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# Performance and environmental proactivity in small mezcal businesses in Oaxaca, México

Desempeño y proactividad ambiental en pequeños negocios mezcaleros de Oaxaca, México

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## RESUMEN:

1) Objetivo. Analizar la relación entre stakeholders, proactividad ambiental y desempeño de negocios mezcaleros en Oaxaca, México. 2) Método: trabajo estadístico no experimental y transversal con base en un cuestionario estructurado y una muestra de 100 negocios. 3) Resultados. La planificación ambiental, la concienciación ambiental y los clientes influyen positivamente sobre el desempeño. 4) Limitaciones del estudio/Implicaciones. Con una muestra más grande, podrían utilizarse técnicas estadísticas que proporcionen un panorama más completo de la relación entre las variables analizadas. 5) Originalidad/Valor. Esta investigación es uno de los primeros trabajos en analizar la proactividad ambiental en negocios mezcaleros. 6). Hallazgos y Conclusiones. La proactividad ambiental es la variable que media el efecto de los stakeholders sobre el desempeño, cuando la literatura indica lo contrario. 7). Implicaciones. El contexto y tipo de negocios brinda nuevos elementos para la teoría y alternativas estratégicas que buscan mejorar el desempeño organizacional.

**PALABRAS CLAVE:** Proactividad ambiental, stakeholders, desempeño, desempeño organizacional, pequeños negocios, teoría basada en recursos naturale, mezcal, Oaxaca.

## ABSTRACT:

1. Objective. Analyze the relationship between stakeholders, environmental proactivity and small mezcal business performance in the state of Oaxaca, Mexico. 2) Method: a non-experimental and transversal statistical work was carried out based on a structured questionnaire and a sample of 100 businesses. 3) Results. The study showed that environmental planning, environmental awareness and clients have a positive influence on business performance. 4) Study limitations / Implications. With a larger sample, statistical

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## NOTAS DE AUTOR

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techniques could be used to provide a more complete picture of the relationship between the variables analyzed. 5) Originality / Value. This research is one of the first works in analyzing environmental proactivity in the small mezcal businesses in Oaxaca, Mexico. 6). Findings and Conclusions. Environmental proactivity is the variable that mediates the effect of stakeholders on performance, when the literature indicates otherwise. 7). Implications. The context and types of businesses provide new insights for the theory and strategic alternatives that seek to improve organizational performance.

**KEYWORDS:** Environmental proactivity, stakeholders, small business, organizational performance, natural resource-based theory, mezcal, Oaxaca.

## INTRODUCTION

Over the last years, the interest in the reduction of environmental pollution, the impact of the businesses activity on the environment, the efficiency of the production processes and the businesses performance has become an important research topic (Carrascosa, Segarra, Peiró, & Segura, 2012; Plaza, De Burgos, & Belmonte, 2011). Historically, the secondary sector of the economy and large companies are signalized as the major's pollution creators, which has been the object to the creation of norms and laws to regulate and reduce that pollution (Carrascosa, et al., 2012). Nevertheless, small businesses might have an environmental impact of equal or greater magnitude than large companies, so the study of these businesses has also become an important issue in the field of productive efficiency, strategic planning, business management and pollution prevention (Laner & Rechberger, 2009; López, Molina, & Claver, 2009; Sánchez, Domínguez, & Hernández, 2008).

Carrascosa et al. (2012) mention that the analysis of different types and sizes of businesses helps to identify factors that may influence the adaptation of environmental strategies, as well as elements that exhibit a good environmental performance (Aragón & Sharma, 2003). In Mexico, many businesses directly use natural resources to manufacture products and obtain a daily income. It is the case of Oaxaca's mezcal production, which is one of the main business activities in Mexico and contributes to the global and domestic economy by generating jobs (Hernández & Domínguez, 2003).

The Mexican Regulatory Council of the Mezcal (COMERCAM, 2017), mentions that the territorial extension dedicated to the mezcal production comes to 500,000 km<sup>2</sup>, which represents the world largest territorial extension dedicated to the production of alcoholic beverages; surpassing cognac, tequila and whiskey. An example of the mezcal industry importance is that in 2016, 3,028,000 liters of mezcal were produced and 17,000 and 70,000 direct and indirect jobs were generated. This territorial extension is made up of nine States of the Mexican Republic, but it is the State of Oaxaca that contributes with 83.5% of the total production and 1'000,000 hectares for production. Notwithstanding, the concern of community groups continues to increase along with the "boom" in this industry, since mezcal factories in Oaxaca use approximately 24 tons of firewood to produce 5,600 liters; 20 liters of water to produce a liter of mezcal, without mentioning the extraction of wild agaves with poor management and conservation practices (Palma, Pérez, & Meza, 2016).

Despite the economic, social, cultural and environmental importance of the mezcal industry in Oaxaca and Mexico, the analysis of the businesses operating into this industry is scarce, as well as the factors that favor the implementation of green strategies and those that influence businesses performance (Fraj, Matute, & Rueda, 2012). In addition, not all businesses can easily adopt environmentally proactive strategies, being the financial resource the main factors to prohibit its implementation (Aragón & Sharma, 2003; Carrascosa, Segarra, Peiró, & Segura, 2012; Calza, Profumo, & Tutore, 2016). Therefore, the present research aims to identify what is the environmental proactivity of the small mezcal businesses of Oaxaca, how the stakeholders influence the environmental proactivity of these businesses and what elements of these two variables determine the performance of the "mezcaleros" business.

