that smaller competition may exist in SeECs compared to WECs.

**Table 3: Results of the binary logistic regressions, 2003-2008 (Criterion variable: firm growth aspirations - Yes)**

	Category	SeECs		WECs		SeECs + WEC	
		Exp(B)	p-Value	Exp(B)	p-Value	Exp(B)	p-Value
How many businesses offer the same product (number of competitors)	Many	0.599	0.000	0.626	0.002	0.617	0.000
	Few	0.947	0.704	0.823	0.194	0.888	0.252
Product is new to all or some customers (innovative product)	No	0.889	0.210	0.771	0.003	0.828	0.003
At least some of the customers come from other countries (international orientation)	No	0.584	0.000	0.542	0.000	0.565	0.000
Belgium						0.671	0.024
France						0.423	0.000
Germany						0.563	0.000
Greece		0.399	0.000			0.394	0.000
Hungary		0.567	0.002			0.567	0.002
Switzerland						0.705	0.048
The Netherlands						0.603	0.003
Intercept		0.794	0.230	0.515	0.000	0.855	0.359
N		3,098		3,626		6,724	
-2Log likelihood		3,370.528		3,512.150		6,885.844	
Nagelkerke R Square		0.088		0.038		0.063	
Model $\chi^2$		194.383		84.497		281.580	
Model $\chi^2$ significance		0.000		0.000		0.000	
Overall predictive accuracy (%)		75.0		77.6		76.4	

Note: The reference category of the criterion variable (firm growth aspirations: Expects more than five employees in next five years) in all three models is No. Reference indicators of the three predictors are: number of competitors (None), innovative product (Yes), and international orientation (Yes). Only countries that have significant odds ratios are included in the table. Macedonia is the reference indicator.

We empirically confirmed Hypothesis 2, which predicted that the likelihood of firm growth aspirations is higher for early-stage entrepreneurs that have at least some customers from other countries. We expected this likelihood to be higher for an early-stage entrepreneur from WECs, which we also confirmed.

In general, we confirmed the proposed associations between firm growth and the level of competition, innovative products/services and international orientation. The results also indicated that the estimated coefficients differ across models, which justify our decision to estimate three models assuming perceived environmental differences in SeECs and WECs. However, the differences between these regions are not substantial, which might suggest that less developed economies are catching up to more developed ones.

## Discussion and policy implications

Innovativeness, internationalisation and firm growth aspirations – the focus of our research – are complex, multidimensional issues in terms of both scope and character. Thus, an increased understanding of the described phenomenon is important for different target groups. From a theoretical perspective, such knowledge is needed to strengthen the empirical micro-level basis of theories of entrepreneurship, especially early-stage entrepreneurship, and theories of innovation. From a societal perspective, there is a good reason to seek more knowledge about the factors that promote and impede entrepreneurship and innovativeness in small and medium-sized enterprises (SMEs). From the policy implications' point of view, it is necessary that supportive measures not be targeted at entrepreneurship in general, but be more focused and selective towards those individuals and companies motivated for growth and with high-growth aspirations.

Insights into the determinants of innovative entrepreneurship are relevant for policymakers as increasing the share of such entrepreneurship is a major target for the EU's 2020 Entrepreneurship as well as Innovation Strategy Agenda (EC 2014; EC 2013; EC 2010). Previous research results (Bosma/Schutjens 2011, 2007) have suggested that accounting for the regional context is important. They have also confirmed the distinction between low- and high-ambition entrepreneurship within various regions. Bosma and Schutjens (2007) further suggested that (the process of) setting up new businesses generally relates to regional conditions and regional demography effects, such as urbanization, age and education structure, whereas entrepreneurs' growth and innovation ambitions are subject to national institutional factors, including entrepreneurial and cultural attitudes. Thus, the focal interest of our investigation was twofold: 1) to determine the associations between the innovation and international orientation of early-stage entrepreneurs and their growth aspirations and 2) to assess whether these associations differ across SeECs and WECs.

The results of the binary logistic regressions show that the early-stage entrepreneurial firms' innovation and international orientations are related to firms' growth aspirations. We confirmed Hypothesis 1, represented by two predictors; the first was verified for both groups, whereas the second was verified for only one group. We succeeded in empirically confirming that, the higher the competitiveness level (using the predictor "many" businesses offer the same products/services), the smaller the likelihood of firm growth aspirations. This likelihood unexpectedly proved to be slightly smaller for WEC than SeEC early-stage entrepreneurs. The second predictor for the innovation orientation measured by the innovativeness of products/services proved to be significant only for WEC early-stage entrepreneurs. What does this suggest? Perhaps, in less advanced environments (e.g., SeECs), more opportunities for innovation exist. In other words, market-level innovation is relatively easier and cheaper in SeECs than in WECs. This theoretically presupposed assumption has already been empirically confirmed (Koellinger 2008), assuming that SeECs' economies are semi-developed and many business opportunities still exist in the area of traditional, well-proven products and services. There is still no urge for a company to survive and grow to have new innovative products/services. Another explanation of such results may lie in the fact that 42 months (the time period defining early-stage entrepreneurs) is a time period in which many companies have not yet been able to develop innovative products, especially in less developed environments (for example, SeECs). However, real innovative products/services will most probably be developed in coming years, when the companies' life cycles force them to change their products/services in order to be competitive and survive in the global economy.

