

# EXAMINING INTERNAL ENVIRONMENT FOR CORPORATE ENTREPRENEURSHIP: EVIDENCE FROM SERBIAN PUBLIC SECTOR

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**Abstract** In today's fast-changing, turbulent and highly competitive business environment, internal entrepreneurship, i.e. intrapreneurship is seen as an instrument for established organizations to provide a fast response to new business challenges and opportunities. It is especially demanding and challenging to encourage intrapreneurship in the public sector organizations where, compared to the private sector, there is a much greater diversity of objectives to be fulfilled, as well as a greater conflict between profit and social responsibility; less flexibility in the decision-making process; and where financial incentives for improvements are much smaller. This paper examines the level of internal environment development for internal entrepreneurship in the public sector of the Republic of Serbia, as well as the differences in the tendency towards internal entrepreneurship among three categories of public organizational systems (public institutions, public administration, and public enterprises). For this purpose, Corporate Entrepreneurship Assessment Instrument (CEAI) developed by Kuratko, Hornsby, and Covin (2014) is used as a research tool developed for diagnosing organization's internal environment for entrepreneurship through five dimensions: top management support, work discretion/autonomy, rewards/reinforcement, time availability, and organizational boundaries. The Survey sample covers 126 employees from Serbian public sector organizations.

**Keywords:**  
entrepreneurship,  
public sector,  
internal  
environment,  
corporate  
entrepreneurship.

## 1 Introduction

Entrepreneurship plays one of the major roles in the economic and social development of both developed and developing countries. It is defined as “the process by which individuals pursue opportunities without regard to resources they currently control” (Barringer & Ireland, 2010, p. 30). Entrepreneurs recognize opportunities, i.e. discover market needs and turn them into successful businesses, by launching new firms to meet those needs (Moore et al., 2008, p. 6). However, an entrepreneur may also be an individual who is employed in an established company who shows characteristics of entrepreneurial behaviour referring to taking initiative, exploiting opportunities, providing ideas for development, change and improvement, expansion of the market, innovation of products and services, establishment of subsidiaries and acquisition of other companies, all with the aim of raising capital, profit or achieving some socially desirable goals (Omerbegović-Bijelović, 2010, p. 236; Bosma, Stam, & Wennekers, 2014., p. 95).

The concept of creating new business ventures in already established firms/enterprises with the aim of increasing profitability of the organization and its competitive advantage is known as Intrapreneurship or Corporate entrepreneurship (Carrier, 1997). Covin and Miles (1999) define it as a situation when existing organizations enter new business areas, implement new ideas and innovations and promote entrepreneurial organizational culture among managers and employees. As Kearney, Hisrich, and Roche (2009) point out, both large and small enterprises, as well as public and private sector organizations, should strive to be entrepreneurial.

Entrepreneurship in the public sector is a form of corporate or internal entrepreneurship which is being implemented in public companies, state or local governments and public institutions (Omerbegović-Bijelović, Rakićević, & Vučinić, 2015). The rationale behind examining this specific type of intrapreneurship lies in the differences between private and public sector which will be discussed later in the text. It is of great interest to understand the precondition for the development of intrapreneurship and entrepreneurial models that can be implemented in public organizational systems. This paper examines the internal environment for corporate entrepreneurship in public sector organizations. It is focused on the measurement of internal environment readiness for corporate entrepreneurship through the effectiveness of the key internal organizational factors, organizational climate,

innovative activities and behaviour of employees, and opportunities and barriers to the implementation of intrapreneurship. Corporate entrepreneurship assessment instrument (CEAI) established by Kuratko, Hornsby and Covin (2014) is applied on three types of organizations in the public sector in the Republic of Serbia (public administration, public enterprises and public institutions). The main research questions are: What is the level of development of the internal environment for intrapreneurship and what are the differences and specificities among three different types of public organizations.

The paper is organized as follows: after the introductory part, Section 2 briefly defines corporate entrepreneurship in the public sector. The third section presents the survey design, explains the sample and the used questionnaire (the CEAI). Section 4 presents results and discussion. Section 5 concludes the paper.