## THEORETICAL FRAMEWORK

Throughout its evolution, performance analysis has been addressed from strategic and economic perspectives (Plaza et al., 2011). However, the growing demand for environmental, social and economic activity has incorporated into the analysis variables ranging from environmental issues to the strategic assessment of internal and external factors that may influence businesses performance and its impact on the environment (Mendoza, Toledo, & Arieta, 2016; Sánchez, 2018). In this sense, different studies explain the importance of an environmental orientation in the improvement of business performance through a competitive advantage (Porter & Van der Linde, 1995a; 1995b; Aragón, A., 1996; Russo & Fouts, 1997; Sharma & Vredenburg, 1998; Christmann, 2000; Claver & Molina, 2000; Fraj, Matute, & Rueda, 2012; Kaja P. & Tomaž, 2015; Calza, Profumo, & Tutore, 2016). Then, the implementation of an environmental strategy enhances the reduction of waste, the expenses and incomes, as well as the business market image and increases the overall business benefits (Carrascosa et al., 2012). Thus, research on environmental proactivity, business performance and stakeholder become a subject of great interest in all areas, as it helps to improve current economic competition, environmental awareness and the preservation of species (Calza, Profumo, & Tutore, 2016; González & González, 2005; Clarkson, Li, Richardson, & Vasvari, 2011)

This position has been planted and developed since the 1990s when it was postulated that future business strategies and the formation of a competitive advantage would originate from an environmentalist perspective (Hart, 1995). Nowadays, three fundamental strategies have been defined to achieve an enhancement of performance: pollution prevention (minimize emissions and waste), administration of the product (minimizing the cost of the life cycle of products) and sustainable development (minimizing the environmental burden of growth and development of the company). Also, Aragón, Hurtado, Sharma & García (2008), define three strategic dimensions: business (options on products, markets and ways to compete), engineering (technology) and administrative (choice of structures and organizational processes to allow innovation). In this sense, the study takes up an administrative position with a focus on sustainable development.

## ENVIRONMENTAL PROACTIVITY

In recent years, governments policy, stakeholder interest, and business strategies are inclined towards the solution of environmental deterioration. However, two important postures have been identified when it comes to business activity and the environment. These are the reactive and proactive postures. The environmental reactivity poses that businesses only respond to obligatory environmental regulations (Law and norms); whereas a voluntary doing responds to an environmental proactive action, which is aimed to reduce the business negative impact on the environment (González & González, 2005; Calza, Profumo, & Tutore, 2016). Then, environmental proactivity actions are voluntary actions that contribute to reduce the impact that organizations have on the environment. So, environmental proactivity addresses a behavior that occur before the demand of any obligatory institutional environment requirement (Winsemius & Guntram, 1992; Sharma & Vredenburg, 1998; Garcés, Rivera, & Murillo, (2012)].

The environmental proactivity of a business can be determined by internal or external factors to the businesses. An internal factor ranges from the size of the business to management capabilities; while an external factor relates to the industrial sector that belongs and the location of the business (Carrascosa et al., 2012). According to Calza, Profumo & Tutore (2016), a firm's environmental proactivity is a multi-dimensional and controversial concept, which makes its assessment a difficult task to perform. Based on Sharma & Vredenburg (1998), González & González (2005) Graham & Berente (2011) and Murali, Saiku & Ho (2013) were identified the dimensions of environmental proactivity: planning environmental practices, waste management, natural resources management and environmental awareness. In addition, the

authors conclude that all the dimension of environmental proactivity has a positive influence on business performance, given that environmental proactivity indicates an authentic commitment to the protection of the environment.

## Theory of the Stakeholders

The stakeholder theory analyzes business management from different approaches (González, 2010). Several authors define the term stakeholders in different ways, but they agree that it refers to those people or groups that make up a third entity in the business and market relationship. Freeman (1984) defined the stakeholders as any group or individual that could affect or be affected by a business activity. Then, stakeholders include employees, customers, suppliers, competitors, shareholders, banks, environmentalists, government or other groups that is direct or indirectly involved in in the performance of a business. Clarkson (1995) mentions that stakeholders are people or groups that have or claim ownership and rights over a business past, present or future activities. Such rights are the result of an action that has been taken by the business that may be legal or moral, individual or collective. Based on Freeman (1984), Clarkson (1995) classifies stakeholders into two groups: primary and secondary.

The primary group consists of those elements that businesses need to operate and survive. This group of stakeholders can be divided into primary private and public stakeholders. The private stakeholders (shareholders, investors, employees, customers, and suppliers) together with the public stakeholder (government, community, laws, and regulations) give rise to the management system necessary for the operation of all businesses. Therefore, the interdependence of the primary groups is high because if any member becomes dissatisfied and retires, the business could be damaged or unable to continue operating. The secondary group is defined as those that affect or are affected by the operation of the business but have no commitments to the business. Within this group are the media, some social organizations and social networks, who can mobilize public opinion for or against the performance of a business.

This perspective (stakeholders) can be developed from three positions (Donaldson & Preston, 1995). The descriptive / empirical one, in which the theory is used to describe and explain organizational characteristics and behaviors (nature of a business and the administrative management of the managers). The instrumental position, in which the descriptive and empirical data are used, as well as statistical methodologies to identify the association or the lack of it between the stakeholders' management and the achievement of a business objectives. The third position is of a normative type, so the theory is used to interpret the operation of the business, so it is about identifying moral or philosophical guides that improve the operation of the business (Donaldson & Preston, 1995; González, 2010).

## BUSINESS PERFORMANCE

Business performance is a complex concept, which does not have a universal definition. However, a large body of studies have sized it in financial and non-financial performance. For example, when studying small businesses, it is recommended to use measures based on managerial appraisals, perceptions or estimates (subjective) to analyze the financial and non-financial performance of the businesses (Garg, Walters, & Priem, 2003). Lumpkin & Dess (1996) mention that performance is defined depending on the size and type of business. For example, a small family business could consider its continued existence in the market as an important indicator, even if it cannot demonstrate strong capital returns or growth in market share. Factors such as reputation, public image and goodwill, and commitment to employees and their satisfaction may be important in new markets. In this sense, the conceptualization and understanding of performance is a term whose definition varies according to the context in which it is applied. Then, it is suggested the use of financial



and non-financial dimensions with subjective measures to achieve a more accurate estimation of the variable, especially when financial records are not available (Venkatraman & Ramanujam, 1986; Paige & Litrell, 2002; Garg, Walters, & Priem, 2003; Hernández, Domínguez, & Mendoza, 2010; Mendoza & Toledo, 2014)

## STAKEHOLDERS AND ENVIRONMENTAL PROACTIVITY RELATIONSHIP

When a business adopts a pollution prevention strategy (proactive strategy), the image and functionality of the business towards the stakeholders improves considerably (Buysse & Verbeke, 2003). However, a business must identify which stakeholders have greater influence in the market in which it is located, and thus adopt the best proactive strategy. González & González (2008) analyzed non-governmental and governmental groups, finding that non-governmental stakeholders have a positive and significant effect on the selection of a proactive strategy and the business performance. In this sense, (Rueda, Aragón, & Sharma, 2008) conclude that stakeholders are positively and significantly associated with the development of a proactive strategy. The authors show that the capacity of an organization to integrate the stakeholders is associated with the adoption of a proactive environmental strategy since the stakeholders are considered as a source of a competitive advantage (Garcés, Rivera, & Murillo, 2012).