We empirically confirmed Hypothesis 2, which suggested that early-stage entrepreneurs with at least some customers from other countries express higher aspirations for growing their firms in terms of additional employment. In addition, the assessed coefficient for the international orientation of early-stage entrepreneurs from WECs proved to be greater than those from SeECs, as hypothesized. Some studies have considered internationalisation to be indivisible of the firm growth in general (e.g., Nummela/Puumalainen/Saarenketo 2005). Internationalisation is, on average, lowest in factor-driven economies and increases as the economic development level increases (Bosma et al. 2012). Based on Porter's typology (Porter et al. 2002), all the WECs in our sample are innovation-driven economies whereas most of the SeECs (except Greece and Slovenia) are efficiency-driven economies. Thus, we expected a greater likelihood of firm growth aspiration in relation to international orientation in WECs. Early-stage entrepreneurs arising from more advanced environments are assumed to be better equipped (i.e., have more knowledge, more programs deriving from entrepreneurship ecosystem) for the internationalisation of their businesses than SeEC early-stage entrepreneurs. This presumption also arises from the consideration of

Autio, Sapienza, and Almeida (2000) that knowledge is one of the most important antecedents of internationalisation.

In accordance with Bosma and Schutjens' (2007) findings, our results clearly suggest that regional institutional conditions affect a firm's innovation and international orientation. The identified differences strongly support the need for the sound development and implementation of a smart specialization strategy, which should include innovation as well as internationalisation on both a country and regional level. Countries and their regions need to focus their efforts on building economic strengths and developing innovative ways to face global competition. Continuous innovation is inevitably dependent on new knowledge creation – a process that is multidimensional in nature and “must be managed at individual and organisational level, as well as in the societal, cultural, economic and political context” (Rebernik/Širec 2007: 408). Hauc, Vrečko, and Barilović (2011) suggest a transition to the project-oriented knowledge society. Therefore, governments should try to affect a thoughtfully leveraged and carefully managed set of initial endowments that can move a new venture far along the road to becoming an established firm. To achieve the necessary progress in increasing employment, governmental activities to promote technological and ambitious entrepreneurs play a vital role. Furthermore, governments may stimulate the internationalisation of early-stage entrepreneurs by organising training and providing information on “going abroad” as well as establishing networks of foreign business people who are able to give advice and act as mentors to start-ups.

The conclusions of this paper lead us to establish a series of proposals for future studies. One possible line of research would be the extension of the comparison between selected entrepreneurs (for example, early-stage and established entrepreneurs from different age groups, with various histories, experiences, knowledge and networks). In order to verify the reliability of the self-reported measures of growth aspirations included in the study, calculating the correlation between these measures and objective measures of growth (sales, employment and assets growth) is recommended. The development of a longitudinal study would enable us to use multiple time measurements to evaluate the influence of several variables on entrepreneurs' growth aspirations. Finally, we consider it to be of great importance to study in depth the relationship between entrepreneurs' early-stage aspirations and their businesses' long-term success.

## References

Acs, Z. (2000): *Regional innovation, knowledge and global change*. London: Pinter.

Acs, Z.J./Anselin, L./Varga, A. (2002): Patents and innovation counts as measures of regional production of new knowledge, in: *Research Policy*, 31, 7, 1069-1085.

Acs, Z.J./Audretsch, D.B./Braunerhjelm, P./Carlsson B. (2005): The knowledge spillover theory of entrepreneurship, in: *Center for Economic Policy Research No. 5326*, London, UK.

Ajzen, I. (1991): The theory of planned behaviour, in: *Organizational Behavior and Human Processes*, 50, 179-211.

Andersson, M./Lööf, H. (2009): Learning-by-exporting revisited: The role of intensity and persistence, in: *The Scandinavian Journal of Economics*, 111, 4, 893-916.

Autio, E. (2007): *Global Entrepreneurship Report, 2007, Report on High-Growth Entrepreneurship*, London Business School and GERA, London.

Autio, E./Acs, Z. (2009): Institutional influence on strategic entrepreneurial behaviours, in: *Jena Economic Research Papers in Economics*, 80, on: <http://edoc.mpg.de/458990>. Accessed 13 February 2015.

