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Artículos científicos

El emprendimiento social de base universitaria en Latinoamérica: caso Zacatecas, México

University-Based Social Entrepreneurship in Latin America. The Zacatecas (México) case

Empreendedorismo social baseado em universidades na América Latina: o caso Zacatecas, México

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Resumen

La globalización exige que los egresados de la educación superior cuenten con habilidades que impacten en el desarrollo económico. Y una de las habilidades más apreciadas actualmente es el emprendimiento social. La presente investigación está precedida por el trabajo denominado *El emprendimiento social de base universitaria en Latinoamérica*, en el cual se encontró que solo 3.4 % de los 5243 estudiantes encuestados de 26 universidades de ocho países está liderando algún emprendimiento social, esto a pesar de que 62 % desea hacerlo. El propósito del presente estudio fue comparar los resultados del contexto internacional con el local. Para ello, se partió del modelo de ecuaciones estructurales usado en el estudio previo. Se aplicó un cuestionario a una muestra de 301 alumnos de la Unidad Académica de Contaduría y Administración de la Universidad Autónoma de Zacatecas. En los resultados se encontró que solo 0.7 % de ellos lidera un emprendimiento social. Se concluye que falta mucho por hacer por parte de la institución educativa, ya que el constructo "Soporte institucional" no contribuyó de manera significativa en la intención emprendedora. Sin duda es pertinente generar acciones que permitan a los alumnos llevar a cabo proyectos y que estos no queden en intenciones.

Palabras clave: emprendimiento social, liderazgo, universidad.

Abstract

Globalization requires that graduates of higher education have skills that impact economic development. And one of the most appreciated skills today is social entrepreneurship. This research is preceded by the work titled *University-based social entrepreneurship in Latin America*, in which it was found that only 3.4 % of the 5243 students surveyed from 26 universities in 8 countries are leading some social entrepreneurship, this despite the fact that 62 % wants to. The purpose of the present study was to compare the results of the international context with the local one. For this, we started from the structural equations model used in the previous study. A questionnaire was applied to a sample of 301 students from the Unidad Académica de Contaduría y Administración of the Universidad Autónoma de Zacatecas. In the results it was found that only 0.7 % of them lead a social enterprise. It is concluded that much remains to be done by the educational institution, since the construct "Institutional support" did not contribute significantly to the entrepreneurial intention.

Without a doubt, it is pertinent to generate actions that allow students to carry out projects and that these do not remain intentions.

Keywords: social entrepreneurship, leadership, university.

Resumo

A globalização exige que os graduados do ensino superior tenham habilidades que impactam o desenvolvimento econômico. E uma das habilidades mais apreciadas hoje é o empreendedorismo social. Esta pesquisa é precedida do trabalho denominado Empreendedorismo social de base universitária na América Latina, no qual se constatou que apenas 3,4% dos 5243 alunos pesquisados de 26 universidades de oito países lideram algum empreendedorismo social, isto apesar de 62 % quer. O objetivo do presente estudo foi comparar os resultados do contexto internacional com o local. Para isso, partimos do modelo de equações estruturais utilizado no estudo anterior. Foi aplicado um questionário a uma amostra de 301 alunos da Unidade Académica de Contabilidade e Administração da Universidade Autónoma de Zacatecas. Nos resultados constatou-se que apenas 0,7% deles lideram um empreendimento social. Conclui-se que muito ainda precisa ser feito pela instituição de ensino, visto que o construto "Apoio institucional" não contribuiu significativamente para a intenção empreendedora. Sem dúvida, é pertinente gerar ações que permitam aos alunos realizar projetos e que estes não fiquem intencionais.

Palavras-chave: empreendedorismo social, liderança, universidade.

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Introduction

The professional competencies of higher level graduates demand more mastery of disciplinary content. The challenges of a complicated and globalized world make it unavoidable for the university context to develop skills that will be advantageous for them to impact the economic development of their social environment. Although entrepreneurship has occupied researchers since the mid-18th century, it was not until the 1950s that the United States addressed this phenomenon in greater detail, as evidence revealed that even the most consistent companies were not exempt from the bankruptcy. In the 1980s, the issue was taken up again, and even more strongly at the beginning of the century (Patiño, Ruiz and Pitre, 2018). Between 1957 and 1982, the crises in the United States showed that large corporations

were not immune to economic disasters or bankruptcies, which is why entrepreneurship programs were started within the most important universities in that country. In Mexico, on the other hand, the recurring crises of the years 1976, 1982, 1985, 1988, 1994 and 2008, owned or imported, have made entrepreneurship the way of life and the economy of families. Undoubtedly, this phenomenon should be considered according to the sector in which it is trying to enter, since the skills and essential learning to break into each one will be as different as the sector and the entrepreneur himself. Organizational capitals have become a profitable strategy for the explanation of these phenomena, due to the extension of the range of explanation that the different aspects of the Latin entrepreneur and their local and specific practices encompass (Ojeda, Mexicano and Mosqueda, 2012). The origin of the word entrepreneur emanates from entrepreneur, which initially appears in the French language, at the beginning of the 16th century, to designate men related to military expeditions (Tarapuez and Botero, 2007). The definition of the concept was not yet absolutely clear until the Pre-Classics, who introduced the term entrepreneur. Richard Cantillon (cited in Morales, Bustamante, Vargas, Pérez and Sereno, 2015), in the 18th century, handled the concept of entrepreneur and defined it as a risk-taking character who is in constant dilemma and whose earnings are anomalous, compared to the other people. Jaques Turgot and Barón de Laune (cited in Morales et al., 2015) assumed that the risks taken are circumvented by the entrepreneurs themselves. Thus, the first studies on the entrepreneur flourished, which historically can be located at the end of the 19th century and the beginning of the 20th. (Tarapuez y Botero, 2007).