When the analysis of stakeholders and environmental proactivity is brought to small businesses, the influence and way of action of the variables may vary, since the pressure of stakeholders on small businesses is not strong and that these businesses do not have any strategy well defined (Darnall, Henriques, & Sadorsky, 2010). However, it should be considered that most small businesses are made up of people who live or come from the same communities where they operate, so, the responses to stakeholder pressures might have a greater impact on the development of a business and its performance. In this sense, the production of mezcal in Oaxaca is, directly and indirectly, involved with social actors that exert some pressure on these businesses to raise awareness about the environmental impact of its production processes. These pressures usually originate from customers and the community in which the businesses are located. Then a first hypothesis rises:

H1. The stakeholders have a positive and significant influence on the environmental proactivity and the performance of the small mezcal businesses in Oaxaca.

## ENVIRONMENTAL PROACTIVITY AND BUSINESS PERFORMANCE RELATIONSHIP

The theoretical relationship that exists between stakeholders and environmental proactivity is extensive. This has set the guideline to identify the internal and external factors that allow businesses to implement the best strategy and its relationship with the enhancement of the business' economic results (González & González, 2005). This, since the implementation of a strategy, will be aimed at improving production and management processes to efficiently use resources and increase market shares (Aragón et al., 2008). The pressure exerted by the stakeholders on the business is an incentive for the implementation of environmental strategies. This is reflected in the fact that stakeholders are considered as a source of competitive advantages for most businesses (Plaza et al., 2011).

The environmental management of a business refers to the implementation of voluntary activities that prevent and correct the negative environmental impact of the business production processes. Most businesses adopt a reactive stance in this situation. However, proactive behavior leads to the generation of a competitive advantage that delivers a better business performance, since environmental management represents an organizational change aimed at defining policies, objectives, strategies and administrative procedures (Hart, 1995; Plaza et al., 2011). In this sense, several authors have studied the direct and positive relationship between environmental proactivity and business performance (Aragón et al., 2008; Piñeiro, Quintas, & Caballero, 2009; Menguc, Auh, & Ozzane, 2010; Graham & Berente, 2011; Fraj, Matute, & Rueda,

2012; Garcés & Cañón, 2013; Murali, Saiku, & Ho, 2013; Park & Jeong, 2014). González & González (2005) state that environmental management allows achieving a better competitive position with respect to those businesses that do not perform any environmental management. The authors stated a significant positive effect of environmental proactivity on business performance, which depends on the environmental proactivity dimension in place, that is, the portfolio of management practices of the business.

Park & Jeong, (2014) agree that the strategy of environmental proactivity is associated with businesses performance, finding that environmental proactivity is a viable strategy for both small and large companies. The literature on strategic management has taken interest on integrating the protection of the environment as an important element in the achievement of financial objectives and a source of competitive advantage. Nevertheless, a decade ago environmental protection was considered as an additional cost for the company (Plaza et al., 2011; Aragón et al., 2008; Hart, 1995).

Given the importance of the mezcal industry as one of the main economic activities in Oaxaca and a source of employment, the businesses in this industry are challenged to streamline processes and reduce waste generation to minimize its impact on the environment, while operating to maximize production. Based on these arguments, the second hypothesis arises:

H2: Environmental proactivity is directly and positively related to the performance of small mezcal businesses in Oaxaca.

## METHODOLOGY

This is a quantitative, cross-sectional and exploratory research (Hernández, Fernández, & Baptista, 2014; Cea, 2001; Babbie, 2000). The unit of analysis are the small mezcal-producing businesses in Oaxaca, Mexico. The response units are the owners of these businesses. The sampling was non-probabilistic and was determined at convenience. The selection of respondents was carried out through the application of the chain technique or by networks (snowball technique) (Hernández, Fernández, & Baptista, 2014).

## Sample Description

The population of this research is integrated by the small mezcal businesses located in the following districts of Oaxaca, México: Tlacolula (Santiago Matatlán, San Pablo Villa de Mitla and Tlacolula de Matamoros), Miahuatlán (San Luis Amatlán), Ejutla (San Agustín Amatengo), Ocotlán (Santa Catarina Minas) and Villa Sola de Vega (Fourth Section, Santa María Sola, Santa Inés Sola).

TABLE 1  
Sample Locations

District	Frequency	Percentage	Accumulative percentage
Tlacolula	43	43	43
Miahuatlán	20	20	63
Ejutla de Crespo	19	19	82
Ocotlán de Morelos	12	12	94
Sola de Vega	6	6	100
	100	100	

own elaboration.

The data were obtained through a semi-structured questionnaire integrated by 101 items. The questionnaire consist of 9 items referred to general data of the respondent and the business, 53 items referred to

environmental proactivity (EP: environmental planning, WM: waste management, NRM: natural resources management, EA: environmental awareness), 12 items to stakeholders (C: customers, COM: community) and 27 items referred to business performance (F: financial, BS: business satisfaction, SN: satisfaction of needs). The measurement instrument was developed based on the literature review regarding environmental proactivity, stakeholders and business performance. From this review, indicators were selected and adapted to the study context. Once the instrument was elaborated, it was submitted to a review with academics and then a pilot test was carried out to obtain the questionnaire that was applied to the sample of this study.

## MEASURES

### Environmental proactivity

In this research, the environmental proactivity was measured by the frequency in which Mezcal's businesses voluntarily undertake environmental planning (EP), waste management (WM), natural resource management (NRM) and environmental awareness (EA) practices in the last two years. It was measured using a 5-point Likert scale from 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Frequently up to 5 = Always.

