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INTRAPRENEUR´S COMPETENCIES AND SKILLS: EVIDENCE FROM MEXICO

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ABSTRACT

The investigation measures the competencies and abilities of intrapreneurism with a population sample of 235 students. The students attend a master's program in the Accounting and Administration Faculty (FCA) of the Autonomous University of Chihuahua (UACH). A survey was conducted in which the following constructs were evaluated: Opportunities Promoter, Proactivity, Flexibility, Business Driver and Risk Assumption. The methodological approach was of a mixed nature including an applied, field test with bibliographic support. The design was non-experimental, transactional and descriptive. Principal components analysis was used. Competencies and intra-entrepreneurial skills were classified into 5 levels. Results show *that 7.55% of the students surveyed had a very low level of competencies and intrapreneurial skills, 11.21% had a low level, 18.40% had a medium level, 22.59% had a high level and 40.25% had a very high level. This research is relevant since identifying intrapreneurial skills and competencies in workers generates new projects in organizations.*

JEL: D24, J24, M54, O31

KEYWORDS: Intrapreneurship, Skills, Competencies

INTRODUCTION

This research measures the capabilities and intrapreneurial skills of employees in organizations. The current literature indicates that an employee with intrapreneurial skills and abilities has the capacity to create, identify and exploit new opportunities, that create value, for the company. Moriano, Topa, Valero, Levy, (2009), found the level of individual autonomy, delegation of authority and responsibility, increases job satisfaction and performance of employees (Kuratko et al., 2005), and increases the competitiveness and effectiveness of organizations through innovation (Lumpkin, 2007).

Sung, Sebastián, Duarte, (2015) explore theories related to the profile of the entrepreneur and the research done on it in Latin America. The analysis indicates that entrepreneur primary qualities include "being innovative, creative people, who see opportunities where others only perceive routine, tolerance to failure, perseverance, need for achievement, motivation, optimism, hard work, concentration and enjoy being an entrepreneur." It also describes the importance of generating more research on entrepreneurs, with regard to external environment, the culture of each country and their different circumstances.

This study measures the skills and abilities of intrapreneurship in students who attend any of seven master's programs offered in the graduate school of business of the Faculty of Accounting and Administration (FCA) of the Autonomous University of Chihuahua (UACH). These programs are: Business Administration, Marketing, Human Resources Management, Public Administration, Taxes, Financial Management and

Auditing. We wish to identify the level of skills and intra-entrepreneurial competencies among students enrolled in any of the master's degrees.

This study begins with a literature review focused on the five constructs used in the survey instrument. The second section describes the methodological design used. The results section identifies the number of students with varying level of competencies and skills.

LITERATURE REVIEW

The term Intrapreneur refers to workers who combine ideas and use existing resources in the organization to promote new lines of business Pinchot III (1985). They seek sustainable economic benefits and help the organization renew from within, thereby improving their competitiveness in the market. The entrepreneurial concept has been examined by different fields of knowledge. Entrepreneurs are identified from their personal characteristics and various external factors that drive entrepreneurial activity. Schumpeter 1991 cited by Jaramillo et al. (2012), defined the entrepreneur as an "innovative person, who proposes and takes advantage of changes, basically in three areas; the introduction of new or better products and production methods; the opening of new markets; and the reorganization of the administrative process."

Intrapreneurship represents an entrepreneurial activity carried out within organizations (Trujillo and Guzmán, 2008, Antoncic and Hsrich, 2003), which generates the creation of new organizational projects, different from existing ones and new exchanges with other companies (Varela and Irizar, 2009). The intraentrepreneurial culture offers employees the chance to find new opportunities in innovation, as well as making them feel part of the company when creating internal projects (Garzón, 2004). In addition, innovation is stimulated by factors such as empowerment, teamwork and the freedom to express creative ideas (McLean, 2005). Innovation is the main component in entrepreneurship. It represents the origin of competitiveness and economic growth (Martínez and Rodríguez, 2013). The measurement instrument used in this research, works with five constructs to evaluate the skills and abilities of intrapreneurship in collaborators that are part of the organizations.

