

Entrepreneurial traits and pillar sustainable development in the Sinaloa region**Rasgos del emprendedor y pilares de desarrollo sustentable en la región de Sinaloa.**

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Abstract

Sustainable development has become an emergency due to problems mainly related to climate change. Entrepreneurs are required to have this approach in order to achieve sustained growth and common welfare, in accordance with the provisions of the 2030 Agenda. Therefore, the objective of this study was to validate the components of the entrepreneur's traits and the pillars of sustainability in Sinaloa companies in Mexico. For this purpose, a measurement instrument based on the Global Reporting Initiative, the Sustainable Development Goals and the Decalogue of the Global Compact was used. Among the main findings are optimal normality characteristics, the correct representativeness of the items with the specific related constructs, the demonstration of the reliability of the construct in general, in addition to supporting the corresponding factor analysis. These results denote the importance of identifying the traits of the entrepreneur to implement actions aimed at achieving organizational sustainability in the study region.

Resumen

El desarrollo sustentable se ha convertido en una urgencia debido a la problemática relacionada principalmente con el cambio climático. Se requiere que los emprendimientos tengan ese enfoque con el fin de lograr un crecimiento sostenido y el bienestar común, de acuerdo con lo establecido en la Agenda 2030. Por ello, el objetivo de este estudio fue validar los componentes de los rasgos del emprendedor y los pilares de la sustentabilidad en las empresas de Sinaloa en México. Para tal efecto se utilizó un instrumento de medición fundamentado en la Iniciativa de Reporte Global, los Objetivos de Desarrollo Sostenible y el Decálogo del Pacto Mundial. Entre los principales hallazgos se aprecian características óptimas de normalidad, la representatividad correcta de los ítems con los constructos específicos relacionados, la demostración de la fiabilidad del constructo en general, además de que se avala el análisis factorial correspondiente. Dichos resultados denotan la importancia de identificar los rasgos del emprendedor para implementar acciones orientadas al logro de la sustentabilidad organizacional en la región de estudio.

Sustainability, Entrepreneur Traits y Regional Development

Sustentabilidad, rasgos del emprendedor, desarrollo regional

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Introduction

Companies are one of the decisive elements in the development of regions, not only as generators of wealth but also as ways of satisfying social demands (Delfín and Acosta, 2016). Historically, the main business objective was focused on producing goods and services that would allow them to extract a surplus to compensate the capitalist partners for the amount of their investment, a share of the profits generated and the guarantee that their investment would continue to produce. However, this utilitarian conception (Friedman, 1970), based on economic theory, is no longer acceptable as an absolute truth (Cajiga, 2010). Today, companies have to assess how their activities affect the communities in which they operate, and these effects are not always positive. This shift in perspective has implied a transition from an economic focus to a stakeholder focus, building bridges to sustainability (Hinrichs, 2014).

Concern for environmental protection intensified in the 1980s as a result of climate change and its manifestations in ocean temperatures; more intense natural phenomena; alarming pollution rates; population growth and food security risks; as well as environmental disasters caused by companies (Cervantes and Aldeanueva, 2016). The environmental impact of economic activities has been "unprecedented in the last two decades" (García, Martínez and Andrade, 2016:102); the greater the growth of economic activity, the greater the impact on environmental degradation; in many cases ignoring the consequences or doing nothing to minimise them (López, Calle and Molina, 2017). Ever since Friedman (1970) pointed out that the only obligation of business was to generate profits and all others belonged to the government, voices have emerged encouraging the involvement of such companies in local community affairs; not only to be socially responsible but also to be sustainable.

In fact, the emergence of the concept of Sustainable Development came about in the Brundtland Report, also known as "Our Common Future", which compiled results of studies and public consultations on environment and development (World Commission on Environment and Development, 1987).

This document sought to raise awareness of the irreversible effects on the environment as a result of lifestyles and how to bring about qualitative and immediate changes through common objectives for countries, recognising their differences and inequalities.