TABLE 2  
Environmental Proactivity Operationalization

Dimension	Indicator
Planning environmental practices. Frequency in which the owner establishes environmental politics, goals and responsibilities	Environmental programs Environmental care goals Environmental impact controls Environmental care activities Compliance with environmental objectives
Waste management. Frequency in which the owner recycles and reuses materials for packaging	Package Covers Labels
Natural resources management. Frequency in which the owner reduce, recycles and reuses the natural resources used in the mezcal production process	Water used during the distillation Water used to ferment the agave Wood burned during agave roast Wood to use during the distill process
Environmental awareness. Frequency in which the owner tries to use environmental friendly products to bottle the mezcal	Ecological labels or seals Glass bottles Agave cork caps

Own elaboration based on Sharma & Vredenburg, (1998); González & González (2005) Graham & Berente (2011) and Murali, Saiku & Ho (2013)

### Stakeholders

This variable was operationalized as the influence that costumers and the community have on small mezcal businesses in the implementation of environmental actions. The dimension of primary and secondary stakeholders was used, considering the influence of costumers and the community. This is because they are the most influential stakeholders in the research context. To measure this variable a 5-point Likert scale is used, ranging from 1 = Never to 5 = Always.



TABLE 3  
Stakeholders Operationalization

Dimension	Indicator
Customers Frequency in which customers make suggestions or recommendations to the business in favor of the environment	Suggestions recommendations
Community Frequency in which the people who lives where the business operates suggest or invites the owner to take actions favoring the environment	Suggestions

Own elaboration based on Darnall, Henriques & Sadorsky, (2010) and Rueda, Aragón, & Sharma (2008).

### *Business performance*

Business performance was operationalized as the financial and non-financial result of the business activities in the last two years. The growth indicators were used in the general profitability of the business (sales, profits, employees, market share), as well as the personal satisfaction of the owners and their satisfaction with the sales of the business. Subjective indicators were used due to the lack of accounting records or activity logs. Financial indicators were measured with a 5-point Likert scale ranging from 1 = nothing to 5 = very much, while non-financial indicators with a scale from 1 = not satisfied up to 5 = very satisfied.

TABLE 4  
Performance Operationalization

Dimension	Indicator
Financial Performance Owner's consideration about the growth of the mezcal business	Sales growth Profits growth Production volume growth Number of workers and customers
Satisfaction with the business Owner's satisfaction with mezcal business results	Current earnings Production volume Business sales Number of customers Mezcal business fame
Satisfaction of needs Owner's needs satisfaction as a mezcal business results	Education Food Health Sanitation

Own elaboration

### *Scale validity*

The scale validity is achieved by a factor reduction analysis based on a main components extraction, a Varimax rotation, and a Kaiser Mayer standardization. Thus, the reliability of the variables by the Cronbach's Alpha index with values above the acceptable threshold of 0.600 (Table 5).

To identify the internal consistency of the items and factors, as well as the parsimony of the study, criteria of the factorial loads and the general Cronbach's Alpha of the factor matrix were taken. Environmental proactivity consisted of 16 questions divided into four dimensions: environmental planning (EP), waste management (WM), natural resource management (NRM) and environmental awareness (EA). The stakeholder's variable was measured with 8 questions integrated into two dimensions: costumers (C) and

community (COM). Finally, the performance variable was measured with 13 questions integrated by three dimensions: financial performance (F), satisfaction with the business (BS) and satisfaction of personal needs (SN). After performing the factorial analysis, acceptable loads were obtained for 39 items, which explained a total variance of 80.54% and presented a Cronbach's Alpha of 0.923. (See Appendix A)

TABLE 5  
Validation of the study variables and factor loading.

Items	Factors									
	Environmental proactivity				Stakeholders		Business performance			
	EP	WM	NRM	EA	C	COM	F	BS	SN	
Establish environmental programs	0.779									
Set environmental care goals	0.919									
Environmental impact controls	0.906									
Environmental care activities	0.686									
Compliance with environmental objectives	0.542									
Recycle defective packaging		0.920								
Recycle defective covers		0.918								
Recycle defective labels		0.892								
Reuse water from distillation			0.707							
Reduce the amount of water to ferment			0.882							
Reduce the amount of water to distill			0.868							
Reduces the consumption of wood during cooking			0.628							
Reduce the consumption of wood to distill			0.617							
Use ecological labels or seals				0.678						
Use glass bottles				0.629						
Use agave cork caps				0.738						
Encourage the use of Energy saving equipment					0.886					
Encourage reducing water consumption					0.893					
Encourage the use of green material					0.857					
Encourage the use of firewood substitutes					0.863					
Encourage participation in reforestation programs						0.799				
Encourage reducing the pollution						0.911				
Encourage environmental education						0.891				
Environmental experiences sharing						0.797				
Sales Grow							0.855			
Profits grow							0.846			
Increase in production volume							0.744			
Increase in the number of workers							0.722			
Increase in the number of clients							0.730			
Satisfaction with current earnings								0.826		
Satisfaction with production volume								0.881		
Satisfaction with business sales								0.859		
Satisfaction with the number of customers								0.799		
Satisfaction with the prestige of the business								0.738		
Payment of education									0.818	
Food satisfaction									0.829	
Health and hygiene satisfaction									0.807	
Explained variance	10.031	8.415	9.000	5.643	9.385	8.692	10.743	11.390	7.243	
Total Explained variance									80.543	
KMO									0.787	
Cronbach's Alpha									0.923	

own elaboration based on SPSS results. EP: Environmental Planning, WM: Waste Management, NRM: Natural Resources Management, EA: Environmental Awareness, C: Customers, COM: Community, F: Financial, BS: Business Satisfaction, SN: Satisfaction of needs.

It should be mentioned that the selection of the items was based on the results of the factor reduction and discriminatory analysis. This indicates that those items that did not have significant loads greater than 0.500 and were not grouped into a single factor, were not included in the consequent statistical analysis.

**RESULTS**

To observe how the selected variables could explain the small mezcal business performance a Pearson’s correlation analysis was performed. This allowed having a first approach to what variables are adequate to deepen the statistical analysis and meet the research objectives.