Opportunities Promoter: Are behaviors to identify, use, demonstrate to others, and reflect diligence about opportunities for new initiatives in the company. High intrapreneurs quickly explore the environment, to discover the early signs of new opportunities and threats. They seek those openings and try to convert threats into opportunities. These opportunities include change and often occur when information is scarce (Lombriser, 1994, p.207).

Proactivity: Behavior that induces one to act, which generate efforts to obtain new initiatives. According the Intrapreneurial Culture and Innovation research, Gálvez (2011) the intrapreneurship factor with the greatest effect on the innovation of companies, "is teamwork which reaffirms the importance of stimulating the synergy produced by combining the creative capacity of the collaborators of different levels or departments".

Flexibility : All behaviors aimed at being tolerant and involve a lack of attachment to rigid schemes and procedures. Freedom at work gives the collaborator autonomy and control over decisions. It is important to take workers into account, delegate authority and responsibility, and tolerate mistakes (Zahra et al., 1999). Productivity-based stimuli increase significant achievement and motivate employees to face new challenges (Kuratko, Hornsby, and Bishop, 2005).

Business Driver: This construct includes behaviors that reflect the individual's ability to integrate into the progress and support new initiatives. This can include, taking actions to convince other people. Strategy and organizational objectives are the foundation to manage innovation and change (Tushman and O'Reilly III, 1997) thereby establishing the context and requirements for innovation (Stewart and Fenn, 2006)

Risk Assumption: Accepting risks involves determining the priority of situations that may contain favorable rewards in case of success, but also severe results if the individual fails (Brockhaus, 1980). The intraentrepreneur ventures into unknown areas of the organization, without knowing the results that might occur (Covin and Slevin, 1991). Intrapreneurial capacities relate to different personal characteristics, such as achievement orientation, risk taking capacity, autonomy or personal initiative (Krauss et al, 2005, Sayeed and Gazdar, 2003).

"It is not enough to have the qualities of a successful entrepreneur; a minimally favorable context is also necessary for the development of these" (Bilbao and Pachano 2002). Ming (2013, p.442) states that "entrepreneurship today has become the most important process in strategic management, in particular, the ability of companies to increase profitability over time." On the other hand, Khakbaz, Kazemi & Zarei (2011) in their study on the municipality of Tehran in Iran, mention that companies recognize the need for entrepreneurship and business ideas have penetrated administrative structures. Dynamism and growth of modern organizations depend on the implementation of organizational entrepreneurship.

METHODOLOGY

The current research is mixed, applied, and field researched with bibliographic support. The design was non-experimental, transectional, descriptive. We applied the same instrument as the Technological Institute of Costa Rica, Dr. Tomás Vargas Halabí, Dr. Ronald Mora Esquivel, and Dr. Berman Siles Ortega (Vargas, Mora and Siles 2017). This approach is the result of the Intrapreneurial article on competencies development and validation of a measurement scale, published in the European Journal of Management and Business Economics, 2017. This approach reflects the traits of intrapreneurial competencies within the company; specifically, knowledge, skills and competencies that manifest behaviors associated with the disposition of the collaborator that contribute to the generation, development and creation of new business for the company.

The questionnaire is composed of 20 items, which are classified into five dimensions. Data were coded as follows using the SAS statistical package; D1 = Promoter of opportunities, D2 = Proactivity, D3 = Flexibility, D4 = Impeller/business driver and finally D5 = Assumption to risk. Henceforth, the instrument is composed with different elements. In general each dimension is represented in the following way: D1 = 6 Ítems, D2 = 3 Ítems, D3 = 4 Ítems, D4 = 4 Ítems, D5 = 3 Ítems.

The number of individuals to be surveyed was determined by a simple random sampling. We obtaining data for 235 students of the postgraduate face-to-face classes in the Accounting and Administration Faculty (FCA) of the Autonomous University of Chihuahua (UACH). The students belonged to seven different master's programs in the economic-administrative area. Specifically, the programs were: Business Administration, Marketing, Human Resources Management, Public Administration, Taxes, Financial Management and Auditing.

