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**TÍTULO**: Diseño, construcción y validación del instrumento EPICL para evaluar la relación entre liderazgo y confianza en ingenios azucareros mexicanos.

### **AUTORES:**

- 1. Dr. Tomás Elio Ochoa-Domínguez.
- 2. Dr. José G. Vargas-Hernández.
- 3. Dr. Arturo García-Santillán.

**RESUMEN:** El objetivo de esta investigación fue diseñar, construir y validar un instrumento para medir la relación entre liderazgo y confianza en ingenios azucareros de México. El diseño es tipo instrumental. Consta de 48 elementos y seis dimensiones: estilo de liderazgo, compromiso, inteligencia emocional, benevolencia, capacidad e integridad. Para su validación, se utilizó una muestra de 52 trabajadores de un ingenio azucarero en la zona de la costa central en el estado de Veracruz, México. El resultado obtenido fue una buena consistencia interna (Cronbach alfa normal 0.820 y estandarizado 0.803), p=0, KMO=0.931 y MSA>0.8. Se concluye que el cuestionario EPICL presenta validez, criterios de construcción y coherencia adecuada; por lo tanto, es una herramienta válida y confiable para el contexto azucarero mexicano.

PALABRAS CLAVES: clima organizacional, liderazgo, confianza, gestión, comportamiento.

**TITLE**: Design, construction and validation of the EPICL instrument to evaluate the relationship between leadership and trust in Mexican sugar mills.

### **AUTHORS:**

- 1. Dr. Tomás Elio Ochoa-Domínguez.
- 2. Dr. José G. Vargas-Hernández.
- 3. Dr. Arturo García-Santillán.

**ABSTRACT:** The objective of this research was to design, build and validate an instrument to measure the relationship between leadership and trust in sugar mills in Mexico. The design is instrumental type. It consists of 48 items and six dimensions: leadership style, commitment, emotional intelligence, benevolence, ability and integrity. For its validation, a sample of 52 workers from a sugar mill on the central coast area in the state of Veracruz, México, was used. The result obtained was a good internal consistency (normal Cronbach alpha 0.820 and standardized 0.803), p=0, KMO=0.931 and MSA>0.8. It is concluded that the EPICL questionnaire presents validity, construction criteria and adequate coherence; therefore, it is a valid and reliable tool for the Mexican sugar context.

**KEY WORDS:** Organizational climate, Leadership, Trust, Management, Behavioral.

### **INTRODUCTION.**

In the productive activities of any kind, the organization is the foundation of its nature. Goals are established that are achieved through strategies addressing the purpose of the organization. The strategies are formed by the plan, which with the addition of its purpose evolves as a tactic. In addition, the strategies contain the observation of consistent patterns or behaviors. They must coexist with the external environment and be linked within them (Mintzberg, 1987). All these actions are

through and from the people that make up this organization, where each one of these individuals perform related functions to achieve the proposed objectives (Stogdill, 1950). Therefore, the strategies will only be achieved if the behavior of the employees in the organizations is adequate. Since the first third of the 20th century, a great deal of research has been done to determine the causes of inappropriate behavior.

In 1933, with the studies of Hawthorne, Mayo (1945) experiments the behavior of workers. He describes how the environment in an organization is affected by a series of variables, which have the capacity to modify the emotional state of the exposed individual, and this in turn is related to the expected economic results in the organization. In their study of aggressive behavior in young males, Lewin, Lippitt and White (1939) coined the term "social climate" to connote the environment that was created in the various study groups.

On some of the dimensions that constitute the organizational climate, Friedlander and Margulies (1969) mention the trust, consideration, commitment and emphasis placed on production.

The structure of the organization, the rules of decision, competence and attitudes are causal variables of behavior. Likert (1974) highlights the variables that show the state of health of the organization, represented by the intermediate variables constituted by motivation, attitudes, the effectiveness of communication, and decision making (cited in Brunet, 1992).

Some of the answers that favor the organizational climate and allow adequate productivity and performance are communication, respect, commitment, friendly interpersonal relationships and a feeling of satisfaction (Alves, 2000). Weak interpersonal relationships may correspond to mistrust or different interests, hindering the construction of reliable interpersonal relationships and high job satisfaction (Omar, 2011).