The Rio Declaration of 1992 defines sustainable development as meeting the needs of present generations without compromising those of the future (World Commission on Environment and Development, 1987). In this regard, Mexico acts as a bridge between Latin American countries when it assumes commitments on sustainability for the development of the regional economy in the 2030 Agenda for Sustainable Development, taking into account the structural gaps that exist in relation to more developed countries (Prado, 2016).

On the other hand, environmental regulations were also designed with the aim of reorienting processes towards sustainable development, seeking to make economic agents bear the costs of environmental impacts and promoting productive activity through efficiency, such as the General Law on Ecological Balance and Environmental Protection (LGEEPA). In this regulation, sustainable development is defined as a process that can be evaluated through environmental, economic and social criteria and indicators that tends to improve the quality of life and productivity of people, based on appropriate measures to preserve the ecological balance, protect the environment and make use of natural resources, in a way that does not compromise the satisfaction of future needs (LGEEPA, 2015:3).

Sustainable development seeks a balance between economic, social and environmental aspects in order to improve living conditions (García, Martínez and Andrade, 2016). One of the great challenges for entrepreneurs is to assume a commitment to environmental issues in a world of hyper-consumption and waste; where economic criteria are the ones that privilege decision-making (González, 2007) and environmental aspects are ignored even in financial information (García, Martínez and Andrade, 2016). Therefore, it is necessary to incorporate ethical principles and values in entrepreneurship (Bueno, 2013), which come from the family nucleus (Alegre, 2013).

In such a way that these enable awareness to be generated of the effects that companies have on the communities in which they operate and that affect their stakeholders. Therefore, all the decisions made in organisations have a positive or negative impact on the environment (Escobedo and García, 2018).

In this line of research, Velázquez and Vargas (2012) pointed out that for the company to reach a sustainable balance, the strategy must be ecologically appropriate, economically viable and socially fair, as this achieves the maximisation of benefits, not only of an economic nature. From this perspective, Rodríguez and Ríos (2016) presented as the main finding in 87 Colombian companies their tendency towards one or another dimension according to the sector to which they belong and their classification according to the level of sustainability, in three parameters: mature, developing or incipient company. They also state that the standardisation provided by the Global Reporting Initiative (GRI) is the most widely accepted and provides a frame of reference.

On the other hand, Paternoster (2011) carried out a comparative analysis of the sustainability reports of five Spanish companies of different sizes, evaluating the three dimensions: in the economic dimension, he focused mainly on profits; in the environmental dimension, on energy and waste; and in the social dimension, on jobs. Similarly, Petrini and Pozzebon (2010) proposed a model for integrating sustainability into organisational practices by analysing five companies that comply with sustainability principles, standards, certifications or issue sustainability reports; that are in the Dow Jones Index or the Bovespa Sustainable Business Index or both; and that have received public recognition for their sustainability-related actions.

These researchers collected data through interviews and presented a model for the context of Latin American companies based on a corporate vision that included management and leadership; organisational structure with governance and formal sustainability areas, as well as organisational mechanisms such as sustainability definition, communication and monitoring, education, recognition and valorisation.

Thus, with the implementation of this model, it was expected that sustainability practices would be integrated into the processes of the organisations, considering the specific characteristics of each company and how the process of implementing these practices would take place.

Based on this background, the objective of this work was to validate the components of the entrepreneurial trait variables and the social, economic and environmental pillars of sustainability in companies in Sinaloa, Mexico. The hypothesis put forward is that "The sustainability construct is composed of three dimensions, also called pillars, equidistant in importance: economic, social and environmental. According to Escobedo and García (2018:11), the economic pillar seeks the highest possible profit by carrying out sustainable activities, the social pillar focuses on satisfying the needs of society at the lowest possible environmental cost, and the environmental pillar is oriented towards the protection of resources. Escobedo and García, (2018) point out that the systemic vision of sustainability is to achieve a balance in the three dimensions, as pointed out by Velázquez and Vargas (2012) that encompasses the ecological, economic and social spheres, which for these authors is inescapable for survival". To this end, this paper first reviews the scientific literature on the research lines of entrepreneurship and sustainability, with the aim of laying the theoretical foundations on which the methodology of the study is based, aimed at designing a measurement instrument and validating the proposed analysis constructs. Subsequently, the main findings, the corresponding conclusions and the sources of consultation are presented.