Students were surveyed prior to the class start with some of their subjects in the classroom. We obtained a response rate of 100%. Prior to delivery of the measuring instrument, they emphasized the objective and the importance of the investigation. After obtaining the results of each student surveyed, an arithmetic average was obtained for each of dimension studied. We then generated a data matrix of 235 x 5, with the purpose of running an analysis of main components, thereby obtaining a new variable capable of summarizing the total variability of the twenty items used in the survey. We evaluate survey reliability through the calculation of Cronbach's Alpha for each of the five constructs. Data were calculated with the statistical package Minitab 17. The results are shown in Table 1.

Table 1 shows the values of Cronbach's Alpha for each of the five constructs of the survey. The values can oscillate between 0 and 1. Values higher than 0.7 indicate a good consistency in the different constructs or

dimensions that make up a questionnaire, thus granting a good level of reliability to the instrument used to Survey and collect information. The table shows the highest value was 0.8129, corresponding to the Opportunities Promoter construct. The lowest value was 0.7011, corresponding to the risk-taking construct. Measuring the 5 constructs in total produces a value of 0.9033. We conclude that, individually, as well as in a general way, the survey presents a high level of reliability.

Table 1: Cronbach's Alpha

Construct	Items	Cronbach's Alpha
Opportunities Promoter	6	0.8129
Proactivity	3	0.7976
Flexibility	4	0.7655
Business Driver	4	0.7522
Risk Assumption	3	0.7011
The total 5 constructs	20	0.9033

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Table 2 shows the Eigenvalues obtained after running the SAS PRINCOMP procedure. A higher Eigenvalue indicates the main component to which it belongs and can summarize a greater proportion of the total variability explained by the set of all variables analyzed. The second column shows a high value for the first main component having an Eigenvalue 3.0353, which provides the basis for the value shown in Column 5 and summarizes the total variability of the study to be 72.21%. When representing such a high percentage of total variability, it is pertinent to consider the main component 1 as an index that allows us to build a scale of measurement of levels of intrapreneurship.

Table 2: Eigenvalues

Main Component	Eigenvalue	Difference	Proportion	Accumulated
1	3.0353	2.1707	0.7221	0.7221
2	0.8646	0.2661	0.1256	0.8477
3	0.5984	0.2760	0.1089	0.9566
4	0.3223	0.1233	0.0377	0.9943
5	0.1990	--	0.0057	1

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Figure 1 shows the high value of the first Eigenvalue obtained for the main component 1, which was 3.0353, representing 72.22% of the total variability. The other 4 Eigenvalues have lower values, representing the 27.78% remaining variability. This graphic allows visual appreciation of the magnitude and difference that exist between the various Eigenvalues belonging to the different main components. It allows us to corroborate that it is appropriated to use the data as an index that allows us to build some scale of measurement of the study phenomenon.