## **2 Corporate entrepreneurship and public sector**

Internal (corporate) entrepreneurship refers to different types of entrepreneurial behaviour in existing organizations that are aimed at achieving competitive advantage by fostering innovation, taking initiative, exploiting opportunities, innovating and taking risks (Bosma, Stam, Wennekers, 2014). The concept of entrepreneurship in the public sector was developed by theorists who focused their attention on finding ways to achieve creativity, opportunity seeking and innovative behaviour in the public sector, through the concept of entrepreneurship (Osborne, 2012). Public sector entrepreneurship can be defined as the process in which an individual or a group undertakes the desired activities to initiate and adopt changes and innovations within a public organization (Kearney, Hisrich, & Roche, 2007).

Kearney, Hisrich and Roche (2007) identified the following characteristics and specifics of corporate entrepreneurship in public sector organizations. Those organizations are not-profit oriented, focused on creating values for citizens in combinations of public and private resources, using external strengths for starting and achieving internal changes. In order to accomplish public innovations, managers in public sectors take personal risks and potential/chance for opportunism by trying to passing administrative obstacles and political barriers.

One conceptual model of corporate entrepreneurship that can be applied to public sector organizations encompasses internal influencing dimensions (structure,

decision making/control, rewards/motivation, culture, risk acceptance, proactivity), as well as external environmental factors (politics, complexity, change and liberality) (Kearney, Hisrich, & Roche, 2007). Benefits from public sector entrepreneurship are obvious and include improved services, greater satisfaction of service users, better internal processes in public organizations, a more adequate reward system, better communication within the organization, better management and employee relationships. Garner and Mann (2014) developed a model which comprises four key steps that public sector management needs to undertake in order to develop intrapreneurship in the public sector. Those are an ability to change organisational culture, a deeper understanding of risk, openness to collaborating with other sectors, improving the experience in fine-tuning performance measurement.

Borins (2011, p. 16) highlighted three groups of obstacles in innovation development and implementation in the public sector. The first group of obstacles coming from bureaucratic organizations include »hostile or sceptical attitudes, turf fights, difficulty coordinating organizations, logistical problems, difficulty maintaining the enthusiasm of program staff, difficulty implementing new technology, union opposition, middle management opposition, and public sector opposition to entrepreneurial action«. The second group of obstacles arising from political environment refer to inadequate funding or other resources, legislative or regulatory constraints, and political opposition. The third group of obstacles arising from external environment, such as »public doubts about the effectiveness of the program, difficulty reaching the program's target group, opposition by affected private sector interests, public opposition, and opposition from private sector entities that, as a result of the innovation, would be forced to compete with the public sector«.

To conclude, public sector enterprises are a highly challenging area for introducing corporate entrepreneurship because of all listed specificities. The permanent goal of the public sector management is to ensure better quality and availability of public services that meet the citizens' needs and requirements, regardless of service profitability (Dube & Danescu, 2011, p. 3). Thus, understanding the internal environment for the development of corporate entrepreneurship in public sector organizations is an important research area.

### 3 Survey design – questionnaire and sample structure

This research examines the level of internal environment development for entrepreneurship in the public sector of the Republic of Serbia, as well as the differences in the tendency towards entrepreneurship among three categories of public organizations (public administration, enterprises, and institutions).

#### 3.1 Corporate entrepreneurship assessment instrument

The basic research tool used in this survey is the Corporate entrepreneurship assessment instrument (CEAI) proposed by Kuratko, Hornsby and Covin (2014). It is an instrument that attempts to measure the effectiveness of the key internal organizational factors, or climate, that influence innovative activities and behaviours, and is developed in a questionnaire form. It contains 48 statements in five dimensions. Answers are based on the five-point Likert scale (from 1 – strongly disagree to 5 – strongly agree). CEAI is generally used as a research tool for diagnosing organization's internal environment for entrepreneurship through the following five dimensions: 1) *top management support* which demonstrates the extent to which employees perceive that the organization's management supports, facilitates, and promotes an entrepreneurial spirit, including adopting innovative ideas and providing resources for their realization; 2) *work discretion/autonomy* which shows the extent to which and employee perceives that he or she has autonomy at work, that he or she is free to make decisions at a lower level, with tolerance of mistakes and without great supervision by superiors; 3) *rewards/reinforcement* which shows the extent to which an employee perceives that an organization encourages and rewards entrepreneurial activities that involve innovating and taking risk; 4) *time availability* which shows the extent to which an employee perceives that he or she has sufficient time available, within working hours, to develop innovative ideas, independent of regular business activities, and 5) *organizational boundaries* which demonstrate to what extent an employee perceives that internal and external boundaries of the organization are flexible and structured to allow and facilitate effective and efficient communication.