Entrepreneurship and sustainability

Starting a business or a wealth-generating activity requires people with attitudes and skills to manage new ideas or economic opportunities with the challenge of remaining and thriving in the market, assuming the potential for success as an inherent risk in the local, regional or global competitive environment.

These postulates essentially describe the models of entrepreneurship of Schumpeter, Kirzner, Knight and Henrekson mentioned by Narváez (2012); now with variables studied regionally as entrepreneurial culture by the Global Entrepreneurship Monitor (GEM) and by the World Economic Forum (WEF) with its Global Competitiveness Report; adding the initiatives combined by the Triple Helix (University - Business - Government) and the development of industrial clusters, to further develop entrepreneurship (Narváez, 2012).

Entrepreneurship is a social interaction that seeks economic growth and regional development by using available natural and financial resources to meet the consumption needs of current generations. However, Badii and Abreu (2006) argue that this cannot be conducive over time if society does not progress under the concept of sustainability, with its limits and conditions, to improve human well-being subject to biophysical and environmental impossibilities caused by modern socio-economic development behaviours.

Although the cultural context determines entrepreneurship (Rodríguez and Prieto, 2009), the family is the cradle and is where the behavioural patterns and values that will serve as a basis are given. What an entrepreneur must possess to be successful are: initiative, creativity, responsibility, autonomy, effort, perseverance, learning, the ability to take risks, confidence in projects, the ability to work in teams and not being afraid to try (Alegre, 2013). However, there are those who point out that the entrepreneurial spirit should be encouraged, especially in the part related to bureaucratic barriers and formalities that limit or inhibit entrepreneurship and additionally create favourable conditions for the entrepreneur to be successful (Leite, 2015).

Thus, one of society's challenges is to incorporate values in entrepreneurship (Bueno, 2013), as these values will generate trust. In fact, a good leader must incorporate values in his or her behaviour (Northouse, 2010). Additionally, as characteristics of the entrepreneur's personality, the propensity to take risks and the lack of fear of failure are considered to be qualities that favour taking advantage of opportunities (García, Martínez and Fernández, 2008) and that can influence the achievement of success.

It is the manager who has to drive change in organisations and this always involves risks and the need to adapt to new situations that arise; therefore, it is essential for the leader to reduce uncertainty and encourage the creativity of his or her collaborators (Suárez, 2014) so that their opinions are considered in decision-making. From this perspective, Cervantes et al. (2018) analysed risk-taking in 1412 entrepreneurial firms in northwestern Mexico, concluding that they were prudent in achieving returns by avoiding risk, unlike those in the commercial sector who adopted bolder and more aggressive stances to exploit potential opportunities; they were also more prone to high-risk projects even when situations of uncertainty existed.

In the same vein, Maldonado et al. (2018) showed that firms older than ten years were better than their competitors in profitability indicators and this gave them more freedom of action and risk management. Also (2014) points out that for a company to grow and position itself, it requires a leader with entrepreneurial traits and without fear of risk.

Although there are authors who point out that sustainable development is only an illusion and that the Millennium Development Goals were only focused on calming good consciences (González, 2007), the Sustainable Development Goals [SDGs] (UNESCO, 2016) are oriented towards achieving well-being and economic growth, which requires entrepreneurs who, in the creation of business ideas and innovations, consider the SDGs set out by the international community at the UN on 25 September 2015.