In the mid-nineteenth century, Mangoldt (cited in Tarapuez and Botero, 2007) offered a theory of the entrepreneur's profit: “the income of the entrepreneurial capacity or special, non-routine and scarce talent, which uses this in the appropriate combination factors ”(p. 49). For Mangoldt himself, "entrepreneurship and innovation are approved as an important factor in the company" (Rodríguez and Jiménez, 2005, cited in Tarapuez and Botero, 2007, p. 50). Thus, the entrepreneur is linked with a person who innovates continuously. In this way, different investigations that studied the figure of the entrepreneur began to flourish and definitions more akin to the concept and role of these people were generated. Schumpeter (1976, cited in Tarapuez and Botero, 2007) is credited with the modern concept. He places the entrepreneur at the center of the stage and from there gives him a transcendental role in economic development. Others like Knight (cited in Tarapuez and Botero, 2007) began to reveal the entrepreneur's traits in an imprecise way and determined characteristics such as

the following: ability to take risks and uncertainty, tenacity, indomitable energy, optimism and faith, self-confidence , creativity and imagination, achievement of effective benefits, being an agent of change and innovation, they believe that money is their greatest motivation, they have knowledge of the sector in which they are going to establish a company. To speak of entrepreneurs is to discuss various theories and concepts that have been created over time and various investigations. According to Santander (2010), various authors agree that, before the present figure of the entrepreneur or manager of the entrepreneur era existed, the traditional businessman existed. In the same way, history has shown us that entrepreneurs are agents that originate economic activity and help to generate competitive environments through the establishment of companies or businesses. (Morales *et al*., 2015).

According to Lozano and Cayetano (2011), in Mexico and in the world the figure of the entrepreneur has taken a mythical position in recent years that places him on a par with a hero who fights against market forces in order to start your business adventure and locate a company. Authors such as Santander (2010) assert that entrepreneurs "are made" and, under this paradigm, the role of education is transcendent, so it is necessary to know and identify the characteristics and entrepreneurial behavior in order to empower them in the students of the college. A diagnosis prepared by the National Entrepreneur Institute (2016) supports that Mexico faces a challenge in terms of productivity. Theoretical evidence indicates that total factor productivity in the economy has decreased at an average rate of 0.7%, which undermines maintaining a growing economy. Therefore, entrepreneurship is an issue that acquires relevance in regions and states, especially where it seeks to accelerate the economy. In this order of ideas, Hidalgo, Kamiya and Reyes (2014) state that entrepreneurial activity has established itself as one of the main engines of development in all the economies of the world, especially due to its role in job creation and expansion of sectors economic and emerging regions. One of the significant aspects that entrepreneurship must consider is the generation of new ideas, innovation that supports stability in the general economy. According to González (2012), innovation must manifest itself in any type of company that is created. It is unavoidable that the phenomenon of entrepreneurship be considered both from the perspective of the individual and from the environmental variables that affect said activity. As a result of the importance of entrepreneurship in Mexico, in 2016, the deputy Luis Fernando Antero Valle submitted for consideration the initiative of the General Law for the Promotion and Promotion of Young Entrepreneurs (Legislative Information System of the Ministry of the Interior, 2016) . In the aforementioned proposal, it is attributed, among many

other reasons, to prejudices such as inexperience and immaturity, as well as to education that is limited to preparing the student for a job and not to having the characteristics that allow them to start their own business. In the aforementioned law, specific financing is considered for the creation of new businesses or companies, advice and incubation of projects, until their consolidation; all of the above, promoted by an adjudicating commission, made up of members of institutions such as the Ministry of Economy, Ministry of Public Education (SEP), business chambers, among others. Parallel to this type of action, a culture of entrepreneurship should be promoted from education in schools, integrating advances in science, technology and innovation so that the entrepreneur has the conditions to develop competitive excellence in his own company. Furthermore, these efforts must be initiated from basic education, with the aim that, from an early age, future entrepreneurs are introduced to the importance of creating jobs and well-being for the whole of society.

Now, Palomares and Chrisvert (2014) affirm that, in the university space, decision-making is more complex, the spaces for reflection, but also for criticism and disappointment with decisions made in another hierarchical plane are expanded. Hernández and Arano (2015), for their part, indicate that degrees related to administration or business could be more susceptible to being linked to in the entrepreneurial process. Universities seek to have a conducive environment for their students to be introduced to plans and activities that lead them to realize their business ideas. It should be noted that Caldera, León and Sánchez (2017) identify youth unemployment and emphasize that this situation is widespread in countries like Mexico. Data from the International Labor Organization [ILO] (August 24, 2016) show that the world youth unemployment rate in 2015 was 12.9% and 13.1% in 2016, and they considered, at that time, that it would persist in this level throughout 2017. Among those affected, there are young professionals with university degrees. Information from the Global Entrepreneurship Monitor (GEM) for Mexico shows that in 2015 there was a rate of premature entrepreneurial activity (TEA) of 21% (Lideres Mexicanos, 2016). ASD in the young population (18 to 24 years old) went from 12% in 2012 to 14.8 in 2014 (Durán, 2016). It could be argued that the primary reason for deciding to undertake is because a business opportunity has been identified. The main activity in which it is undertaken is in the wholesale and retail trade; later, there are the manufacturing services. In terms of government policies aimed at promoting new ventures, Mexico ranks 15th out of 62 economies that comprise the GEM. Regarding business education, our country ranks 45 out of 62 economies that comprise the GEM (Durán, 2016). Taking the above into account, Gibb (2011) locates

the pressures that lead business society to link the political environment with initiatives to undertake and face the demands of global capacity, as well as the way in which it changes and adapts to government organizations. On the other hand, numerous studies discuss how universities should influence the entrepreneurial spirit of their students. Palomares and Chrisvert (2014) and Duarte and Ruiz (2009) also affirm that the educational environment is the most convenient and effective way to transfer, participate and recreate the culture of entrepreneurship: this culture can be formed at all levels of the school. This is perceived as a pedagogical process, where work circumstances and the projection of wealth can be created throughout the population, all directed and based on human development. It is essential that higher education institutions promote in students a vision of timely business development, with the aim of helping, not only to economic reactivation, but also to the creation of jobs for an improvement in the quality of life of the population, and thus fulfill the duty to create knowledge and train professionals sensitive to social reality (Hernández and Arano, 2015). It is necessary to continue fostering student creativity, the earlier the better. A conscious involvement of the state and municipal authorities towards society is demanded, in addition to the entrepreneurs beginning to see the services that the academy can offer them. The purpose of the present study was to compare the results of the international context with the local one on university-based social entrepreneurship in students surveyed about social entrepreneurship.