### 3.2 Sample structure

According to Kavran (2003, p. 23), public sector of Serbia encompasses 1) *Public administration*, which includes a system of state organizations and authorities that protect the public interest of the citizens by performing services and activities of public importance; 2) *Public enterprises*, as state-owned business; 3) *Public institutions*, as publicly supported organizations from health, education, culture and sports industries. The sample consists of 126 employees in Serbian public sector organizations, surveyed in 2018. The structure of the sample is presented in Table 1. It shows that the number of respondents from three groups of organizations are equally distributed. Also, the sample is balanced referring to age, gender, and work experience of the respondents.

**Table 1: Survey sample structure.**

Descriptive variable	Value	Frequencies	
		[1]	[%]
Type of public organization	State and public administration	42	33.3
	Public institutions	42	33.3
	Public enterprises	42	33.3
Gender	Female	57	45.2
	Male	69	54.8
Respondents age	18-30	18	14.3
	31-45	68	54.0
	46-55	29	23.0
	56-65	11	8.7
Work experience	0-5 years	22	17.5
	6-10 years	19	15.1
	10-20 years	46	36.5
	above 20 years	39	30.9
Education	Secondary school	33	25.2
	Higher school	20	15.9
	Bachelor degree	49	38.9
	Master/ PhD degree	24	19.0

## 4 Survey results and discussion

Before conducting the survey, it was necessary to review the reliability and validity of the CEAI measurement scale for the survey sample (Table 2).

**Table 2: Reliability of the measurement scale.**

Scale	Cronbach's alpha	No. of items
Total CEAI	0.903	48
Top management support	0.911	19
Work discretion	0.798	10
Rewards and reinforcement	0.758	6
Time availability	0.125	6
Organizational boundaries	0.522	7

The Cronbach's Alpha coefficient (Table 2) was at the level of 0.903, which satisfies the reliability request according to which Cronbach's Alpha coefficient higher than 0.7 indicates a reliable scale (DeVellis, 2011).

Table 3 presents average results (mean value - M and standard deviation - SD) of CEAI and its dimensions on the whole sample, as well as per the type of organization. The overall results show that internal environment for entrepreneurship is modestly developed in the public sector in the Republic of Serbia (M=2.82; SD = 0.46). It is slightly below the theoretical average, viewed through a theoretical range of the CEAI questionnaire. Analysing individual dimensions across the entire sample of public sector organizations, the dimensions with the highest values on the scale are *Organizational boundaries* (M = 3.14, SD = 0.526), followed by *Time availability* (M = 3.08, SD = 0.481). The lowest value was obtained for the *Top management support* (M = 2.53, SD = 0.662), which is a worrying result.

Viewed by organizational units of the public sector, the highest score on the scale is obtained by the respondents from public institutions (M = 3.15, SD = 0.452) – slightly higher than the theoretical average, followed by the respondents from public administration (M = 2.67, SD = 0.406), and the lowest value was obtained for the public enterprises (M = 2.64, SD = 0.341). This result is of particular concern because public companies are closest to the commercial market and have much more

opportunity to develop entrepreneurial activities than other public sector units. A statistically significant difference between the three groups of companies is later shown using ANOVA (Table 4).

Referring to the results in Table 3, each of the three groups of organizations was analysed individually for the five dimensions of CEAI. *Top management support* was highest for public institutions (M = 2.98, SD = 0.622) and lowest for public administration organizations. In the case of the *Work discretion*, the highest score was obtained for public institutions (M = 3.32, SD = 0.598). For the *Rewards and reinforcement*, the highest score was obtained for the public institutions (M = 3.32, SD = 0.778), while for *Time availability* the highest score was obtained for public administration (M = 3.19, SD = 0.491). *Organizational boundaries* has the highest score for public institutions (M = 3.34, SD = 0.521).