Figure 1: Eigenvalues Graph

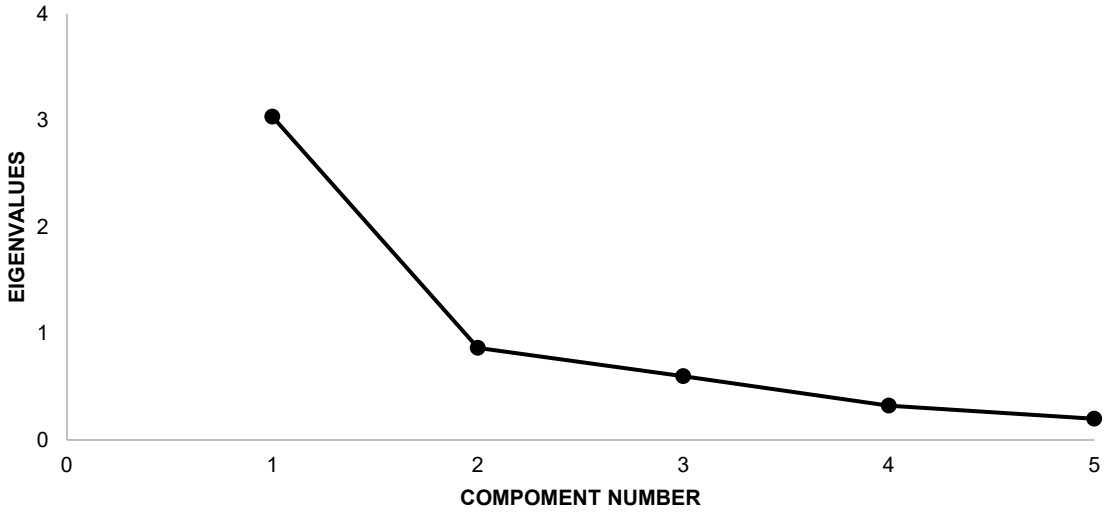

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Table 3 shows values obtained for main component 1 in the students surveyed. Because the sample studied included 235 students, the information is summarized showing only the ten lowest values obtained on the left side of the table. On the right side of the table, the ten highest values obtained are presented. By obtaining each of these values, it is possible to determine which students have the lowest levels of intrapreneurship and which students present the highest.

Main component 1 that summarizes and orders all the information obtained based on the 20 items that make up the five constructs of the applied questionnaire. With these values, it is possible to appreciate that student 33 obtained the lowest value. Therefore, this student presents the lowest level of competencies and intrapreneurial skills. Student 177 presents the higher value, indicating the highest level of intra-mobile skills.

Table 4 shows a scale of measurement to classify different levels of intrapreneurship. To determine the level of intrapreneurship for each student surveyed, we createed an index divided into five scales depending on the value obtained for main component 1. Specifically we classify as follows: Very low (values less than or equal to -5), Low (values greater than -5 to values less than or equal to -2), Medium (values greater than -2 to values less than or equal to 1), High (values greater than 1 to values less than or equal to 4) and Very high (values greater than 4). The creation of this type of index allows classifications and segmentations that can facilitate the analysis of all the collected data.

Table 3: Values for the Main Component 1

Surveyed	Prin1	Surveyed	Prin1
Student 33	-6.4907	Student 92	0.7739
Student 123	-5.8338	Student 12	0.8466
Student 233	-4.1289	Student 188	1.4856
Student 39	-3.6017	Student 123	2.0355
Student 75	-2.7259	Student 134	2.9186
Student 101	-2.3803	Student 205	2.9541
Student 99	-1.9288	Student 166	5.2146
Student 208	-1.8170	Student 73	5.4009
Student 189	-1.7145	Student 55	5.5116
Student 42	-1.7138	Student 177	5.7909

This table shows values obtained for main component 1 in the students surveyed. Because the sample studied included 235 students, the information is summarized showing only the ten lowest values obtained on the left side of the table. On the right side of the table, the ten highest values obtained are presented. By obtaining each of these values, it is possible to determine which students have the lowest levels of intrapreneurship and which students present the highest. Main component 1 that summarizes and orders all the information obtained based on the 20 items that make up the five constructs of the applied questionnaire. With these values, it is possible to appreciate that student 33 obtained the lowest value. Therefore, this student presents the lowest level of competencies and intrapreneurial skills. Student 177 presents the higher value, indicating the highest level of intra-mobile skills.

Table 4: Levels of Intrapreneurship

Values Obtained in Main Component 1	Levels of Intrapreneurship
Less than or equal to -5	Very Low
Greater than -5 to values less than or equal to -2	Low
Greater than -2 up to values less than or equal to 1	Moderate
Greater than 1 up to values less than or equal to 4	High
Greater than 4	Very High

In Table 4, shows a scale of measurement to classify different levels of intrapreneurship. To determine the level of intrapreneurship for each student surveyed, we createed an index divided into five scales depending on the value obtained for main component 1. Specifically we classify as follows: Very low (values less than or equal to -5), Low (values greater than -5 to values less than or equal to -2), Medium (values greater than -2 to values less than or equal to 1), High (values greater than 1 to values less than or equal to 4) and Very high (values greater than 4). The creation of this type of index allows classifications and segmentations that can facilitate the analysis of all the collected data.