List of SDGs for 2030			
1. The end of poverty	2. Zero hunger	3. Health and well-being	4. Quality Education
5. Equality	6. Clean water and sanitation	7. Energy clean and renewable	8. Decent work and economic growth
9. Industry, Innovation and Infrastructure	10. Reduction of inequalities	11. Cities and communities sustainable	12. Responsible consumption and responsible
13. Climate Action for Climate	14. Underwater life	15. Life of terrestrial ecosystems	16. Peace, justice and strong institutions
17. Partnerships to achieve the Objectives			

Table 1 Sustainable Development Goals (SDGs) for 2030
Source: (UNESCO, 2016)

In addition, as mentioned by Delgado, Imaz and Beristain (2015:15), it is time to promote the green economy model that is complemented by seeking (1) better design and development of sustainable products, (2) attracting more customers and (3) increasing sales. Economic growth is about improving the common good and development with a focus on sustainability.

Thus, sustainability has been adapted to the context of organisations (Bell and Morse, 2000) and is considered inconsistent without the balance of the three pillars: economic, social and environmental or also as Triple P: profit, people and planet, as the construct is explained by the three strands (Alhadd, 2015). Sustainable development has an existential character as it is necessary to measure to influence people with power to ensure that there is a future for humanity (Bell and Morse, 2018).

This poses a great challenge considering the current situation of society and the planet: to create a new social structure in which entrepreneurship and sustainability generate regional development and add value to the green economy; obtaining sustainable returns (Rodríguez & Ricárdes, 2020). Such a challenge implies a paradigm shift, as described by Riechmann (2016:10) who points out that today we need something else: building adaptive flexibility and socio-ecological resilience in times of collapse.

To this end, and as a product of the coincidence of common objectives such as the creation of markets, the fight against corruption, the safeguarding of the environment and social inclusion, the Global Compact arises from which ten principles emanate to be incorporated into business activities with a focus on global sustainability. The main advantages of this proposal are the sharing of best practices, the creation of alliances and linkages at a global level, the use of experience and management instruments, and the creation of a global network.

All this through the acceptance of an institutional commitment to make the principles part of the organisation's strategy, which are grouped into Human Rights, Labour Standards, Environment and Anti-corruption. Specifically, the Human Rights section includes the protection of human rights and non-complicity in their violation; in relation to Labour Standards, support for free association, elimination of forced labour, eradication of child labour and abolition of discriminatory practices. In the case of the Environment, the preventive approach to protection, the promotion of initiatives for greater respect for the environment and the development and dissemination of environmentally friendly technologies; finally, in Anti-Corruption, action against all forms of corruption.

In this regard, it is pertinent to point out that this initiative, launched in 1999, has had a great impact on corporate citizenship worldwide in the promotion of good business practices (UN, 2009).

Pillars of sustainability

Sustainability is made up of three dimensions, also called pillars, which are equidistant in importance: economic, social and environmental. The economic pillar seeks the highest possible profit according to Escobedo and García (2018: 11) by carrying out sustainable activities, the social pillar focuses on satisfying the needs of society at the lowest possible environmental cost and the environmental pillar is oriented towards the protection of resources. Escobedo and García, (2018) point out that the systemic vision of sustainability is to achieve a balance in the three dimensions, as pointed out by Velázquez and Vargas (2012), which encompasses the ecological, economic and social spheres, which for these authors is inescapable for survival.

In the Global Compact, these three pillars are clearly visible in the common objectives that give rise to it: market creation in the economic pillar, safeguarding the environment in the environmental pillar and social inclusion in the social pillar (UN, 2009). Similarly, Elkington (1997), Alhaddi (2015) and Bell and Morse (2018) noted that another construct that is used interchangeably is the Triple Bottom Line (TBL) or which is integrated by the same three pillars or dimensions: economy, society and environment.

In particular, Rodríguez and Ríos (2016) under the GRI methodology measured the economic pillar with safe, reliable and durable products; the environmental pillar with the management of resources such as materials, energy, water, among others, as well as the development of environmental programmes; and the social pillar with the management of human talent, industrial safety, occupational health, relations with suppliers and social initiatives. They also identify biases towards one dimension or another.

