

## AN EMPIRICAL EXPLORATION OF CORPORATE ENTREPRENEURIAL ORIENTATION IN BIHOR COUNTY ROMANIA

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**Abstract:** According to Schumpeter (1934) an entrepreneur is an individual who innovates and creates new combinations. Today entrepreneurship refers to a process of opportunity recognition and pursuit that leads to growth. It assumes an opportunistic approach to opportunities. It bears risks and it is associated with innovation' (Hsu et al., 2011). Last two decades have witness the birth of entrepreneurship at organizational level or corporate entrepreneurship (Sciascia and Bettinelli, 2013). Greblikaite and Krisciunas (2012) have identifies the main features that compound the modern entrepreneurship in an enterprise. According to them corporate entrepreneurship has four main components: (a) economic activity, (b) managerial activity, (c) social – cohesion activity and (d) technological and environmental activity. As an economic activity corporate entrepreneurship assumes the framework of the resource – based and transaction – costs theories, focusing on eliminating transaction costs within existing constraints in order to maximize profitability (Antoncic and Prodan, 2008). Striving for profitability, effectiveness, competitiveness, risks management, value and jobs creation are several indicators measuring the construct named economic activity (Greblikaite and Krisciunas, 2012). A second construct underlines that corporate entrepreneurship has a managerial dimension. Consequently entrepreneurs must focus on innovation, knowledge creation, team work and networking. With the advent of the new EU social cohesion policy, corporate entrepreneurship is characterized by responsiveness to different shareholders, including the society and by 'friendliness to problematic social groups' (Greblikaite and Krisciunas, 2012, p. 527). Finally appliance of technological and scientific research and focusing on renewable resources are the indicators of a forth component of corporate entrepreneurship, named Technological and Environmental activity. Synthetizing, the literature on corporate entrepreneurship identifies a central construct measuring the corporate entrepreneurship, named entrepreneurial orientation (EO). The multidimensionality of corporate entrepreneurship is reduced to a construct having only three dimensions: innovation, proactiveness and risk taking (Zahra and Nielson, 2002). For the purpose of this study principal component analysis has been chosen to conduct an exploratory analysis of the validity of scales used to measure the three dimensions of EO of firms in Bihor County. Factor scores have afterwards been used to bring empirical evidence supporting the positive effect of EO on organizational performance.

**Keywords:** entrepreneurial orientation, entrepreneurship, OLS estimation

**JEL classification:** M10, C54

## 1. Entrepreneurial orientation

Covin and Slevin (1989) have identified three constructs defining the EO: (a) Innovation, (b) Proactiveness and (c) Risk Taking (Pato and Teixeira, 2013). Later, Lumpkin and Dess (1996) add two more dimensions to EO: (a) autonomy and (b) competitive aggressiveness. As some researchers argue that competitive aggressiveness is part of proactiveness dimension and autonomy is a precursor of EO we have chosen to limit the present research to the three dimensions identified initially by Lumpkin and Dess (1996).

According to Sciascia and Bettinelli (2013) innovatively defines:

- the proclivity to try new ways to conduct business, to organize production;
- the willingness to adopt new ideas and methods;
- the importance of research and development function within the organization;
- seeking creative, extraordinary solutions to existing problems
- the frequency of launching new products or approaching new markets.

Innovatively was first identified as a core element of entrepreneurship by Schumeter (1934). According to him the entrepreneur maximizes profits by means of innovation in: (a) new products, (b) new production methods, (c) new markets and (d) new forms of organization.

Risks taking refers to proclivity to undertake actions with uncertain outcomes. Such outcomes can result in negative results. Although a plethora of studies in the field of entrepreneurship focus on identifying traits favoring entrepreneurship, Knight (1921) adequately has shown that ultimately it is the change which distinguished between success and failure in business. As a personal note, although such studies are preferable to analysis making inferences based on qualitative studies (i.e. case studies), they suffer from sample selection bias and therefore their results are questionable. Consequently we prefer the conclusion of Knight (1921), even if we do not agree with him in differentiating between risks and uncertainties based on the distinction between subjective and objective probabilities (Constangioara, 2010).

Proactiveness is 'an opportunity seeking forward looking perspective involving introducing new products or services ahead of competition and acting in anticipation of future demand to create, change and shape the environment' (Vij and Bedi, 2012, p. 20).