Table 5 shows Pearson´s correlation coefficients between the five variable constructs of the study and the main component 1. Pearson correlation values oscillate between 0 and 1, Values obtained, closer to -1.0, indicates a high level of negative relationship between 2 variables.

Table 5: Pearson´s Correlation of the Main Component 1 with the 5 Dimensions of Intrapreneurship

Variable	Prin 1
D1	0.744**
D2	0.717**
D3	0.897**
D4	0.868**
D5	0.721**

*Table 5 shows Pearson´s correlation coefficients between the five variable constructs of the study and the main component 1. Pearson correlation values oscillate between 0 and 1, Values obtained, closer to -1.0, indicates a high level of negative relationship between 2 variables. Values closer to 1.0, indicate a higher level of positive relationship between two variables. Results shows a strong positive correlation. On average correlations surpass a value of 0.7 with a p-value that indicates significance with a value lower than 0.05 (marked with **),*

Values closer to 1.0, indicate a higher level of positive relationship between two variables. Results shows a strong positive correlation. On average correlations surpass a value of 0.7 with a p-value that indicates significance with a value lower than 0.05 (marked with **), Such a high level of positive association increases the reliability for the use of the main component 1 as an index that allows comparison of the different levels of intrapreneurship.

CONCLUSIONS

The objective of this research was to measure the skills and abilities of intrapreneurship in students who attend to one of the seven face-to-face master programs: Business Administration, Marketing, Human Resources Management, Public Administration, Taxes, Financial Management and Auditing offered by the Faculty of Accounting and Administration (FCA) of the Autonomous University of Chihuahua (UACH). We achieved this objective by applying the survey called "entrepreneurship Competencies " by Vargas, Mora & Siles (2017), together with the statistical analysis of the main components. We applied the analysis of the main components to the data collected from the 235 students surveyed. A high value was obtained for Eigenvalue 1, allowing us to summarize the total variability of the twenty items that make up the five constructs of the questionnaire. We achieved a result of 72.22%. Therefore, it was possible to create an index that measured, in a general way, the level of intrapreneurship for each student surveyed. Based on the value assigned in main component 1 it was possible to classify them into five ability levels (very low, low, medium, high, very high level of skills and intrapreneur skills). When applying Cronbach's Alpha to the survey, it was possible to validate the internal consistency of the items used in each construct. We were also able to do so for the full instrument, which presented a high value of 0.9033, The foregoing shows that the instrument is capable of measuring the capacities and abilities of intrapreneurship in an individual.

The results of levels of intrapreneurism measurement were distributed as follows: 7.55% of the students surveyed presented a very low level of competencies and skills of intra-occupational tourism, 11.21% presented a low level, 18.40% presented a level medium, 22.59% presented a high level and 40.25% presented a very high level of these competences and skills evaluated. These results can measure efficiency of the different programs aimed at promoting and encouraging skills and intra-entrepreneurial competencies of students. It can also identify students who present a higher level of intrapreneurship with the purpose of potentiating their development in this area. It can also identify students who presented lower levels. These results reveal areas of opportunity that arise in the programs, as well as other areas of opportunity for this type of students.

This research was limited to postgraduate students, which come from different academic backgrounds, different types of professional activity and different labor sector, limiting the ability to generalize to a specific type of organization. To identify people who have the skills and competencies of intrapreneurship within an organization, this analysis proves to be a very powerful tool.

The results are valuable for many uses including the generation of new projects or improvement processes, identifying employees who already work within the company with the skills and competencies to participate in this type of activity, and may even represent an informational advantage in the development of the human capital of an organization. It can be of great impact to identify those skills and competencies that can potentiate strengths within the organization. Future research might apply this analysis in conjunction with the principal component’s analysis technique. Likewise, future research might replicate this analysis in public companies, since these organizations can benefit in a way similar to the private sector.

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