Autio, E./Sapienza, H.J./Almeida, J.G. (2000): Effects of age at entry, knowledge intensity, and imitability on international growth, in: *Academy of Management Journal*, 43, 5, 909-924.

Bosma, N./Wennekers, S./Amorós, J.E. (2012): *Global entrepreneurship monitor–2011 extended report: Entrepreneurial employees across the globe*. Babson Park, MA: Babson College, Santiago, Chile: Universidad del Desarrollo, Kuala Lumpur, Malaysia: Universiti Tun Abdul Razak, London, UK: Global Entrepreneurship Research Association.

Bosma, N.S./Schutjens, V.A.J.M. (2007): Outlook on Europe: Patterns of promising entrepreneurial activity in European regions, in: *Tijdschrift voor Economische en Sociale Geografie*, 98, 5, 675-686.

Bosma, N.S./Schutjens, V.A.J.M. (2011): Understanding regional variation in entrepreneurial activity and entrepreneurial attitude in Europe, in: *The Annals of Regional Science*, 47, 3, 711-742.

Braczyk, H./Cooke, P./Heidenreich, M. (1998): *Regional innovation systems: The role of governances in a globalized world*. London: UCL Press.

Cassar, G. (2007): Money, money, money? A longitudinal investigation of entrepreneur career reason, growth preferences and achieved growth, in: *Entrepreneurship & Regional Development*, 19, 1, 89-107.

Chen, X./Zou, H./Wang, D.T. (2009): How do ventures grow? Firm capabilities, growth strategies and performance, in: *International Journal of Research in Marketing*, 26, 4, 294-303.

Davidsson, P. (2006): Nascent entrepreneurs: Empirical studies and developments, in: *Foundations and Trends in Entrepreneurship*, 2, 1, 1-70.

Davidsson, P./Wiklund, J. (1999): Theoretical and methodological issues in the study of firm growth, in: *Jönköping International Business School, Working Paper Series No 99-6*.

De la Mothe, J./Pacquet, G. (eds.) (1998): *Local and regional systems of innovation*. Boston: Kluwer Academic Publishers.

Delmar, F./Davidsson, P./Gartner, W.B. (2003): Arriving at the high-growth firm, in: *Journal of Business Venturing*, 18, 2, 189-216.

D'Souza, D.E./McDougall, P.P. (1989): Third world joint venturing: a strategic option for the smaller firm, in: *Entrepreneurship Theory and Practice*, 14, 4, 19-33.

European Commission (2010): *Europe 2020. A European strategy for smart, sustainable and inclusive growth*, on: <http://ec.europa.eu/eu2020/pdf/COMPLET%20EN%20BARROSO%20%20%20007%20-%20Europe%202020%20-%20EN%20version.pdf>. Accessed 20 October 2014.

European Commission (2013): Entrepreneurship 2020 action plan, on:  
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0795:FIN:EN:PDF>. Accessed 20 October 2014.

European Commission (2014): Innovation union scoreboard 2014, on:  
[http://ec.europa.eu/enterprise/policies/innovation/files/ius/ius-2014\\_en.pdf](http://ec.europa.eu/enterprise/policies/innovation/files/ius/ius-2014_en.pdf). Accessed 20 October 2014.

Gilbert, B.A./McDougall, P.P./Audretsch, D.B. (2006): New venture growth: A review and extension global, in: *Journal of Management*, 32, 6, 926-950.

Hall, P./Markusen, A. (1985): *Silicon landscapes*. Boston: Allen and Unwin.

Hauc, A/Vrečko, I/Barilović, Z. (2011): A holistic project-knowledge society as a condition for solving global strategic crises, in: *Društvena istraživanja*, 20, 4, 1039-1060.

Henrekson, M./Johansson, D. (2009): Competencies and institutions fostering high-growth firms, in: *Foundations and Trends in Entrepreneurship*, 5, 1, 1-80.

Henrekson, M./Johansson, D. (2010): Gazelles as job creators: a survey and interpretation of the evidence, in: *Small Business Economics*, 35, 2, 227-244.

Hessels, J./van Gelderen, M./Thurik, R. (2008): Drivers of entrepreneurial aspirations at the country level: The role of start-up motivations and social security, in: *International Entrepreneurship and Management Journal*, 4, 401-417.

Kafouros, M./Buckley, P. J./Sharp, J. A./Wang, C. (2008): The role of internationalization in explaining innovation performance, in: *Technovation*, 28, 63-74.

Kelley, D./Bosma, N./Amoros, J.E. (2011): Global entrepreneurship monitor, 2010 global report. Babson Park, MA: Babson College, Universidad del Desarrollo, London Business School, and GERA.