Table 6 shows that all dimensions of environmental proactivity are related to the financial and non-financial dimensions of business performance, but it is the dimension of environmental awareness that has a higher correlation index ( $r=0.465, 0.401, 0.441; p\leq 0.01$ ). On the contrary, the relationship of the stakeholders varies according to the dimension of performance that is taken into consideration, since only costumers are related to the financial performance ( $r=0.294; p\leq 0.01$ ). This suggests that the pressure of customers towards the business impacts on its market image, since the relationship of customers and awareness actions have a positive relationship between them and with the financial performance of the business. In other words, the mezcal market customers influence the businesses actions to create environmental awareness inside and outside the business, which would create a favorable position for the businesses and improve its financial performance.

**TABLE 6.**  
Descriptions and correlation between the study variables.

Variables	Media	Standard Deviation	EP	WM	NRM	EA	C	COM	F	BS	SN
EP	2.300	1.048	1	0.223*	0.304**	0.438**	0.323**	0.338**	0.429**	0.348**	0.288**
WM	2.060	1.509		1	0.491**	0.473**	0.214*	-0.086	0.304**	0.272**	0.264**
NRM	2.234	1.146			1	0.470**	0.099	0.024	0.402**	0.258**	0.258**
EA	2.333	1.275				1	0.228*	0.073	0.465**	0.401**	0.441**
C	1.728	0.997					1	0.259**	0.294**	0.072	0.104
COM	2.150	1.109						1	0.136	0.180	0.222*
F	1.852	0.764							1	0.412**	0.394**
BS	3.532	0.940								1	0.738**
SN	3.207	0.835									1

Own elaboration based on SPSS results. EP: Environmental Planning, WM: Waste Management, NRM: Natural Resources Management, EA: Environmental Awareness, C: Customers, COM: Community, F: Financial, BS: Business Satisfaction, SN: Satisfaction of needs.

Correlation analysis allows observing which variables have the highest correlation and the meaning of it. This could be considered one of the first steps for subsequent statistical analysis. In the present, it was observed that the financial performance has the highest relation with the individual variables (Table 6). However, linear regression models were developed to evaluate the influence of each individual variable on the three business performance dimensions and thus test the study hypotheses.

The study identifies that the environmental proactivity of the small mezcal businesses consists of planning how the business can reduce the environmental impact of its activities, make an adequate use and management of the waste and resources in the production process, as well as carrying out actions of environmental awareness. In addition, it identifies that the most influential stakeholders on a strategy and

business performance are costumers. This can be explained due to the link that this industry has with the tourism sector, as well as the influence that the “uses and customs” of each community have on the business operation.

Table 7 shows the individual influence of the variables on the performance dimensions of satisfaction with the business (BS) and the satisfaction of personal needs (SN), as well as the composite of business performance formed by the three dimensions studied (BP = F + BS + SN). As a result, the subsequent analyzes are performed on financial performance (F) since it was the dimension with the greatest response in the statistical analyzes performed. In this case, it is observed that the proactive strategy that most influences performance is environmental planning and environmental awareness (model 1;  $\beta_{PA} = 0.230$ ;  $\beta_{CA} = 0.340$ ;  $p \leq 0.050$ ;  $R^2 = 0.337$ ). Not so in the case of stakeholders (costumers and community) about the composite of business performance (model 2;  $\beta_C = 0.133$ ;  $\beta_{COM} = 0.184$ ;  $p \geq 0.050$ ;  $R^2 = 0.064$ ). This same behavior is presented when carrying out the linear regressions taking as a dependent variable the dimension of owner’s business performance satisfaction (model 4;  $\beta_{PA} = 0.208$ ;  $\beta_{CA} = 0.251$ ;  $p \leq 0.050$ ;  $R^2 = 0.206$ ; Model 5;  $\beta_C = 0.027$ ;  $\beta_{COM} = 0.173$ ;  $p \leq 0.050$ ;  $R^2 = 0.033$ ).

TABLE 7  
Individual influence of the variables on the business performance dimensions

Models	Business performance			Business satisfaction			Satisfaction of needs		
	Betas ( $\beta$ )	1	2	3	4	5	6	7	8
(Constant)	1.867 **	2.453 **	1.747 **	2.494 **	3.172 **	2.419 **	2.350 **	2.797 **	2.176 **
EP	0.230 *		0.183	0.208 *		0.188	0.112		0.055
WM	0.078		0.106	0.092		0.133	0.059		0.104
NRM	0.096		0.094	0.032		0.021	0.031		0.025
EA	0.340 **		0.345 **	0.251 *		0.261*	0.349 **		0.358 **
C		0.133	-0.027		0.027	-0.115		0.050	-0.073
COM		0.184	0.145		0.173	0.139		0.209 *	0.204*
F	12.09 2**	3.312 *	8.520 **	6.172 **	1.667	4.593 **	6.299 **	2.627	5.027 **
R squared	0.337	0.064	0.355	0.206	0.033	0.229	0.210	0.051	0.245
Durbin-Watson	1.493	1.197	1.511	1.460	1.366	1.485	1.481	1.204	1.517

\*\* $p \leq 0.01$ ; \* $p \leq 0.05$ . Source: Own elaboration based on SPSS results. EP: Environmental Planning, WM: Waste Management, NRM: Natural Resources Management, EA: Environmental Awareness, C: Customers, COM: Community, F: Financial, BS: Business Satisfaction, SN: Satisfaction of needs.

Table 7 shows how the independent variables vary when being tested with the dimension of the owner’s business satisfaction (BS). Also, it shows that the community influence the dimension of satisfaction of personal needs (SN) (model 8;  $\beta_{COM} = 0.209$ ;  $p \leq 0.050$ ;  $R^2 = 0.051$ ). Mezcal producer communities use a characteristic social system of “uses and customs” which regulates the ways in which citizens coexist. Then, the influence of that social system on the variables may be due to the solidarity and high level of communication of the business owners with the community people, which may influence how businesses redistribute the profits, regardless of the level of profitability that is achieved.