In parallel, López, Calle and Molina (2017) analysed 264 Ecuadorian companies and found an unconscious development of economic activities by the companies and a lack of knowledge of environmental management tools, although a small part carried out activities related to recycling and waste collection and found that environmental management systems can help to improve the corporate image, take advantage of growth opportunities, improve processes and increase awareness of the environmental damage caused by the activities carried out.

Methodology developed

Against this background, this research makes a first approach to the constructs of entrepreneurship, sustainability and the components of the variables entrepreneurial traits and the social, economic and environmental pillars of sustainability. Through the design of an instrument with a Likert-type scale (Hernández Sampieri et al., 2010), as well as an additive type of scale that corresponds according to Padua & Ahman (1979) to an ordinal level of measurement, consisting of a series of items or judgments to which the subject's reaction is requested.

This questionnaire is composed of five sections: company and respondent profile; entrepreneur traits; economic pillar; social pillar and environmental pillar. For content and construct validation, the variables were operationalised by verifying the behaviour of the indicators. The information gathering instrument was designed based on the operationalisation of variables, taking each of the indicators to item level, so that in accordance with the theoretical review and empirical evidence, two constructs, 4 dimensions and 40 indicators were determined.

Construct	Dimension	Authors
Entrepreneurial-durism	Entrepreneurial traits	Alegre (2013), Molina (2014), García et al (2008), Cervantes et al (2018), Riechman (2016), Suárez (2014), Bueno (2013), Northouse (2010).
Sustainability	Social pillar	Badí y Abreu (2006), UNESCO (2015), Rodríguez and Osorio, (2016), ONU (2009), Delgado et al (2015).
	Economic pillar	Delgado et al (2015), Molina (2008), Badí and Abreu (2006), Velázquez (2012).
	Environmental pillar	UNESCO (2015), ONU (2009), Rodríguez and Osorio (2016), Martínez, Guevara and Escamilla (2018), Hinrichs (2014), López (2017).

Table 2 Constructs of the Entrepreneurship and Sustainability instrument

Source: Own elaboration.

A stratified non-probabilistic sampling was carried out, resulting in a sample size $n = 122$, which was selected according to the stratification criteria by company size and radius of influence of economic activities in the State of Sinaloa, Mexico, mainly in Guasave and Culiacán.

For the application of the instrument, an implementation plan was drawn up for the companies that were the subjects of the study. Subsequently, there was coordination with the managers of each of them to inform them of the purpose of the research and to agree on dates for visits or sending via email, with the corresponding follow-up. The data collected from the selected subjects were analysed using the Statistical Package for the Social Sciences (SPSS v.25).

The content validation of the instrument was carried out based on the theoretical review and the operationalisation of the variables according to relevance, measurement representation and technical quality; this allowed for the evaluation (Stake, 1999). To determine the construct validity and reliability, the reliability of the instrument was determined using Cronbach's Alpha method, to show that the items of the dimensions have internal consistency with values between .80 and .90 (Hall, 1963) and subsequently the factor analysis technique was used for construct validity and to determine the degree of explanation of the dimensions and construct according to the behaviour of the variance.

Analysis of data behaviour

A univariate analysis was performed for each of the items based on the kurtosis and skewness coefficient according to Haidar (2013), with acceptable values for each item and where the values should not be greater than 3.00 for skewness and 8 for kurtosis, regardless of whether they are negative. The data present values less than 3 for skewness and less than 8 for kurtosis in the two constructs with their corresponding dimensions, indicators and their observation items of the behaviour of the entrepreneurial phenomenon Entrepreneurial traits and Sustainability with the research subject, which is why the values obtained are within the expected parameters.

The goodness-of-fit test was used to measure the degree of agreement between the theoretical distribution and the data proposed with Kolmogorov, Smirnov and Shapiro, which reports a level of significance of the sample with values that present normality as they are less than .05, in accordance with the criteria of normality for multivariate kurtosis (Mardia, 1970) in each of the items for the two constructs under study.