We build a measurement model of EO composed of three dimensions. The indicators used to quantify innovation, risks taking and proactiveness are based on a questionnaire taken from Wang and Yen (2012) (table 1).

**Table 1. Factors and indicators of EO**

Dimension	Indicator
Innovativeness	Acting quicker than competitors
	New lines of products
	Major changes in product or service lines
Risks taking	Top management has a strong proclivity towards high-risks projects
	Bold, wide-ranging acts to achieve objectives
	Bold, aggressive posture to maximize the probability of exploiting new opportunities
Proactiveness	The 'undo –the competitors' posture
	Introducing new administrative techniques, operating technologies
	Acting quicker than competitors

Source: Based on Wang and Yen (2012)

Table 1 presents the indicators used to measure the innovativeness, risks taking and proactiveness dimensions of the EO. Obviously there is some overlapping especially between innovativeness and proactiveness. We see that both factors refer to the way the organization is acting as compared to competitors. Yet whereas innovativeness' output is given by products/services, in the case of proactiveness the output is primarily given by new administrative techniques, operating technologies.

## **2. Empirical studies of entrepreneurial orientation of firms in Bihor County Romania**

In autumn 2013 we have conducted a research targeting an initial sample of 100 Romanian companies. Data was collected using a survey-based questionnaire returning 30 usable responses, covering firms from various industries

We use the same questionnaire proposed initially by Wang and Yen (2012) to measure the extent of EO of firms in Bihor County Romania. Our measurement model relies on a five point Likert type scale, asking respondents to rate on a five –point Likert type scale (1=strongly disagree, 5= strongly agree) the degree of EO in their firm as compared to competitors. The questionnaire is based on the indicators presented in table 1.

The survey was pre-tested and validated using the feedback of local supply chain managers. Afterwards, the measurement model was tested using a principal component analysis. The proposed measurement model required refinement. Testing is ensured by existing statistical techniques in the field.

Our proposed methodology allows for exploring the validity of scales used to measure EO.

In order to assess the organizational performance we rely on Richards et al. (2009) to choose a financial indicator as dependent variable in an OLS estimation of the relationship between organizational performances and EO. For the required analysis we have chosen to use the statistical package Eviews 7.

## 2.1. Results

Table 2 shows the correlations between indicators measuring innovativeness.

**Table 2. Pearson Correlation Coefficients for indicators of volatility (H0: Rho=0)**

	Acting quicker than competitors	New lines of products	Major changes in product or service lines
Acting quicker than competitors	1	0.58 (p<0.001)	0.47 (p=0.0003)
New lines of products	0.58 (p<0.001)	1	0.42 (p=0.0012)
Major changes in product or service lines	0.47 (p=0.0003)	0.42 (p=0.0012)	1

We see that innovativeness scale displays relatively high correlations among its indicators. All correlations are statistically significant at p=0.005.

Table 3 presents the results of principal component analysis of the measurement scale of innovativeness.

**Table 3. Principal component results for scale measuring volatility**

	Factor loadings	Final Communality estimates	Variance explained by factor
Acting quicker than competitors	0.85	0.72	1.98
New lines of products	0.83	0.68	
Major changes in product or service lines	0.76	0.58	

Only one factor has been identified. All loadings are very high (above 0.7). Final communalities estimates are also relatively high for each variable. Total variance explained by the factor is 1.98 out of 3 (66%). Cronbach's alpha is 0.74, above the recommended threshold of 0.7.

Table 4 shows the correlations between indicators measuring risks taking.

**Table 4. Pearson Correlation Coefficients for indicators of risks taking (H0: Rho=0)**

	<b>Strong proclivity towards high-risks projects</b>	<b>Bold, wide-ranging acts to achieve objectives</b>	<b>Bold, aggressive posture to maximize expose to opportunities</b>
<b>Strong proclivity towards high-risks projects</b>	1	0.69 (p<0.001)	0.48 (p=0.002)
<b>Bold, wide-ranging acts to achieve objectives</b>	0.69 (p<0.001)	1	0.52 (p<0.001)
<b>Bold, aggressive posture to maximize expose to opportunities</b>	0.48 (p=0.002)	0.52 (p<0.001)	1

Indicators of risks taking display high correlation coefficients, comparable to those measuring innovativeness.