To test the first hypothesis, that the stakeholders positively and significantly influence the environmental proactivity of the mezcal businesses, regressions were made for each dimension of environmental proactivity and stakeholders. In addition, the effect of stakeholders as a composite on the dimensions of proactivity was evaluated. Table 8 shows that costumers, the community and the stakeholder composite (costumers+community) positively and significantly influence the environmental planning of the businesses (model 1;

$\beta_C = 0.253$ ;  $\beta_{COM} = 0.272$ ;  $\beta_{STKHOLD} = 0.416$   $p \leq 0.010$ ;  $R^2 = 0.173$ ). However, the community does not influence the management of waste, natural resources and environmental awareness (table 8). The hypothesis is not rejected since environmental proactivity is significantly affected by the stakeholder composite (model 5;  $\beta_{STKHOLD} = 0.232$   $p \leq 0.050$ ;  $R^2 = 0.054$ )

TABLE 8.  
Environmental and stakeholders model

Models Betas ( $\beta$ )	Environmental proactivity				
	EP	WM	NRM	EA	PROACT
	1	2	3	4	5
(Constant)	1.288 **	1.842 **	2.040 **	1.802 **	
C	0.253 **	0.253 **	0.099	0.224 *	
COM	0.272 **	-0.152	-0.002	0.014	
STKHOLD	0.416 **	0.070	0.075	0.184	0.232*

\*\* $p \leq 0.01$ ; \* $p \leq 0.05$ . Source: Own elaboration based on SPSS results. EP: Environmental Planning, WM: Waste Management, NRM: Natural Resources Management, EA: Environmental Awareness, C: Customers, COM: Community, F: Financial, BS: Business Satisfaction, SN: Satisfaction of needs.

Table 9 shows that environmental proactivity is directly and positively related to the small mezcal business performance, which proves the second research hypothesis. Environmental planning, natural resource management, and environmental awareness positively affect business performance (model 3;  $\beta_{PA} = 0.211$ ;  $\beta_{GRN} = 0.205$ ;  $\beta_{CA} = 0.236$   $p \leq 0.050$ ;  $R^2 = 0.331$ ). In addition, when all the variables are included in a single model, environmental proactivity influences the stakeholder variable behavior and its effect on performance. This is because when evaluating the individual effect of the stakeholders and then include environmental proactivity in the model, the effect of the stakeholders is not statistically significant (model 5;  $\beta_{STKHOLD} = 0.265$ ;  $p \leq 0.010$ ;  $R^2 = 0.070$ ; model 6;  $\beta_{STKHOLD} = 0.151$ ;  $p \geq 0.050$ ;  $R^2 = 0.300$ ).

Baron and Kenny (1986) establish that a variable has a mediating effect when it meets the following conditions:

- The independent variable affects the mediator (table 8).
- The independent variable affects the dependent (table 9).
- The mediator variable affects the dependent, but the effect of the independent on the dependent must be less (Table 9).

Table 9 shows the coefficients of the variables, which gives more evidence to support the mediating effect of environmental proactivity on the pressure that stakeholders can exert to influence business performance. The effect of stakeholder (model 5;  $\beta_{STKHOLD} = 0.265$ ;  $p \leq 0.010$ ) decreases when the model incorporates environmental proactivity (model 6;  $\beta_{STKHOLD} = 0.151$ ;  $p \geq 0.050$ ). This may be because the small mezcal businesses belong to the micro-small business sector of Oaxaca and have an image with a lot of artisanal and ethnic influence, so the link with the tourism sector is strong. This makes mezcal businesses an attraction for many entities, which has led these businesses to anticipate the environmental demands of customers.



TABLE 9  
Hierarchical regression and mediation effect

Models (β)	Betas	F						C	COM	STKHOLD
		1	2	3	4	5	6	7	8	9
(Constant)		0.758 **	1.390 **	0.646 **	0.883 **	1.382 **	0.680 **	0.945 **	1.508 **	1.472**
EP		0.255 **		0.211 *				0.286 **	0.382 **	
WM		0.038		0.014				0.167	-0.161	
NRM		0.190		0.205 *				-0.104	-0.005	
EA		0.246 *		0.236 *				0.073	-0.016	
PROACT					0.528 **		0.493 **			0.232*
C			0.277 **	0.148						
COM			0.064	0.005						
STKHOLD						0.265 **	0.151			
F		10.74 7**	4.806 **	7.657 **	37.86 3**	7.405 **	20.80 0**	3.681 **	3.915 **	5.584*
R squared		0.312	0.090	0.331	0.279	0.070	0.300	0.134	0.142	0.054
Durbin-Watson		1.789	1.413	1.757	1.755	1.406	1.762	1.811	1.633	1.537

\*\*p≤0.01; \*p≤0.05. Source: Own elaboration based on SPSS results. EP: Environmental Planning, WM: Waste Management, NRM: Natural Resources Management, EA: Environmental Awareness, C: Customers, COM: Community, F: Financial, BS: Business Satisfaction, SN: Satisfaction of needs.

Table 9 also shows the effect that stakeholders have on the small mezcal businesses performance. The study finds that only costumer affect the business performance (model 2; βc=0.277; p≤0.010; R2=0.090). An interesting finding is that the construct of environmental proactivity has a greater effect than any individual proactive strategy (model 4; βep=0.528; p≤0.010; R2=0.279), what follows the logic of the theoretical approaches in the sense that a strategy alone is important, but together is how sustainability can be reached (Aragón et al., 2008; Hart, 1995).

## DISCUSSION

The analysis of business performance and its relationship with environmental strategies cannot be explained with an universal business model. Aragón et al. (2008) and Plaza et al. (2011) mention that this type of analysis should be improved by encouraging the development of more research on the subject, the use of innovative analysis methods and include variables that may vary according to the study context. The results of this research suggest that there is statistically significant evidence on the effect that stakeholders and environmental proactivity have on small mezcal businesses in an emerging economy context.