Materials and method

Type of study

The present study had a quantitative approach, with the advantage that the results of the sample can be extended to the population (APA Norms, s. F.). In addition, the data were obtained on purpose of the investigation (primary). And it is a cross-sectional study, since it measures and obtains data only once, during the January-June 2018 semester (Hernández, Fernández y Baptista, 2014).

Population and sample

The present study was carried out at the Academic Unit of Accounting and Administration of the Autonomous University of Zacatecas, in the city of Zacatecas, Mexico. The population was 735 regular 8th and 10th semester students enrolled in the undergraduate degree. To calculate the sample, the formula for finite populations was used, a qualitative variable (estimation of proportions), with 95% confidence (z = 1.96), a maximum error of 5% (0.05) and an unknown variability, so p = 0.5 and q = 1-p, q = 0.5. The sample size was 253.

$$n = \frac{Npqz^2}{e^2(N-1) + pqz^2} \qquad n = \frac{(735)(.5)(.5)(1.96)^2}{(.05)^2(734) + (.5)(.5)(1.96)^2} = 252.51 \cong 253$$

301 surveys answered by the aforementioned students were collected.

Instrument

For this research, a structured questionnaire designed at the University of San Martín de Porres in Lima, Peru, was used, which inquired: demographic information (gender, age, semester attended, employment information); information on entrepreneurial background (if you have an entrepreneurial family business and what role does it take in it); “Intention of social entrepreneurship” (willingness and probability of undertaking) (five items); "Positive perception of social entrepreneurship" (social vision, innovation and sustainability) (11 items); “Social approval of social entrepreneurship” (opinion of family friends and teachers when deciding to undertake) (seven items); "Self-efficacy to develop social entrepreneurship" (students' perception of their ability to develop a social entrepreneurship project), and "University support to promote social entrepreneurship" (access to resources and university-based programs to develop social entrepreneurship) (nueve ítems) (Giraldo y Vara, 2018).

Process

A face-to-face survey was applied through the procedure of going to the classrooms of the already specified semesters of the undergraduate degree. The information was requested from them while emphasizing its confidentiality.

Tabla 1. Ficha técnica de la investigación

Características	**Encuesta**
Universo	735 alumnos regulares de 8.º y 10.º semestre
Ámbito de estudio	Unidad Académica de Contaduría y Administración de la Universidad Autónoma de Zacatecas en México
Unidad de análisis	Alumno regular inscrito y cursando el 8.° o 10.° semestre
Método de recogida de información	Cuestionario estructurado
Procedimiento de muestreo	Entrevista cara a cara
Tamaño de muestra	253 (301 aplicadas)
Confianza y margen de error del muestreo	Confianza de 95 % y 5 % de margen de error, $p = q = 0.5$
Fecha de trabajo de campo	Enero-junio de 2018

Nota: Para el cálculo de tamaño de muestra se recurrió a Landero y González (2007)

Fuente: Elaboración propia

Results

To evaluate the descriptive statistics, the statistical package for the social sciences SPSS version 24 was used. Among the results, it is predominant that, of the total sample, 66.8% were women and the rest, 33.2%, men. Furthermore, 47.2% were in the 8th semester and the rest, 51.8%, the 10th semester. Of those interviewed, 42.9% dedicate themselves only to studying; the rest, 57.1%, study and work. Among the latter, 32.2% stated that they earn between 100 and 200 US dollars per month, with an average of 14.89 months of work experience. Also, 26.2% of those interviewed stated that their family has some type of business. Of these, only four students, corresponding to 1.3% of the sample, lead the aforementioned business. Even more: of the total of these businesses, 10.6% were considered as social entrepreneurship, however, only two students, that is, 0.7% of the total respondents, participate as a leader in social entrepreneurship. Regarding the university-based social entrepreneurship model, SmartPLS version 3.2.2 was used (Ringle, Wende and Becker, 2015). More than the minimum sample size required by a structural equation was available (Hair, Black, Babin y Anderson, 2010).

Evaluation of the measurement model

According to Chin (2010), the first step for an analysis of structural equations not based on covariance is the measurement or external model in which convergent validity is evaluated: item loads and extracted variance (AVE), and the reliability: Cronbach's alpha and composite reliability. Therefore, we proceeded to the analysis of the external or measurement model (Hair, Hult, Ringle & Sarstedt, 2007) of the original model, which was evaluated by eliminating from this the items whose external load was not less than 0.40, this given that at least 50% of the variance of each indicator must be explained by the underlying construct (Sarstedt, Ringle and Hair, 2017). The result is shown in table 2.

Tabla 2. Evaluación del modelo de medida: fiabilidad y validez convergente (*n* = 301)

Constructo	Ítem	Validez convergente		Fiabilidad compuesta	Alfa de Cronbach
		Cargas	AVE		
Aprobación social	NSProfesores1	0.889	0.675	0.912	0.878
	NSProfesores2	0.858			
	NSProfesores3	0.827			
	NSAmigos1	0.796			
	NSFamilia1	0.727			
Autoeficacia	Autf1	0.792	.648	0.88	0.818
	Autf2	0.754			
	Autf3	0.847			
	Autf4	0.824			
Intención emprendedora	Int1	0.856	0.682	0.915	0.884
	Int2	0.856			
	Int3	0.814			
	Int4	0.799			
	Int5	0.803			
Percepción positiva del emprendimiento social	PercINN4	0.805	0.627	0.87	0.801

	PercINN5	0.82			
	PercSS3	0.743			
	PercVS3	0.798			
Soporte institucional del emprendimiento social	Eco1	0.86	0.714	.957	0.95
	Eco2	0.815			
	Eco3	0.851			
	Eco4	0.862			
	Eco5	0.834			
	Eco6	0.855			
	Eco7	0.82			
	Eco8	0.859			
	Eco9	0.847			

Fuente: Elaboración propia

As can be seen in Table 2, there are significant differences with the original study carried out in eight Latin American countries, since the dimension "Social approval" had five of the seven original items; the remaining two did not meet the minimum 0.40 factor load. Similarly, only four out of 16 original items remained in the construct called "Positive perception of social entrepreneurship", this because the opinion regarding the mentioned construct differed substantially between one context and another. According to Hair et al. (2007), the discriminant validity is checked using the criterion of Fornell and Larker (1981), who mention that a construct must better explain the variance of its own indicators than the variance of other constructs.