Numerous empirical investigations related to the labor climate have tried to characterize it, with inconclusive results in the prevalence of one model over another. Even now, and many years after it began to be defined and to try to formalize it, there is no consensus on a definition to use (Parker et al., 2003). From the investigations related to the organizational climate, it is possible to conclude that the work environment influences, through the different variables that constitute it, in the behavior of the workers. The interaction of people with labor situations works as the link for effort and effective achievement by conviction (García-Santillán and Uscanga, 2008).

### **DEVELOPMENT.**

### **Background of the variables.**

In applied environments, the use of climate surveys as a diagnostic tool is widely accepted for organizational improvement and change. This statement was based on the effects that the perception of employees has on individual and organizational results (Burke and Litwin, 1992). With support in this statement, this article proposes an instrument to measure, in an exploratory way, dimensions of leadership and trust as components of the organizational climate.

The variables proposed as components of leadership are: leadership style, commitment and emotional intelligence. From the perspective of trust, the variables that integrate it are those that Mayer, Davis and Schoorman (1995) developed in "An integrating model of organizational trust". These dimensions were described as benevolence, integrity and capacity. The dimensions selected to explore the condition of the organization under study, should allow to trace the image of the organizational climate that prevails in the analyzed context.

According to the context analyzed, the originality of the instrument is based on its meager nature, and the joint relationship between the variables of leadership and trust. This type of research is exalted, even more, in the face of the work-related stress that Mexico suffers in 75% of its workers, placing it in the first place worldwide in the field, according to a report by the World Health Organization (Rojas, 2017).

### Influence of leadership styles on commitment, emotional intelligence and trust.

The factors of differentiation that favor competitive advantages are increasingly required for organizations to survive in an increasingly related and competitive world.

The generation of competitive advantages in an organization is stimulated when the leadership is able to enrich, and mobilize the commitment of its workers inspiring trust and security (Capa-Benítez, Benítez-Narváez and Capa-Benítez, 2018). The right leadership style creates creativity in subordinates. However, the willingness to experiment, identified as open to experience, showed no correlation with the link between trust in the leader against the creativity of subordinates (Javed, Rawwas, Khandai, Shahid and Tayyeb, 2018). Curtis (2018) finds few significant correlations between leadership styles self-evaluated by leaders and followers 'perceptions of leaders' modes of influence.

The results obtained by Tortorella, Castro Fettermann, Frank and Marodin (2018) indicate that leaders must have different behaviors according to the context in which they are developed. Navarro and Rodas (2018) conduct a review of the literature on the measurement of emotional intelligence, concluding that several studies point out limitations in their measurement. In addition, there are articles that show dependence between emotional intelligence and leadership styles, while others do not present evidence.

In the research group related to emotional intelligence and leadership style is Manrique (2018), who determines the existence of a relationship between emotional intelligence, and the leadership style based on the dependence between: regulation of emotions, the monitoring of results and the work of leaders. The satisfaction of collaboration is linked to emotional intelligence, but leadership styles

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form the mechanism that makes this relationship possible (Zhang, Cao and Wang, 2018). Engelbrecht, Heine and Mahembe (2017) determine a relationship between the integrity of the leader and the leadership, as well as a positive relationship between the trust in the leader and the commitment of the employees.

The relevance of these findings shows the relationship of the leader in the construction of the work environment, and the participation of employees through trust. The foundation of leadership in the organization is linked to the integration of human capital to organize work teams that generate innovation, add value and greater customer satisfaction. The model of leadership adopted by organizations must be integrated with the elements that define the identity of a society (Velázquez, Montejano and Allier, 2015). In his research, Velázquez et al. (2015) point out that the model of empathic leadership, proposed by them, is a generator of synergies and collaboration in the human and social capital of Mexican organizations.

It exists under the domain of personal and social competences of emotional intelligence, having an impact on the style of leadership and on the variables of organizational consequences (Barbosa, 2013).

Leadership efficiency depends on emotional intelligence, due to the relationship found between emotional intelligence and leadership practices (Zarate and Matviuk, 2012). Lo, Ramayah and Min (2009) conclude that the transformational leadership style has a significant relationship with organizational commitment. The definition and stratification of the types of leadership turns out to be a complex task, due to the conflicts generated by the factors that intervene (Yukl, Gordon and Taber, 2002).