It was identified that the dimensions of environmental proactivity (environmental planning, waste management, natural resource management and environmental awareness) are related to the financial and non-financial dimensions of business performance. Likewise, it identifies that the relationship of the stakeholders with business performance varies according to the dimension of performance that is taken into consideration, since only costumers are related to the financial performance. This suggests that costumers influence the adoption of environmental activities for businesses, explained by the financial benefits that an environmental posture have. In other words, the customers of the mezcal market could influence the actions

of the businesses to create environmental awareness inside and outside the business, which would create a favorable position for business and improve their financial performance (Calza, Profumo, & Tutore, 2016).

Regarding to the first hypothesis (H1): the stakeholders have a positive and significant influence on the environmental proactivity and the performance of the small mezcals businesses in Oaxaca. The hypothesis is not rejected, because both environmental planning and awareness, as well as business financial performance relates to the primary stakeholders of customer. This suggests that the pressure of customers towards the business impacts on its market image, since the relationship of customers and awareness actions have a positive relationship between them and with the financial performance of the business. Also, these variables not only relate but impact each other. Multiple regression analysis showed that customers, the community and the stakeholder composite (customers + community) positively and significantly influence the environmental planning of the businesses. Respecting to stakeholders dimensions, not the composite, it was found that the community is related only to one of the environmental proactivity dimensions (environmental planning), since in the communities where mezcals is produced, the main economic activity is the production of this beverage, therefore, it could be assumed that the entire community performs the same production practices, the same waste and natural resources management and may not be so worried about the environmental issues.

Results show the association that exists between these two variables, supporting what Rueda, Aragón & Sharma (2008) found in their study. The authors conclude that stakeholders are positively and significantly associated with the development of an environmental proactive strategy. Specifically, the present study found that customers, the community and the stakeholder compound (customers+ community) positively and significantly influence environmental planning, but only customers influence the four dimensions of environmental proactivity. It should be noted that the stakeholder compound, which is the sum of the pressures from customers and the community to the business, affects the compound of environmental proactivity. When observing that customers and community groups are concerned about the environmental proactivity, the latter could be considered as a source of competitive advantage, since the business that meets the needs of these groups (customers/community) could generate a differentiating effect that would lead to customer loyalty or the implementation of a brand in the market (Carrascosa et al., 2012). The above agrees with Plaza et al. (2011), who found that by integrating improvements in environmental management, waste management, resource management and the stakeholders, the development of a competitive advantage is more likely. In this sense, it is possible to support the fact that non-governmental stakeholders have a positive and significant effect on the performance of the businesses and the strategy adopted. Then the first hypothesis is not rejected since the stakeholder composite significantly affects environmental proactivity composite.

Regarding to the second hypothesis (H2): Environmental proactivity is directly and positively related to the performance of small mezcals businesses in Oaxaca. The hypothesis is not rejected. All dimensions of environmental proactivity are related to the financial and non-financial dimensions of business performance, but it is the dimension of environmental awareness that has the higher correlation index. Environmental planning, natural resource management, and environmental awareness positively affect business performance. In addition, when all the variables are included in a single model, environmental proactivity influences the stakeholder variable behavior and its effect on performance. This is that the individual effect of the stakeholders is not statistically significant when the variable of environmental proactivity is included in the model. An interesting finding is that the construct of environmental proactivity has a greater effect than any individual proactive strategy, what follows the logic of the theoretical approaches in the sense that a strategy alone is important, but together is how sustainability can be reached (Aragón et al., 2008; Hart, 1995).

The proactive strategy with a greater impact on the business performance compound (sum of financial and non-financial performance) is environmental planning and environmental awareness, while the stakeholders (customers and community) had no influence (Graham & Berente, 2011). This could be explained by the

social system of “uses and customs” that regulate the ways in which citizens and entities from the community act, this factor is a contextual element that is little considered in the current research.

Finally, the research identifies that those businesses that incorporate environmental proactivity in their operations have the capacity to modify the behavior of the stakeholders, since a business without an environmental proactive system have a higher pressure from the stakeholders to implement the necessary environmental actions. In this sense, a mediating effect of environmental proactivity was identified on the pressure that stakeholders can exert on business performance since the statistical evidence shows that the effect of stakeholders on performance decreases when a proactive strategy is incorporated into the model. This is because the small mezcal businesses adopt voluntary actions to reduce their environmental impact (Garcés, Rivera, & Murillo, 2012) Contextually, this behavior is a result of the link between the small mezcal business market and the tourism sector, which allows businesses to take favorable positions in the face of the possible demands of customers with an interest in the environment, as well as the owners having experience with this type of costumers, anticipating the environmental demands of them.

This indicates that this type of business has values and principles that allow them to voluntarily pursue environmental actions and anticipate the needs of the stakeholders, specifically the customers. An interesting finding is that the environmental proactive strategy composite had a greater effect than any individual strategy, which follows the logic of the theoretical approaches in the sense that a strategy alone is important, but overall, it is how can get to a sustainable effect (Aragón et al., 2008; Hart, 1995).

## CONCLUSION

The present identified that the environmental proactivity of the small mezcal business in Oaxaca consists of planning how the business can reduce its environmental impact, a good resource and waste management and carry out actions of environmental awareness. In addition, it was identified that the stakeholders that have a greater effect on the strategy and the business performance are costumers. This is explained due to the link that this industry has with the tourism sector, as well as the influence that the “uses and customs” of each producer community have on the businesses operation.

In this emerging context of small businesses, the principles and values within the business operation influence the pressure that the stakeholders have on the business performance since it is possible to anticipate the needs of costumers and reduce their impact on the business. In this sense, it is important to integrate the internal characteristics of the business, the economic sector in which the business perform the environmental strategy and the business specific objectives to achieve a better performance.

The study presents some limitations. In relation to the sample, it is advisable to evaluate the hypotheses analyzed in a broader sample. In addition, it is recommended that future studies include objective indicators of performance and specific environmental practices in to the analysis.

Despite its limitations, the work has an important implication: the surpassing role of principles and values over the environmental discourse of managers.

## Author’s Contribution

Theoretical Framework: Jiménez-Castañeda; Granados-Echegoyen; Nieto-Delgado. Methodology (Research design, sampling design, Measurement and Scaling Techniques): Jiménez-Castañeda; Granados-Echegoyen. Data collection: Jiménez-Castañeda; Nieto-Delgado. Processing and Statistical Analysis: Granados-Echegoyen. Discussion: Jiménez-Castañeda; Granados-Echegoyen; Nieto-Delgado

Writing and style revision: Jiménez-Castañeda; Granados-Echegoyen.