**Table 3: The development level of CEAI dimensions by the type of public sector organization.**

Scale M (SD)	Public sector (total)	PA	PI	PE
<b>Total CEAI</b>	2.82(0.46)	2.67(0.41)	3.15(0.45)	2.64(0.34)
Top management support	2.53(0.66)	2.23(0.58)	2.98(0.62)	2.39(0.54)
Work discretion	2.91(0.67)	2.78(0.70)	3.32(0.60)	2.63(0.50)
Rewards and reinforcement	2.94(0.77)	2.85(0.69)	3.32(0.78)	2.65(0.71)
Time availability	3.08(0.48)	3.19(0.49)	3.00(0.45)	3.04(0.49)
Organizational boundaries	3.14(0.53)	3.12(0.59)	3.34(0.52)	2.96(0.38)
<b>PA</b> – Public administration; <b>PI</b> – Public institutions; <b>PE</b> – Public enterprises				

For the purpose of examining statistically significant differences between individual groups of public sector enterprises, an analysis of variance ANOVA was performed (Table 4). Statistically significant difference in the level of development of internal environment for corporate entrepreneurship is shown for three groups of organizational units of the public sector ( $F = 21.335$ ,  $r = 0.000$ ). The resulting difference is high and significant at the level of  $p < 0.01$ , which means that these three groups of public sector organizations are different in this sense. Observing individual dimensions of CEAI, statistically significant difference among groups is obtained for: *Top management support*, *Work discretion*, *Rewards and reinforcement*, *Organizational boundaries*. The only dimension for which statistically significant result was not obtained is *Time availability*.



**Table 4: ANOVA results for measuring difference among three types of organizations.**

Scale (M/SD)	ANOVA (F)	Significance
<b>Total CEAI</b>	21.335	0.000**
Top management support	19.605	0.000**
Work discretion	15.111	0.000**
Rewards and reinforcement	9.482	0.000**
Time availability	1.858	0.160
Organizational boundaries	6.019	0.003**
<i>p</i> < 0.01**		

The survey also examined the influence of certain characteristics of respondents on the level of development of internal environment for corporate entrepreneurship. There are no statistically significant results by the following characteristics: respondents' gender, age, work experience. The only statistically significant result was obtained for the respondents' level of education. The highest value of CEAI was obtained for respondents with master/PhD degree (M=3.06, SD=0.48), the lowest value was for the secondary school (M=2.68, SD=0.397). This result is expected due to the fact that employees and managers with post-bachelor degree, better perceived the environment for corporate entrepreneurship. Also, since higher education provide higher position in company and higher opportunity and ability for new changes, innovations, ventures, this result is not surprising.

**Table 4: ANOVA for measuring CEAI difference among respondents by the level of education.**

Level of education	Total CEAI		ANOVA (F)	Significance
	M	SD		
Secondary school	2.68	0.397	2.827	0.028*
Higher school	2.76	0.494		
Bachelor degree	2.82	0.449		
Master/ PhD degree	3.06	0.479		
<i>df</i> = 126; <i>p</i> < 0.05*;				

## 5 Conclusion

The aim of this paper was to examine internal environment for development of corporate entrepreneurship in public sector organizations and to find in which manner results differ among different types of public sector organizations. The technique by which internal environment for corporate entrepreneurship can be diagnosed is presented, with application in public sector organizations. This research is focused on the Republic of Serbia, and the main conclusions are the following. It is shown that internal environment for supporting entrepreneurship in the public sector is poorly developed. It is slightly below the theoretical average in the Republic of Serbia, viewed through the theoretical range of the CAEI questionnaire. Furthermore, by analysing the dimensions within the CAEI questionnaire, the highest values are obtained for the *Organizational boundaries* dimension, followed by *Time availability*, *Rewards and reinforcement*, and *Work discretion*. The lowest value was obtained for the *Top management support*. Considering internal entrepreneurship through three public sector organizational units, the highest propensity for internal entrepreneurship (slightly higher than the theoretical average) is seen in public institutions, followed by respondents from public administration, and the lowest propensity for internal entrepreneurship was obtained from respondents from public enterprises. Analysis of each group per each of the five dimensions is presented in the Results and discussion section.

Future work directions are aimed at measuring public sector performance and its comparison with the level of development of the internal environment to support the process of corporate entrepreneurship. Benefits of measuring performance are multiple and refer to obtaining knowledge, promoting innovation, change in behaviour, transparency, and strong leadership.

The results of this paper contribute to the understanding of the preconditions for innovation, proactiveness and risk-taking in public sector organizations, the effects of internal entrepreneurship on the creation of public values, and the state of development of entrepreneurship in the public sector of the Republic of Serbia. More generally, this research can contribute to the establishment of the principles for internal entrepreneurship development in public sector organizations, and thus increase effectiveness and efficiency, which is one of the prerequisites for the overall economic recovery.

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