Koellinger, P. (2008): Why are some entrepreneurs more innovative than others?, in: *Small Business Economics*, 31, 1, 21-37.

Kolvereid, L. (1992): Growth aspirations among Norwegian entrepreneurs, in: *Journal of Business Venturing*, 5, 209-222.

Kyläheiko, K./Jantunen, A./Puumalainen, K./Saarenketo, S./Tuppura, A. (2011): Innovation and internationalization as growth strategies: The role of technological capabilities and appropriability, in: *International Business Review*, 20, 508-520.

Liao, J./Welsch, H. (2003): Social capital and entrepreneurial growth aspiration: a comparison of technology- and non-technology-based nascent entrepreneurs, in: *Journal of High Technology Management Research*, 14, 149-170.

Makó, C./Csizmadia, P./Illéssy, M./Iwasaki, I., Szanyi, M. (2013): Diffusion of innovation in service firms (Hungarian versus Slovakian business service firms), in: *Journal for East European Management Studies*, 18, 1, 135-147.

Malecki, E. (1981): Government funded R&D: Some economic implications, in: *Professional Geographer*, 33, 72-82.

Millán, J.M./Congregado, E./Román, C./van Praag, M./ van Stel, A. (2011): The value of an educated population for an individual's entrepreneurship success, EIM business and policy research, Zoetermeer, the Netherlands, on:  
<http://www.tinbergen.nl/discussionpapers/11066.pdf>. Accessed 8 February 2014.

Minnitti, M./Bygrave, W./Autio, E. (2006): Global entrepreneurship monitor–2005 executive report. Wellesley, MA: Babson College.

Močnik, D./Širec, K. (2010): The determinants of internet use controlling for income level: Cross-country empirical evidence, in: *Information Economics and Policy*, 22, 3, 243-256.

Morris, R. (2011): High-impact entrepreneurship global report 2011. Ernst & Young, Center for High-impact Entrepreneurship at Endeavour, on: <http://www.gemconsortium.org>. Accessed 10 February 2015.

Nummela, N./Puimalainen, K./Saarenketo S. (2005): International growth orientation of knowledge-intensive SMEs, in: *Journal of International Entrepreneurship*, 3, 1, 5-18.

Obeng, B.A./Robson, P./Haugh, H. (2014): Strategic entrepreneurship and small firm growth in Ghana, in: *International Small Business Journal*, 32, 5, 501-524.

OECD (1997): National innovation systems. Paris: Organization for Economic Co-operation and Development.

Park, J.S. (2005): Opportunity recognition and product innovation in entrepreneurial hi-tech start-ups: A new perspective and supporting case study, in: *Technovation*, 25, 7, 739-752.

Penrose, E.T. (1959): *The theory of the growth of the firm*. New York: John Wiley.

Porter, M.J./Sachs, J./McArthur, J. (2002): Executive summary: Competitiveness and stages of economic development, in: Porter, M.J./Sachs, P.K./Cornelius, J.W./McArthur, J./Schwab, K. (eds.): *The Global Competitiveness Report 2001–2002*, New York: Oxford University Press, 16-25.

Rebernik, M./Širec, K. (2007): Fostering innovation by unlearning tacit knowledge, in: *Kybernetes*, 36, 3-4, 406-419.

Stohr, W. (1986): Regional innovation complexes, in: *Papers of the Regional Science Association*, 59, 29-44.

Storey, D. (1994): *Understanding the small business sector*. London, New York: Routledge.

Sweeney, P. (1987): *Innovation, entrepreneurs and regional development*. New York: St. Martin Press.

Terjesen S./Hessels J./Li D. (2013): Comparative international entrepreneurship: A review and research agenda, in: *Journal of Management*. Epub ahead of print 1 May. doi:10.1177/0149206313486259.

Terjesen, S./Szerb, L. (2008): Dice thrown from the beginning? An empirical investigation of determinants of firm level growth expectations, in: *Estudios De Economia*, 35, 2, 153-178.

Tominc, P./Rebernik, M. (2007): Growth aspirations and cultural support for entrepreneurship: a comparison of post-socialist countries, in: *Small business economics*, 28, 2/3, 239-255.

Verheul, I./Van Mil, L. (2011): What determines the growth ambition of Dutch early-stage entrepreneurs?, in: *International Journal of Entrepreneurial Venturing*, 3, 2, 183-207.

Westhead, P./Wright, M./Ucbasaran, D. (2001): The internationalization of new and small firms: A resource-based view, in: *Journal of Business Venturing*, 16, 4, 333-358.

Williams, A.M./Shaw, G. (2011): Internationalization and innovation in tourism, in: *Annals of Tourism Research*, 38, 27-51.