Tabla 3. Evaluación del modelo de medida: validez discriminante (*n* = 301)

	Aprobación social	**Autoeficacia**	**Emprendimiento social**	**Intención emprendedora**	**Percepción positiva del emprendimiento social**	**Soporte institucional del emprendimiento social**
Aprobación social	*0.821*					
Autoeficacia	0.555	*0.805*				
Emprendimiento social	-0.015	0.022	*1*			
Intención emprendedora	0.678	0.731	-0.004	*0.826*		
Percepción positiva del emprendimiento social	0.411	0.479	0.046	0.358	*0.792*	
Soporte institucional del emprendimiento social	0.295	0.326	0.104	0.299	0.466	*0.845*

Fuente: Elaboración propia

In the previous table it is observed that the square root of AVE in the main diagonal is greater than the correlations of the latent variable outside of it, and the discriminant validity is verified. The value of one in the construct "Social Entrepreneurship" is due to the fact that it is an indicator of a single item, which are used to measure concepts such as satisfaction or intention (Hair et al., 2007) and always present that value as a result for this type of analysis. Cross-loading, following Fornell and Larker (1981), is a way of detecting discriminant validity problems by checking that the items of a construct have higher correlations with its construct than with others.

Tabla 4. Cargas cruzadas

	Aprobación Social	Autoeficacia	Emprendimiento social	Intención emprendedora	Percepción positiva del emprendimiento social	Soporte institucional del emprendimiento social
Autf1	0.475	*0.792*	0.039	0.577	0.39	0.231
Autf2	0.315	*0.754*	0.08	0.424	0.508	0.419
Autf3	0.458	*0.847*	0.011	0.6	0.326	0.282
Autf4	0.524	*0.824*	-0.046	0.728	0.332	0.142
Eco1	0.265	0.285	0.051	0.201	0.442	*0.86*
Eco2	0.359	0.347	0.05	0.391	0.39	*0.815*
Eco3	0.269	0.292	0.053	0.274	0.387	*0.851*
Eco4	0.224	0.277	0.139	0.283	0.38	*0.862*
Eco5	0.248	0.274	0.096	0.256	0.384	*0.834*
Eco6	0.251	0.296	0.087	0.249	0.391	*0.855*
Eco7	0.253	0.268	0.087	0.23	0.39	*0.82*
Eco8	0.219	0.207	0.121	0.204	0.411	*0.859*
Eco9	0.106	0.202	0.121	0.135	0.359	*0.847*
Int1	0.539	0.667	0.009	*0.856*	0.319	0.239
Int2	0.619	0.65	-0.029	*0.856*	0.272	0.237
Int3	0.538	0.585	0.02	*0.814*	0.288	0.259
Int4	0.471	0.529	0.048	*0.799*	0.259	0.354
Int5	0.62	0.574	-0.056	*0.803*	0.337	0.163
NSAmig1	*0.796*	0.408	0	0.552	0.299	0.163
NSFamil1	*0.727*	0.448	-0.033	0.416	0.473	0.254
NSProfe1	*0.889*	0.421	-0.028	0.578	0.344	0.187
NSProfe2	*0.858*	0.484	0.013	0.62	0.32	0.334
NSProfe3	*0.827*	0.514	-0.016	0.604	0.261	0.26
PercINN4	0.32	0.402	0.067	0.279	*0.805*	0.396

PercINN5	0.333	0.377	0.033	0.27	*0.82*	0.375
PercSS3	0.298	0.35	0.041	0.303	*0.743*	0.372
PercVS3	0.349	0.384	0.003	0.282	*0.798*	0.333

Fuente: Elaboración propia

In the results of Table 4, no discriminant validity problems are found. According to the cross-load test, it was observed that the indicators load more in their associated constructs than in other constructs. However, the aforementioned Fornell and Larker (1981) criteria and the cross-loading are insufficient to detect discriminant validity problems; A novel method for evaluating discriminant validity is the so-called Heterotrait-Monotrait Ratio (HTMT), which consists of verifying that the correlations between items of the same construct must be greater than the correlations of items from different constructs.

Tabla 5. HTMT

	Aprobación Social	**Autoeficacia**	**Emprendimiento social**	**Intención emprendedora**	**Percepción positiva del emprendimiento social**	**Soporte institucional del emprendimiento social**
Aprobación Social						
Autoeficacia	0.649					
Emprendimiento Social	0.024	0.06				
Intención emprendedora	0.763	0.847	0.042			
Percepción positiva del emprendimiento social	0.494	0.597	0.051	0.425		
Soporte institucional del emprendimiento social	0.313	0.374	0.109	0.325	0.533	

Fuente: Elaboración propia

Table 5 verifies the HTMT values, which should preferably be less than 0.85, or at least 0.90 (Henseler, Ringle y Sarstedt, 2015).

Model evaluation: structural model results

According to Chin (2010), once it has been established that the measurement model is suitable, the next step is to provide evidence to support the theoretical model, mainly the predictive power with the values of the coefficient of determination R^2 and the importance of route estimates. For the structural model, Hair et al. (2007) recommend evaluating the following points:

1) Collinearity between the constructs;

2) Significance and relevance of the path coefficients;

3) Predictive relevance (R^2, f^2, Q^2, q^2, PLS predict), and Goodness of fit.

As mentioned above, the partial least squares technique was used for the present investigation, since in simulations it has been found that it is a fairly robust method for deficiencies such as collinearity (Cassel, Hackl and Westlund, 1999). To evaluate it, the variance inflation factor (VIF) was used.