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## Appendix A

### *Environment al Proactivity Scale*

(1. Never, 2. Rarely, 3. Sometimes, 4. Frequently, 5. Always)

In order to protect the environment, how often in your business you:

Planning environmental

Establish environmental programs. 1 2 3 4 5

Set environmental care goals. 1 2 3 4 5

Environmental impact controls. 1 2 3 4 5

Environmental care activities. 1 2 3 4 5

Compliance with environmental objectives. 1 2 3 4 5

Waste Management

Recycle defective packaging. 1 2 3 4 5

Recycle defective covers. 1 2 3 4 5

Recycle defective labels. 1 2 3 4 5

Natural Resources Management

Reuse water from distillation. 1 2 3 4 5

Reduce the amount of water to ferment. 1 2 3 4 5

Reduce the amount of water to distill. 1 2 3 4 5

Reduces the consumption of wood during cooking. 1 2 3 4 5

Reduce the consumption of wood to distill. 1 2 3 4 5

Environmental Awareness

Use ecological labels or seals. 1 2 3 4 5

Use glass bottles. 1 2 3 4 5

Use agave cork caps. 1 2 3 4 5

### Stakeholders Scale

(1. Never, 2. Rarely, 3. Sometimes, 4. Frequently, 5. Always)

Customers

How often your customers,

Encourage the use of energy saving equipment. 1 2 3 4 5

Encourage reducing water consumption. 1 2 3 4 5



- Encourage the use of green material. 1 2 3 4 5
- Encourage the use of firewood substitutes. 1 2 3 4 5
- Community
- How often the resident from your community,
- Encourage participation in reforestation programs. 1 2 3 4 5
- Encourage reducing the pollution. 1 2 3 4 5
- Encourage environmental education. 1 2 3 4 5
- Share environmental experiences. 1 2 3 4 5

### *Business Performance Scale*

#### Financial Performance

- (1. Nothing, 2. Little, 3. Some, 4. Much, 5. Very much)
- In the last two years, how much do you consider that your business,
- Has increased the sales. 1 2 3 4 5
- Has increased the profits. 1 2 3 4 5
- Has increased the production volume. 1 2 3 4 5
- Has increased the number of workers. 1 2 3 4 5
- Has increased the number of customers. 1 2 3 4 5
- Non-Financial Performance (Satisfaction with the business)
- (1. Not satisfied, 2. Little satisfied, 3. Some satisfied, 4. Satisfied, 5. Very satisfied)
- How satisfied are you with your,
- Current earnings. 1 2 3 4 5
- Production volume. 1 2 3 4 5
- Business sales. 1 2 3 4 5
- Number of customers. 1 2 3 4 5
- Prestige of the business. 1 2 3 4 5
- Non-Financial Performance (Satisfaction of personal needs)
- (1. Nothing 2. Little 3. Some 4. Much 5. Very much)
- With your business incomes and profits, you have satisfied your,
- Education needs. 1 2 3 4 5
- Food needs. 1 2 3 4 5
- Health and hygiene needs. 1 2 3 4 5

#### NOTAS

- (1. Never, 2. Rarely, 3. Sometimes, 4. Frequently, 5. Always) In order to protect the environment, how often in your business you:  
Planning environmental Establish environmental programs. 1 2 3 4 5 Set environmental care goals. 1 2 3 4 5  
Environmental impact controls. 1 2 3 4 5 Environmental care activities. 1 2 3 4 5 Compliance with environmental objectives. 1 2 3 4 5  
Waste Management Recycle defective packaging. 1 2 3 4 5 Recycle defective covers. 1 2 3 4 5 Recycle defective labels. 1 2 3 4 5  
Natural Resources Management Reuse water from distillation. 1 2 3 4 5 Reduce the amount of water to ferment. 1 2 3 4 5  
Reduce the amount of water to distill. 1 2 3 4 5 Reduces the consumption of wood during cooking. 1 2 3 4 5  
Reduce the consumption of wood to distill. 1 2 3 4 5 Environmental Awareness Use ecological labels or seals. 1 2 3 4 5  
Use glass bottles. 1 2 3 4 5 Use agave cork caps. 1 2 3 4 5
- (1. Never, 2. Rarely, 3. Sometimes, 4. Frequently, 5. Always) Customers How often your customers, Encourage the use of energy saving equipment. 1 2 3 4 5  
Encourage reducing water consumption. 1 2 3 4 5 Encourage the use of green material. 1 2 3 4 5  
Encourage the use of firewood substitutes. 1 2 3 4 5 Community How often the resident from your community, Encourage participation in reforestation programs. 1 2 3 4 5  
Encourage reducing the pollution. 1 2 3 4 5 Encourage environmental education. 1 2 3 4 5 Share environmental experiences. 1 2 3 4 5

- (1. Nothing, 2. Little, 3. Some, 4. Much, 5. Very much) In the last two years, how much do you consider that your business, Has increased the sales. 1 2 3 4 5 Has increased the profits. 1 2 3 4 5 Has increased the production volume. 1 2 3 4 5 Has increased the number of workers. 1 2 3 4 5 Has increased the number of customers. 1 2 3 4 5 Non-Financial Performance (Satisfaction with the business)
- (1. Not satisfied, 2. Little satisfied, 3. Some satisfied, 4. Satisfied, 5. Very satisfied) How satisfied are you with your, Current earnings. 1 2 3 4 5 Production volume. 1 2 3 4 5 Business sales. 1 2 3 4 5 Number of customers. 1 2 3 4 5 Prestige of the business. 1 2 3 4 5 Non-Financial Performance (Satisfaction of personal needs)
- (1. Nothing 2. Little 3. Some 4. Much 5. Very much) With your business incomes and profits, you have satisfied your, Education needs. 1 2 3 4 5 Food needs. 1 2 3 4 5 Health and hygiene needs. 1 2 3 4 5
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## INFORMACIÓN ADICIONAL

*Clasificación JEL: M14, Q56 : M14, Q56*