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### Methodology.

### Design.

An instrumental study was carried out, according to the classification proposed by Montero and León (2005), since it is a study aimed at the development, design and evaluation of the psychometric properties of a test.

### Process.

The objective of the measurement instrument is to establish the perception of the subordinate regarding the way in which it is guided in the daily work relationship and the role of trust in the supervisor over such a relationship. The instrument that this article proposes is formed with a Likert scale, which allows to evaluate the attitude and degree of conformity of the respondent. This instrument is constructed from the model presented in Figure 1. The evaluation and interpretation of the data collected by the instrument, the multivariate statistical procedure of Exploratory Factor Analysis is followed. For this, the following criterion is established: statistical hypothesis: Ho:  $\rho = 0$  there is no correlation; Hi:  $\rho \neq 0$  there is correlation.

From the hypothesis:

 $HO_1$ . The style of leadership, emotional intelligence, commitment, benevolence, integrity and capacity do not form a structure of latent variables that explain the leadership and trust of the Sugar Mill worker.

 $HA_1$ . The style of leadership, emotional intelligence, commitment, benevolence, integrity and capacity form a structure of latent variables that explain the leadership and trust of the Sugar Mill worker.

Following the work of Garcia-Santillan, Venegas-Martínez and Escalera-Chavez (2013), firstly we carry out the test of Sphericity with KMO, and goodness of fit index  $\chi^2$  with significance  $\alpha$ =0.01, all

this, in order to validate the pertinence of using this technique. Also, we obtain the communalities and factorial weights, in order to identify the explanatory power of the model, its mean, component matrix and communalities to obtain eigenvalue and its percentage of total variance. Once the first statistics to validate the relevance of using the multivariate technique of factor analysis are obtained, we follow the method proposed by Carrasco Arroyo (s/f) and replicated in several studies by García-Santillán, Venegas-Martínez y Escalera-Chávez, (2013); Rojas-Kramer, García-Santillán, Fuentes-Rosas, Benítez-Moreno y Córdova-Rangel, (2015); García-Santillán, (2017).



Figure 1: Leadership and trust model. Source: Own elaboration.

Through the literature review, a variety of validated instruments that have generated empirical knowledge were accessed. The questions raised in these instruments form the basis of the research tool. The reliability index of the instrument is represented by Cronbach's alpha and was extracted and adapted according to the context where it is applied in order to find representativeness in each of the items.

The group of items that make up the emotional intelligence dimension were selected from the instruments published by: Salovey et al. (1995), Graupera Sanz, García Coll, Ruiz Pérez and Palomo Nieto (2013), as well as Tapia (2001). The construct styles of leadership were based on the research of Casales (1999). The instruments of Chathoth, Mak, Jauhari and Manaktola (2007) with Arciniega and Gonzales (2006), based the variable commitment for this instrument. The Trust dimension was based on the works of McAllister (1995), Mayer and Davis (1999), Adams and Sartori (2006) and Chathoth, Mak, Jauhari and Manaktola (2007).

The instrument shown in Table 1 with its dimensional distribution is identified from this point with the transformation of the acronym from the initials EPICL, which identify it as Surveys for the Perception of Indicators of Trust and Leadership. The instrument (EPICL) is made up of 48 items, which cover six dimensions grouped into two variables. Each of them is theoretically defined, for this instrument, as follows:

Leadership  $(X_0)$ - The labor authority conferred through a superior command whose function is to inspire and influence the culture of everyone under his command, in the pursuit and achievement of the objectives of the company.

Emotional intelligence  $(X_1)$ - Respondent perception, about the emotional attitude perceived in established situations.

Commitment ( $X_2$ )- Perception of the respondent about gratitude towards the organization and the need to remain working in it.

Leadership style (X<sub>3</sub>)- Respondent perception, on the attitude of the chief in a given situation.

Trust  $(Y_0)$ - "Willingness to take risk (i.e., be vulnerable) in a relationship" (Mayer, Davis and Schoorman, 2007, p.350).

Benevolence  $(Y_1)$ - Perception of the type of response offered by the chief to the needs of the respondent.