Tabla 6. VIF

	AP	**A**	**ES**	**IE**	**PPES**	**SIES**	
AP			1.976	1.505	1.096		
A			2.434	1.623			
ES							
IE			2.826				
PPES		1.278	1.566	1.35			
SIES	1	1.278	1.315		1.096		

AP = Aprobación social, *A* = Autoeficacia, *ES* = Emprendimiento social, *IE* = Intención emprendedora, *PPES* = Percepción positiva del emprendimiento social y *SIES* = Soporte institucional del emprendimiento social.

Fuente: Elaboración propia

When evaluating the VIF, as shown in table 6, which should be less than five, no problem of collinearity was found between the constructs. Path coefficients vary between -1 and 1. Higher absolute values denote stronger predictive relationships between constructs, having direct effects: relationship with a single arrow joining constructs; indirect: sequence of relationships involving at least one intervening construct, and a total effect: sum of direct and indirect effects (Hair *et al*., 2007).

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Tabla 7. Coeficientes de ruta (*path*)

	Muestra original	**Media de la muestra**	**Desviación estándar**	**Estadísticos *t***	***P* valores**
Aprobación social Emprendimiento social	-0.048	-0.051	0.081	0.591	0.555
Aprobación social Intención emprendedora	0.408	0.408	0.046	8.845	0
Aprobación social Percepción positiva del emprendimiento social	0.299	0.296	0.074	4.024	0
Autoeficacia Emprendimiento social	0.031	0.031	0.084	0.364	0.716
Autoeficacia Intención emprendedora	0.536	0.539	0.052	10.253	0
Intención emprendedora Emprendimiento social	-0.031	-0.023	0.091	0.344	0.731
Percepción positiva del emprendimiento social Autoeficacia	0.417	0.412	0.072	5.804	0
Percepción positiva del emprendimiento social Emprendimiento social	0.01	0.01	0.071	0.137	0.891
Percepción positiva del emprendimiento social Intención emprendedora	-0.067	-0.07	0.046	1.434	0.152
Soporte institucional del emprendimiento social Aprobación social	0.295	0.294	0.061	4.816	0
Soporte institucional del emprendimiento social	0.131	0.135	0.068	1.943	0.053

Autoeficacia					
Soporte institucional del emprendimiento social Emprendimiento social	0.113	0.114	0.049	2.289	0.022
Soporte institucional del emprendimiento social Percepción positiva del emprendimiento social	0.378	0.381	0.059	6.389	0

Fuente: Elaboración propia

From table 7, in which the path coefficients are observed, it can be deduced that "Social approval" is strongly related to "Entrepreneurial intention" (0.408) and with "Positive perception of social entrepreneurship" (0.299), while "Support institutional ”it is with“ Social approval ”(0.295) and with“ Positive perception of social entrepreneurship ”(0.378). "Self-efficacy" is the strongest driver of "Entrepreneurial intention" (0.536), while "Positive perception of social entrepreneurship" is the strongest driver of "Self-efficacy" (0.417). The total effects, the sum of the direct and indirect, indicate the strength of the effect on a target variable, in this case the entrepreneurial intention.

Tabla 8. Efectos totales

	Muestra original	**Media de la muestra**	**Desviación estándar**	**Estadísticos *t***	***P* valores**
Aprobación social -> Autoeficacia	0.125	0.125	0.047	2.651	0.008
Aprobación social -> Emprendimiento social	-0.055	-0.056	0.064	0.872	0.384
Aprobación social -> Intención emprendedora	0.455	0.456	0.046	9.96	0
Aprobación social -> Percepción positiva del emprendimiento social	0.299	0.296	0.074	4.024	0
Autoeficacia -> Emprendimiento social	0.014	0.019	0.079	0.174	0.862
Autoeficacia -> Intención emprendedora	0.536	0.539	0.052	10.253	0
Intención emprendedora -> Emprendimiento social	-0.031	-0.023	0.091	0.344	0.731
Percepción positiva del	0.417	0.412	0.072	5.804	0

emprendimiento social -> Autoeficacia					
Percepción positiva del emprendimiento social -> Emprendimiento social	0.018	0.02	0.067	0.26	0.795
Percepción positiva del emprendimiento social -> Intención emprendedora	0.157	0.152	0.063	2.502	0.013
Soporte institucional del emprendimiento social -> Aprobación social	0.295	0.294	0.061	4.816	0
Soporte institucional del emprendimiento social -> Autoeficacia	0.326	0.328	0.067	4.846	0
Soporte institucional del emprendimiento social -> Emprendimiento social	0.105	0.106	0.051	2.07	0.039
Soporte institucional del	0.264	0.265	0.058	4.582	0

emprendimiento social -> Intención emprendedora					
Soporte institucional del emprendimiento social -> Percepción positiva del emprendimiento social	0.466	0.469	0.059	7.869	0

Fuente: Elaboración propia

From table 8 it can be deduced that "Self-efficacy" has the strongest total effect on the objective variable, "Entrepreneurial intention", followed by "Social approval", "Institutional support" and "Positive perception of social entrepreneurship". The predictive relevance, with the coefficient of determination R^2 and the effect size f^2, are the prediction within the sample, the explanatory power; the coefficient of determination R^2 represents the amount of variance in the endogenous constructs explained by all the exogenous constructs linked to it, it ranges between zero and one, where higher levels indicate greater predictive precision (Hair *et al*., 2007).

Tabla 9. Coeficiente de determinación R^2

	***R* cuadrado**	***R* cuadrado ajustada**
Aprobación social	0.087	0.084
Autoeficacia	0.243	0.238
Emprendimiento social	0.014	-0.003
Intención emprendedora	0.645	0.641
Percepción positiva del emprendimiento social	0.299	0.295

Fuente: Elaboración propia

As can be seen in table 9, the value of “Entrepreneurial intention” has the highest determination coefficient, even using the adjusted R^2, which eliminates the problem of increasing R^2 by including additional predictor constructs: it represents the amount of variance explained by all the constructs linked to it, directly and indirectly. The effect size f^2

evaluates how strongly an exogenous construct contributes to explaining a certain endogenous construct in terms of R^2.