To determine the relevance of the factor analysis and check whether it is significant, the percentage of variance explained by Bartlett's test of sphericity, which assesses the applicability of the factor analysis of the variables studied, and the Kaiser Meyer-Olkin measure of sampling sufficiency (De los Santos, 2016) were used to assess the relevance of conducting a factor analysis to validate the principal components and their factor loadings. The rotation method used was Varimax (Gürbüz and Mert, 2009) with the aim of identifying the redistribution of variance by the establishment of factors with highly related components and eliminating clusters with intermediate relationships (Lozares and López, 1991).

Results

Descriptive analysis of the sample

With the purpose of describing the categorical stratification variables according to selection criteria by company size and the managerial participation of the research subject.

The stratification of the Ministry of Economy was taken as a basis and civil associations and universities were separated as they have different characteristics. When asked about the number of employees, it stands out that 70% have between 11 and 50 workers.

Type of organisation	
Number of employees	Percentage
Large company	17
SME	70
Civil Association	3
Universities	5
Other	5
Total	100

Table 3 Types of organisation

Source: Own elaboration

Regarding the position held by the study personnel, 42% are owners or managers of the company, another 42% work as middle management and 16% have another position.

Post	Percentage
General manager owner	42
Middle management	42
Other	16
Total	100

Table 4 Workplace

Source: Own elaboration

Regarding the position held by the study personnel, 42% of them are owners or managers of the company, another 42% are middle management and 16% hold another position. Validation of the data collection instrument

For the validation of the instrument, according to the reliability analysis, it was considered whether the internal consistency of the indicators, of which there are 40, are rigorously measuring the variable they intend to measure, using the criterion of Cronbach's Alpha Coefficient. The value obtained in the total validation of the instrument is .961 for the Alpha value of the instrument considering entrepreneurship and sustainability. The categorical variables are not included in this analysis since the validity of the instrument was carried out with each of the indicators.

The entrepreneurial traits dimension according to its indicators presents an Alpha of .948 and the sustainability dimension of .944 and its dimensions social sustainability .948, economic pillar .910 of sustainability and environmental pillar .895.

The values obtained for both the overall Cronbach's Alpha coefficient and for each of the indicators and their corresponding items of the instrument, which exceed the minimum value of 0.80 to determine the reliability of the test (Devellis, 2003) and the criteria determined for research in social and economic-administrative sciences. For this reason, it can be established that it is within the appropriate levels of reliability for each construct and has internal consistency.

Construct	Dimension	Indicator	Alpha Cronbach
Entrepreneurship Alpha.948	Entrepreneurship traits	I consider partners for decision making I take the initiative I can lead a team I keep my commitments Fresh ideas I am not risk averse I like to take risks I am adaptable to change Defined values I respect and respect myself I look for solutions to problems I consider myself happy I fight for what I want I am hardworking I have healthy self-esteem I value the efforts of others I analyse alternatives I am economically solvent I accept criticism I ask for help if I need it	.948
Sustainability Alpha.944	Social pillar	In favour of social inclusion Support for social projects Focus on improving the lives of employees Our salaries are above the industry average Salaries are based on competencies and performance We privilege occupational health and safety We promote training and development Flexibility at work Support for social projects Promotion of dialogue and communication	.910
	Economic pillar	High quality products and services Extensive information on products and service Respect for consumer rights Win-win relationships with responsible responsible	.915
	Pillar environmental	We use fuels with a lower environmental impact environmental impact Optimisation of energy use We favour the use of alternative energy We protect the environment by minimising the impact of activities We invest to reduce the environmental impact In favour of recycling and emission reduction emissions and waste In favour of the use of recyclable packaging	.895

Table 5 Validation of the entrepreneurship and sustainability instrument
Source: Own elaboration

Another test that determined construct validity was the Kaiser-Meyer-Olkin (KMO) test of sampling adequacy which reports values for the entrepreneur traits of .925 with a significance level for Bartlett's test of sphericity. Of .000.