Integrity  $(Y_2)$ - Perception of respect, from the chief, towards the respondent and the others coworker. Capacity  $(Y_3)$ - Perception, of the respondent, on the ability of the chief to solve situations with domain.

Dimension	Sub-dimension	Code	Item	Total
Leadership	Leadership styles	Tipos-Lid	1, 16, 17, 18, 20, 21, 22, 27, 28, 35, 36	11
	Emotional intelligence	Intemo-Lid	3, 6, 7, 11, 13, 14, 44, 47	8
	Commitment	Compro-Lid	4, 8, 9, 15, 32, 43, 48	7
Trust	Benevolence	Benev-Conf	2, 19, 30, 34,40, 41, 45, 46	8
	Integrity	Integ-Conf	5, 10, 24, 29, 31, 38, 39, 42	8
	Capacity	Capac-Conf	12, 23, 25, 26, 33, 37	6

Table 1: Dimensional distribution of the EPICL instrument.

## Description of reagents.

-				
1.My chief is friendly and easy to deal with	25. My chief knows a lot about his work.			
2. I can tell my chief about the difficulties I	26. My chief succeeds in the things he tries to do.			
have at work and pay attention to me.				
3. Sometimes, I cannot explain what I feel.	27. My chief insists on the need to increase more and			
	more the quality in the accomplishment of the tasks			
	or works carried out.			
4. I think I owe a lot to the ingenuity, for the	28. My chief maintains a pleasant mood with			
opportunities it has given me.	everyone in the factory.			
5. I think my chief is honest.	29. My chief tells me everything I need to know to do			
	my job.			
6. When someone needs it, I leave what I am	30. My chief makes me feel valuable.			
doing to help him.				

7. When someone bothers me, I stop to think	31. My chief treats me well and fairly.
about the other person's situation instead of	
getting angry.	

# Continue ... Table 1 Dimensional distribution of the EPICL instrument

8. Too many things in my life would be	32. My chief shows trust in my knowledge and skills.
interrupted if I decided to stop working at the	
mill.	
9. The mill is willing to invest in me.	33. My chief keeps us informed of the events and
	achievements in the mill and the factory.
10. At risk, I know that my chief is telling	34. My chief would never do anything to deliberately
the truth.	harm me.
11. It is often a waste of time to think about	35. My chief puts into practice the suggestions made
emotions	by the other members of the group.
12. Lack of skill in my chief puts us at risk.	36. My chief ensures that tasks are carried out
	properly.
13. Most people feel comfortable talking to	37. My chief does his job well even when he is
me about their personal feelings.	required to finish quickly.
14. I like to share what I feel with my co-	38. My chief communicates with me openly and
workers.	honestly.
15. I feel like part of a family in the factory.	39. My chief takes significant steps to guide me in the
	right direction.

16. My chief tries to make decisions related	40. My chief and I have a friendly relationship that		
to the work are made in group discussions	shares ideas, feelings and hopes.		
and not personally.			
17. My chief refuses to change his mind	41. My needs and wishes are important to my chief.		
when others do not agree with him.			
18. My chief accepts suggestions to	42. I never question my chief's word.		
introduce changes and modifications in the			
way of developing the activities.			
19. My chief would stop doing his job to	43. I really feel as if the problems of the factory were		
help me in anything.	my own problems.		
20. My chief develops friendships with the	44. I am able to stay motivated when things are not		
other members of the department, earning	going well.		
his sympathy.			
21. In the discussions, my chief tries to	45. I have trust in the reasons or reasons that my chief		
impose his opinions.	has in the decisions he makes.		
22. My chief encourages extra efforts (extra)	46. I have the support of my chief before the decisions		
to accomplish the tasks.	I make.		
23. My chief is very well trained to do his	47. I try to have good thoughts, no matter how bad I		
job.	feel.		
24. My chief usually tries to be fair to others	48. One of the main reasons why I keep working at		
	the mill is because outside, it would be difficult for		
	me to get a job like I have here.		

Source. Own elaboration.

#### Validation of the instrument.

The validation procedure was addressed from seven phases as detailed below:

*Phase 1:* Design and construction of the item bank. For this purpose, the bibliographic review was taken into account, forming a bank of items with origin in validated instruments that have measured the dimensions under the same concepts that this proposal required.