Tabla 10. Tamaño del efecto f^2

	Aprobación social	**Autoeficacia**	**Emprendimiento social**	**Intención emprendedora**	**Percepción positiva del emprendimiento social**	**Soporte institucional del emprendimiento social**
Aprobación social			0.001	0.311	0.117	
Autoeficacia			0	0.498		
Emprendimiento social						
Intención emprendedora			0			
Percepción positiva del ES		0.18	0	0.009		
Soporte institucional ES	0.096	0.018	0.01		0.186	

Fuente: Elaboración propia

In the present study, as can be seen in table 10, “Self-efficacy” (exogenous) has a strong effect (f^2> .35) on “Entrepreneurial intention” (endogenous). "Positive perception of social entrepreneurship", "Social approval" and "Institutional support" have a moderate effect (15≥f^2 <.35) on "Self-efficacy", "Entrepreneurial intention" and "Positive perception of social entrepreneurship", respectively. . For Q^2 predictive relevance, the procedure called blindfolding is used, which consists of an iterative procedure in which different parts of the matrix are omitted until each data point has been omitted and predicted. The prediction error is used as an indicator of predictive relevance (Hair et al., 2007), which allows evaluating the predictive relevance of each exogenous construct for a certain endogenous construct. It is

considered a predictive measure outside the sample as it remains almost intact in its calculation. (Sarstedt *et al*., 2017).

Tabla 11. Relevancia predictiva Q^2

	SSO	SSE	Q² (= 1-SSE/SSO)
Aprobación social	1505	1421.945	0.055
Autoeficacia	1204	1019.095	0.154
Emprendimiento social	301	305.964	-0.016
Intención emprendedora	1505	857.994	0.43
Percepción positiva del emprendimiento social	1204	989.548	0.178
Soporte institucional del emprendimiento social	2709	2709	

Fuente: Elaboración propia

Table 11 shows how "Entrepreneurial intention" has a strong predictive power ($Q^2 >$ 0.35), while "Self-efficacy and" Positive perception of social entrepreneurship "have moderate predictive power. ($0.15 \leq Q^2 \leq 0.35$).

Goodness of fit

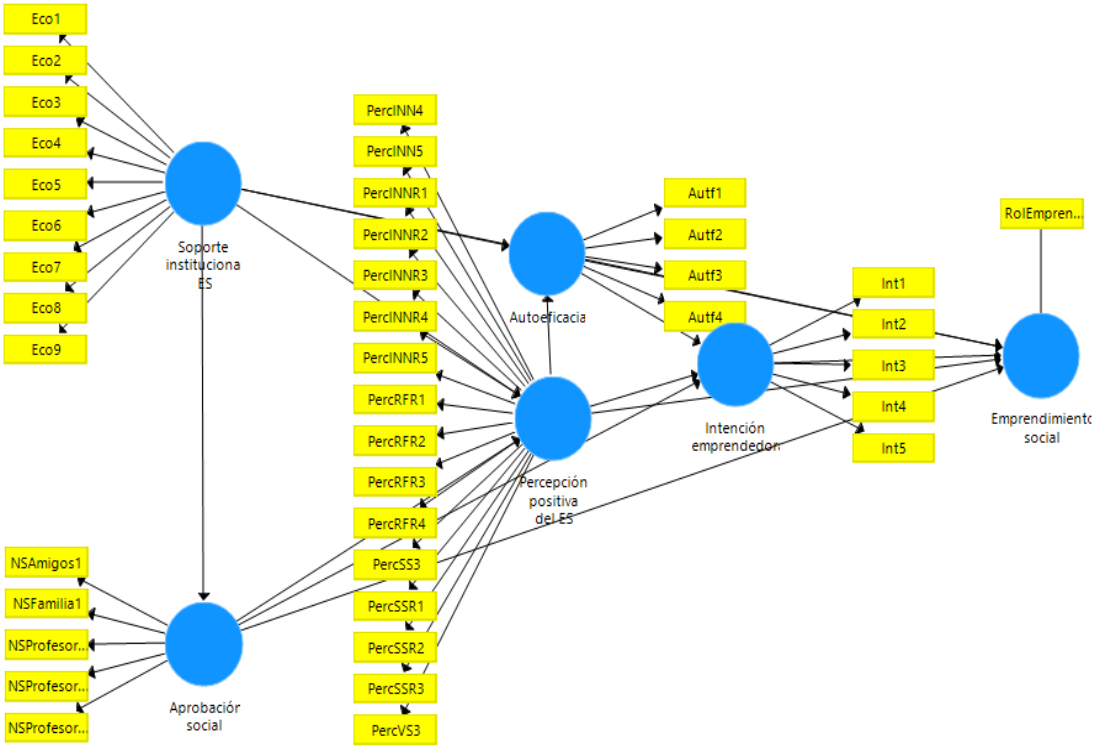
According to Tenenhaus, Esposito, Chatelin and Lauro (2005), unlike models based on covariance, using PLS it is not possible to separate valid from invalid models. However, according to Lohmöller (1989), the degree to which the residuals of the external model correlate can be measured using the residual mean square covariance (RMStheta), which must be between the values of ≤ 0.12 - 0.14 (Henseler, 2013). For the present investigation, a value of RMStheta = 0.133 was obtained, which, being within the parameters, the goodness of fit of the model is obtained.

Discussion

Being an entrepreneur means taking risks, using intelligence, working and innovating. There are risks that must be resolved by the entrepreneurs themselves (Morales et al., 2015). According to Santander (2010), entrepreneurs are made. And Palomares and Chrisvert (2014), as well as Duarte and Ruiz (2009), point to education as the most convenient means to transfer, participate and recreate the culture of entrepreneurship. While Hernández and Arano (2015) specify how education related to administration and business is the most conducive to the development of entrepreneurship. It is an alternative to solve youth unemployment (Caldera et al., 2017). Since, according to the National Entrepreneur Institute (2016), each year the Mexican economy decreases 0.7%. And the GEM found that this, unemployment, occurs at 12.7% among young people between 18 and 24 years old. The main purpose of this research was to evaluate the models (original and the particular context investigated), since PLS modeling can be used for both explanatory and predictive research (Cepeda, Henseler, Ringle & Roldán, 2016). After evaluating the measurement or external model, as well as the structural or internal one, a significant change was obtained from the original model of the study that was developed in 26 universities in eight countries. Thus, two of the constructs differ from the original:

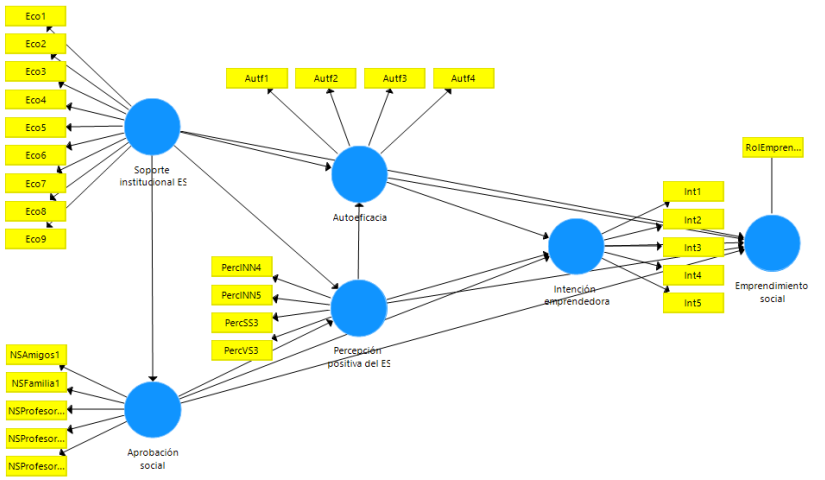
- "Social approval": with two fewer items, which refer to considering the opinion of the family as important, as well as that of friends, which indicates that, unlike the original study, although they answered that it would be important for them to agree with them, the perception of people close to the student does not significantly influence their decision or intention to undertake • "Positive perception of social entrepreneurship": of the 11 items, only four were retained after the assessment of loads that did not reach the minimum value of 0.4. From the foregoing, it is concluded that the student of the Academic Unit of Accounting and Administration of the Autonomous University of Zacatecas does not perceive being focused on social problems or having a strong social commitment, they do not see risks as opportunities, they do not warn to improve their life in the long run term or preserve the environment; However, they observe that they are easy to identify social needs, create greater social value than classic entrepreneurs by having advantages through innovative products and services, and with this, providing solutions to neglected social needs. Therefore, the model changed from the international context, as can be seen in figure 1, to the model in the context of the present investigation, as shown in figure 2.

Figura 1. Modelo internacional



Fuente: Giraldo y Vara (2018)

Figura 2. Modelo local



Fuente: Elaboración propia

The change in the local model with respect to the original research implies that the university under investigation is not doing enough work or providing support to promote and accompany the entrepreneurship process, since the percentage of entrepreneurship leaders is less than 1%, it remains very far from the figure of 12.7% found by the Instituto Nacional

del Emprendedor (2016) (although it should be noted that the young people between 18 and 24 years old mentioned are not specifically university students). And also well below 3.4% of research internationally.

Conclusions

In accordance with the purpose of this study, which was to compare an international study on university-based social entrepreneurship in Latin America with the context of the Autonomous University of Zacatecas, specifically its Academic Unit of Accounting and Administration, since it was considered that when generalizing The results found in the 26 universities of eight countries can make the mistake of making wrong decisions based on the aforementioned results, different results were found in terms of descriptive statistics, since only 0.7% lead social entrepreneurship projects, even lower than the 3.4% figure found in the international study. Regarding the model, when evaluating the measurement model, or outer model, items were eliminated that did not reach in their external load at least the 0.4 that is required as a minimum to keep it. This is another of the most significant differences in the context, since, of the constructs of social approval and positive perception of social entrepreneurship, two and seven items were eliminated respectively, which indicates that the vision that students have about entrepreneurship is adjusted to different motifs in different contexts, and endow them with an uneven specific weight. Although the structural model did not present differences, which proves that the model adheres to the original, the same values were not obtained. For the present research, a very strong entrepreneurial intention stands out (0.43), but an entrepreneurship tending to zero (-.016). Having carried out the present research and obtained the aforementioned results will allow the appropriate decisions to be made in the context studied by the corresponding university authorities, since the current work does not reflect the results of an entrepreneurial mentality on the part of the students.

Contributions to future lines of research

Based on the results obtained in this research, actions must be implemented by the administration and teachers involved in the restructuring of the curriculum in order to promote social entrepreneurship among students, as well as follow-up, which will allow make relevant decisions based on future results.

References

Caldera, D., León, S. y Sánchez, M. (2017). Desafíos para el desarrollo de programas y ecosistemas universitarios de emprendimiento en México. Ponencia presentada en el Congreso Interdisciplinario de Cuerpos Académicos. Guanajuato, 28 y 29 de septiembre de 2017.

Cepeda, G., Henseler, J., Ringle, C. M. and Roldán, J. L. (2016). Prediction-oriented modeling in business research by means of PLS path modeling. *Journal of Business Research*, *69*(10), 4545-4551.

Cassel, C., Hackl, P. and Westlund, A. H. (1999). Robustness of partial least-squares method for estimating latent variable quality structures. *Journal of Applied Statistics*, *26*(4), 435-446.

Chin, W.W. (2010). How to Write Up and Report PLS Analyses. In Esposito, V. V., Chin, W., Henseler, J. and Wang, H. (eds.), *Handbook of Partial Least Squares*. Berlin, Germany: Springer. https://doi.org/10.1007/978-3-540-32827-8_29

Duarte, T. y Ruiz, M. (2009). Emprendimiento, una opción para el desarrollo. *Scientia et Technica*, *15*(43), 326-331. Recuperado de https://www.redalyc.org/pdf/849/84917310058.pdf.

Durán, J. (2016). Emprendimiento juvenil en México. Informe nacional del "estudio de laoferta d recursos técnicos y tecnológicos para favorecer los procesos de emprendimiento juvenil" del CLADCS del INCAE. Recuperado de https://incae.edu.sites/reporte_nacional_-_mexico_final_corregido.pdf (incae.edu)

Fornell, C. and Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, *18*(1), 39-50.