KMO and Bartlett Entrepreneurship test		
Kaiser-Meyer-Olkin measure of sampling adequacy		.925
Bartlett's test of sphericity	Approx. Chi-square	1880.709
	G1	190
	Sig.	.000

Table 6 KMO and Bartlett Entrepreneurship and Sustainability Test
Source: Own elaboration

According to the explanatory power of each of the items in the 3 components of the entrepreneurial traits, they explain 67% of the total variance. The results allow us to continue with the factor analysis, so the selected method was the principal component analysis, as a tool of multivariate analysis used for data reduction and determination of the correlated factors that explain most of the total variance, which was obtained through the Varimax method for factorial rotation.

The results are analysed according to the degree of explanation of the data for the total variance with 3 common factors or the regression coefficient (factor loading only with values above .5 considering the minimum acceptable correlation index) of one of the observed variables per factor, at a value of 1, to establish a scale for the components that explain 66 % of the data according to the total variance and to avoid the problem of indeterminacy between variance and factor loadings.

	Rotating component matrix entrepreneurship		
	Component		
	1	2	3
I value the efforts of others	.853		
I fight for what I want	.824		
I have well-defined values	.793		
I respect and make myself respected	.790		
I have healthy self-esteem	.769		
I am hard-working	.755		
I consider myself happy	.709		
I keep my commitments	.643		
I analyse alternatives	.604		
I ask for help if I need it	.509		
I am financially solvent		.813	
I look for solutions to problems		.681	
I accept criticism		.624	
I can lead a team		.528	
I take initiative		Lower values a .5	
I like to take risks			.766
I am not risk averse			.676
I am adaptable to change	.541		.615
I have fresh ideas			.562
I consider collaborations to make decisions		Valores inferiores a .5	

Note: Extraction method: Principal Component Analysis.
Rotation method: Varimax with Kaiser normalization^a.
a. Rotation has converged in 5 iterations

Table 7 Matrix of rotated components of entrepreneurialism

The principal components determined for entrepreneurship were measured with only one; however, the factor loadings of the data behaviour indicate 3 components, according to the state of the art are identified firstly as indicators of Leadership inherent to the research subject in managerial positions, secondly to the perception of the manager in his administrative - employee - company relationship according to his managerial position and thirdly to his risk aversion, which will be submitted for consideration in this research.

Regarding the sustainability dimension, the construct validity according to the Kaiser-Meyer-Olkin (KMO) sample adequacy test reports values for sustainability of .897 with a significance level for the Bartlett's test of sphericity of .000, used as a hypothesis test, on the relationship of the indicators for the measurement of the sustainability construct showing an explanation between each of the items, this statistic can have values of 0 and 1, indicating values less than 0.5 that factor analysis should not be used with the sample data being analysed, because the correlations between pairs of variables cannot be explained by other variables.

KMO and Bartlett's test		
Kaiser-Meyer-Olkin measure of sampling adequacy		.897
Bartlett's test of sphericity	Approx. Chi-square	1778.738
	Gl	190
	Sig.	.000

Table 8 KMO and Bartlett's test
Source: Own elaboration.

Continuing with the factor analysis, the Varimax rotation method (orthogonal transformation) was used, based on the analytical method used to summarise a group of empirical indicators into a smaller set of composite factors or variables, with minimal loss of information (Hair, Anderson, Tatham and Black, 1999). According to the factor weights the data are grouped into 3 components according to the explanatory dimensions of the sustainability construct.

The first component corresponds according to the measurement of sustainability in the components of the environmental pillar, where in the item we optimise the use of energy, the model shows a better explanation.

The second refers to the social pillar where it is excluded, in favour of social inclusion and it is proposed to change support for social projects within the environmental pillar. The third is made up of the economic pillar where the degree of explanation of the proposed indicators with their corresponding items is confirmed.