**Table 5. Principal component results for scale measuring risks taking**

	<b>Factor loadings</b>	<b>Final Commuality estimates</b>	<b>Variance explained by factor</b>
<b>Strong proclivity towards high-risks projects</b>	0.87	0.75	2.13
<b>Bold, wide-ranging acts to achieve objectives</b>	0.88	0.78	
<b>Bold, aggressive posture to maximize expose to opportunities</b>	0.77	0.60	

As expected only one factor has been identified. Loadings exceed by far the recommended threshold of 0.4. Final communalities estimates are also relatively high for each variable. Total variance explained by the factor is 2.13 out of 3 (71%). Cronbach alpha is 0.79, above the 0.7 threshold.

Table 6 shows the correlations between indicators measuring proactiveness.

**Table 6. Pearson Correlation Coefficients for indicators of proactiveness (H0: Rho=0)**

	The 'undo –the competitors' posture	Introducing new administrative techniques, operating technologies	Acting quicker than competitors
The 'undo –the competitors' posture	1	0.45 (p=0.005)	0.10(p=0.46)
Introducing new administrative techniques, operating technologies	0.45 (p=0.005)	1	0.34 (p=0.0091)
Acting quicker than competitors	0.10(p=0.46)	0.34 (p=0.0091)	1

In this case the correlation coefficients are lower than in previous cases. This results in lower variable loadings, lower final communality estimates and lower variable explained by the factor (table 7).

**Table 7. Principal component results for scale measuring proactiveness**

	Factor loadings	Final Communality estimates	Variance explained by factor
The 'undo –the competitors' posture	72	0.52	1.62
Introducing new administrative techniques, operating technologies	86	0.74	
Acting quicker than competitors	60	0.35	

Indeed we see that table 7 displays lower factor loadings, lower final communalities and lower total variance explained. The results in table 7 are above recommended threshold. The Cronbach alpha coefficient is 0.56, bellow he threshold.

In what follows we have used the factor scores for Risks taking and Innovativeness in a regression measuring the partial effect of EO on organizational performances (table 8).

**Table 8. OLS results of performance modelling**

Variable	Parameter Estimate	Pr >  t
Intercept	3.51668	<.0001
innovativeness	0.09295	0.00
risks	-0.03956	0.09

Table 8 reveals that only innovativeness is statistically significant ( $p=0.00$ ). The p-value for risks is only marginally significant at 10%.

### 3. Conclusions

A key construct defining the corporate entrepreneurship is represented by the concept of entrepreneurial orientation (EO). There is widespread agreement in the entrepreneurship literature that in today's volatile environment organization could benefit from adopting EO (Wang and Yen, 2012). There is also agreement on the existence of a positive relationship between EO and organizational performance (Sciascia and Bettinelli, 2013). According to same authors, firms that possess a higher degree of EO are said to be more successful than their counterparts.

Empirical analysis revealed that further refinement of the scales was unnecessary. All variable loadings were above the 0.4 threshold. Consequently our analysis proved that scales used to assess EO are unidimensional. Yet only scales for innovativeness and risks taking are deemed reliable by our alpha coefficients ( $>0.7$ ). In the case of proactiveness the Cronbach alpha was only 0.56. This brings supporting evidence that the proactiveness dimension of EO is not reliable in the context of firms in Bihor county. One possible explanation is given by the overlapping content of innovativeness and proactiveness. Although innovativeness focuses on products and services whereas proactiveness on instruments and tools, both factors refer to how quickly the firm is acting as compared to competition. Our results show that firms in Bihor County does not consider important to differentiate between the outcomes of innovativeness and proactiveness. Consequently in Bihor County EO retains only two dimensions: Risks taking and Innovativeness. Further OLS estimation has revealed that only innovativeness is statistically significant. In Bihor County firms that have a proclivity to innovate have better organizational performances. Perhaps surprising, risks ventures do not bring the expected positive and statistical significant impact on performance. It might be that proper risks management strategies are needed to counteract a high volatility in the business environment. Without such strategies the risky behavior results in negative consequences on the organizational performances.

We appreciate that further research should control for environmental turbulences in order to better assess the impact of EO on organizational performances. Also as a direction for future research we propose controlling for different characteristics of firms and industries.

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