Gibb, A. (2011). Espíritu empresarial: Soluciones únicas para ambientes únicos. ¿Acaso es posible lograr esto con el paradigma existente? En Varela, R. (ed.), *Desarrollo, Innovación y Cultura Empresarial. Volumen* 2. *Educación Empresarial* (pp. 15-76). Santiago de Cali, Colombia: Centro de Desarrollo del Espíritu Empresarial.

Giraldo, W. A. y Vara, A. A. (coords.) (2018). *El emprendimiento social de base universitaria en Latinoamérica. ¿Están las universidades haciendo lo suficiente?* Lima, Perú: Universidad de San Martín de Porres-Accreditation Council for Business Schools and Programs. Recuperado de

administracion.usmp.edu.pe/investigacion/files/USMP-ACBSP-LIBRO-EMPRENDIMIENTO-SOCIAL-COMPLETO.pdf.

González, M. D. (coord.) (2012). *Retos de las ciencias administrativas desde las economías emergentes: evolución de sociedades*. México: Instituto Tecnológico y de Estudios Superiores de Monterrey.

Hair, J. F., Hult, G. T. M., Ringle, C. M. and Sarstedt, M. (2007). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (2nd ed.).Thousand Oaks, United States: Sage.

Hair, J. F., Black, W. C., Babin, B. J. and Anderson, R. E. (2010). *Multivariate Data Analysis.* (7th ed.). United States: Prentice Hall.

Henseler, J. and Sarstedt, M. (2013). Goodness-of-fit indices for partial least squares path modelling. *Computational Statistics*, *28*, 565-580.

Henseler, J., Ringle, C. M. and Sarstedt, M. (2015). A New Criterion for Assessing Discriminant Validity in Variance-Based Structural Equation Modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115-135.

Hernández, C. y Arano, R. (2015). El desarrollo de la cultura emprendedora en estudiantes universitarios para el fortalecimiento de la visión empresarial. *Revista Ciencia Administrativa*, (2015-1), 29-37. Recuperado de https://www.uv.mx/iiesca/files/2012/10/04CA201501.pdf.

Hernández, R., Fernández, C. y Baptista, P. (2014). *Metodología de la investigación* (6.ª ed.). Ciudad de México, México: McGraw-Hill.

Hidalgo, G., Kamiya, M. y Reyes, M. (2014). *Emprendimientos dinámicos en América Latina. Avances en prácticas y políticas*. Caracas, Venezuela: Banco de Desarrollo de América Latina. Recuperado de http://scioteca.caf.com/handle/123456789/371.

Instituto Nacional del Emprendedor. (2016). *Diagnóstico 2016 del Fondo Nacional Emprendedor*. México: Secretaría de Economía. Recuperado de https://www.inadem.gob.mx/wp-content/uploads/2017/02/Diagno%CC%81stico_FNE-2016-1.pdf.

Landero, H. R. y González, M. T. (2007). *Estadística con SPSS y metodología de la investigación*. México: Trillas.

Lideres mexicanos. (2016). El emprendimiento en México está en su nivel más alto desde 2001. Reuperado en https://lideresmexicanos.con/noticias/el-emprendimiento-en-mexico-esta-en-su-nivel-mas-alto-desde-2001/

Lohmöller, J. B. (1989). *Latent Variable Path Modeling with Partial Least Squares*. Berlin, Germany: Springer-Verlag.

Lozano, O. y Cayetano, J. (2011). El emprendedor de la empresa familiar mexicana, una visión crítica. *Gestión y Estrategia*, (40).

Morales, J., Bustamante, A., Vargas, S., Pérez, N. y Sereno, O. (2015). Factores de éxito emprendedor en dos municipios de la montaña de Guerrero, México. *Nova Scientia*, *7*(15), 416-435.

Normas APA. (s. f.). Cuantitativo o cualitativo, ¿cuál escoger? Recuperado de https://normasapa.net/cuantitativo-o-cualitativo-cual-escoger/.

Ojeda, J., Mexicano, A., Mosqueda, M. (2012). Causas de inicio y quiebre de pymes en un municipio de la región Laja-Bajío. Voces de los empresarios. Ponencia presentada en el 6.º Coloquio de Investigación Nacional e Internacional de Cuerpos Académicos. Aguascalientes, del 20 al 22 de junio 2012.

Organización Internacional de Trabajo [OIT]. (24 de agosto de 2016). El desempleo juvenil está aumentando de nuevo en el mundo. Comunicado de prensa. Recuperado de http://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_513736/lang--es/index.htm.

Palomares, D. y Chisvert, M. J. (2014). Ética y empresa en el espacio universitario: el emprendimiento social en las universidades públicas como vehículo facilitador de la equidad social. *Revista de Docencia Universitaria*, *12*(2), 205-230.

Patiño, J. D., Ruiz, A. y Pitre, R. (2018). El emprendimiento en Colombia, una respuesta a los retos de competitividad y desarrollo sostenible. *Revista Espacios*, *39*(14), 24.

Ringle, C. M., Wende, S. and Becker, J. M. (2015). SmartPLS 3. Bönningstedt, Germany: SmartPLS. Retrieved from http://www.smartpls.com.

Santander, V. (2010). Características del comportamiento emprendedor en alumnos de enseñanza media de la ciudad de Talca. *UCMaule - Revista Académica*, (39), 91-114.

Sarstedt, M., Ringle, C. M. and Hair, J. (2017). Partial Least Squares Structural Equation Modeling. In Homburg, C., Klarmann, M. and Vomberg, A. (eds.), *Handbook of Market Research*. New York, United States: Springer.

Sistema de Información Legislativa de la Secretaría de Gobernación. (2016). Que expide la Ley General de Promoción e Impulso al Joven Emprendedor, a cargo del diputado Luis Fernando Antero Valle, del grupo parlamentario del PAN. Recuperado de

http://sil.gobernacion.gob.mx/Archivos/Documentos/2016/04/asun_3371822_20160426_1460479045.pdf.

Tarapuez, E. y Botero, J. (2007). Algunos aportes de los neoclásicos a la teoría del emprendedor. *Cuadernos de Administración, 20*(34), 39-63.

Tenenhaus, M., Esposito, V., Chatelin, Y. M. and Lauro, C. (2005). PLS path modeling. *Computational Statistics & Data Analysis, 48*(1), 159-205.

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