Rotated factor matrix ^a			
Sustainability	Factor		
	1	2	3
We protect the environment by minimising the impact of our activities.	.738		
We invest to reduce our environmental impact	.727		
We favour the use of alternative energies	.713		
We are in favour of recycling and the reduction of gas emissions and waste.	.685		
We are in favour of the use of recyclable packaging	.671		
We optimise the use of energy	.653	Corresponds to economic	
We support social projects	.619	Corresponds to social	
We use consumables with a lower environmental impact	.580		
We are in favour of social inclusion		Values below .5	
Our salaries are above average for the sector		.724	
We promote training and development		.720	
We prioritise occupational health and safety		.659	
Salaries are based on competencies and performance		.651	
We have flexibility labour		.633	
We focus on improving the lives of employees		.574	.517
We encourage dialogue and communication	.521	.533	
We respect consumer rights			.859
Our products and services are of high quality			.789
We seek win-win relationships with responsible suppliers			.765
Our customers receive comprehensive information on products and services.			.755
Extraction method: maximum likelihood.			
Rotation method: Varimax with Kaiser normalization. ^a			
a. Rotation has converged in 5 iterations.			

Table 9 Rotated factor matrix
Source: Own elaboration.

With regard to the transformation of the factors, the Varimax rotation method (orthogonal transformation) is used. This is based on the analytical method of summarising a group of empirical indicators into a smaller set of composite factors or latent variables, with minimal loss of information (Hair, Anderson, Tatham and Black, 1999).

Goodness-of-fit test		
Sustainability Chi-square	G1	Sig.
290.866	133	.000

Table 10 Goodness-of-fit test*Source: Own elaboration***Acknowledgement**

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Conclusions

According to the review of the state of the art, background and development of sustainability, where it is highlighted that the maximisation of company profits was considered until before the 1980s as the most important element for the continuity and permanence of businesses, although it is highlighted in these findings that the features of entrepreneurship are associated not only with the creation of economic value but also show an awareness within its management towards a projection into the future, considering the factors that impact on the environment, and therefore on the individual, under a scheme in which economic, environmental and social resources are as important as economic-financial resources in order to build an international society with a sense of valuing the quality of life of society and the community of influence of the company.

This shift in perspective is in line with Hinrichs (2014) who points to a transition from an economic focus to a stakeholder focus, building bridges to sustainability. The need to address climate change requires a transition from companies implementing only social responsibility actions (sometimes for purely economic purposes) to a sincere concern for sustainability on the part of the leaders of organisations and entrepreneurs.

Mexico currently assumes sustainability commitments for the development of the regional economy in the 2030 Agenda for Sustainable Development, with regulation towards the reorientation of processes towards sustainable development, seeking to make economic agents bear the costs of environmental impacts and the promotion of productive activity through efficiency.

However, according to the review of the scientific state of the art, as well as international institutions and organisations, sustainability shows a time horizon not only to the regulation of the damage caused, but also a sincere valuation of the individual in his or her environment, as well as the institutional and business commitment to consider sustainability as the guiding axis of their management activities for the responsible use of human, material and natural resources. In order not to compromise the satisfaction of current and future needs regardless of their line of business or activity, in order to increase the quality of life of the society in which they participate.

In such a way that this research found coincidences between the scientific literature with the foundation and measurement of the results presented, in addition to the fact that it fulfils the objective and hypothesis set out, since the components for measuring the traits of entrepreneurs and the variables explaining sustainability in the business context were determined as an approach to its measurement and subsequent promotion in organisations.

It should be emphasised that these aspects could help to direct the lines of action and strategies for implementing sustainability in companies, as well as training and the development of management skills that contribute to the generation of sustainability, and most importantly, by identifying the wealth of entrepreneurial traits, precedents for sustainability actions in a direct way.

Therefore, the contributions of this study frame an approach to the entrepreneurial definition of sustainability, as well as the methodology that was validated from a theoretical and empirical perspective, developed for the measurement and projection of the entrepreneurial traits necessary to generate organisational sustainability, as well as to show the importance of the traits and ethical aspects of the leader in the management of organisations and their precedent towards sustainability in the business environment.

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