Phase 2: Selection of reagents. The items were selected and integrated from the bank of items that formed the measurement instrument to proceed with the evaluation and ratification of the language. Phase 3: Harmonization of language. In this stage, three expert judges in the English language participate in the adjustment of those items that were necessary for their translation. The second adjustment of language made was for the context where it would be used. Taking advantage of the participation of four people, who read the instrument and proposed the expressions that best adapted to the language used in the context before starting the pilot test. These tests allowed to evaluate the clarity and comprehension of the language used in the writing of each reagent that would be autocompleted by the respondent, giving rise to cultural adaptation (Carretero-Dios and Pérez, 2005). Phase 4: Reliability of the pilot trial. The instrument was applied to 52 workers of a sugar mill located in the central zone of the state of Veracruz, Mexico. Based on the conclusions of Corral (2009) and Arribas (2004), it is possible to indicate that a sample of at least 30 individuals is acceptable in the pilot test. The interpretation of the items by the respondents was evaluated with the Cronbach alpha coefficient, with support from the IBM SPSS Statistics v.23 software (Statistical Package for Social Science). The values obtained from Cronbach's alpha = 0.918, and standardized alpha = 0.922 are placed within the classification of excellent by different researchers (George and Mallery, 2003, Hair, Anderson, Tatham and Black, 1999), being able to determine that the items do not they caused confusion when interpreted by the respondents, and the redesign of the reagents was unnecessary.

*Phase 5:* Validation of the EPICL pilot instrument. From the ratification of the reagents, comparative tables of internal consistency were generated. Confirming that the instrument has good internal consistency, from the normal Cronbach indicator = 0.820 and standardized = 0.803, according to the classification already mentioned by the referring researchers (George and Mallery, 2003, Hair et al., 1999).

*Phase 6:* Reliability, relevance and repeatability of the EPICL instrument. This phase had the need for a larger sample than according to the size of the population of interest, and based on the calculation for finite populations, the minimum number of samples to collect is determined in 251. The sample of valid surveys carried out exposed 323 cases for analysis.

*Phase 7:* Extraction of new variables. The extraction method used for the whole analysis is through main components, which according to what is indicated by Brown (2006) is ideal to carry out a reduction of a set of elements without modifying the basic components associated with them. The first part to be evaluated is the one corresponding to the instrument grouped into sub-dimensions, where the total variance is explained with 69.763% and a single component whose eigenvalue is 4.186. The extraction of components, from the individual analysis of the items, shows a total explained variance of 50.124%, carried out according to six factors, direct Oblimin rotation and analysis of principal components with Kaiser Normalization. Single rotation that allows forming components with at least four variables (Ferrando y Anguiano-Carrasco, 2010) and factorial loads <0.4 (Montoya, 2007).

The field intervention, in the pilot phase as in the confirmation, was executed during the first semester of the year 2017, period in which the organization requires the largest number of collaborators to carry out the productive process.

### **Results.**

The validity and internal consistency of the pilot instrument in its dimensions, is reporting in Table 2 summary. Table 3 identifies each of the dimensions of the variables, from the perspective of the Cronbach alpha normal consistency indicator (0.820) and standardized (0.803), allowing it to be related as good according to the classification already mentioned by the referring researchers (George and Mallery, 2003; Hair et al., 1999).

Dimensions with 52 validated cases	Elements	Mean	Standard deviation	Cronbach´s alpha	Cronbach's standardized	average Corr. inter- item
Individual EPICL	48	179.134	26.320	0.918	0.922	0.198
EPICL grouped	6	179.134	26.320	0.820	0.803	0.404
EPICL grouped variables	2	179.134	26.320	0.785	0.823	0.699
Individual leadership	26	94.192	11.383	0.732	0.744	0.100
Individual trust	22	84.942	17.057	0.933	0.937	0.402

Table 2: Validation summary of the EPICL pilot instrument.

Source: Own elaboration.

Table 3: Validation of the EPICL pilot instrument grouped in its dimensions.

Summary of the scale: Mean = 179.1346, Standard deviation = 26.32007, Validated cases (N) =						
52, Elements = 6, Cronbach's alpha = $0.820$ , Standardized alpha = $0.803$ , Average inter-item corr.						
= 0.404						
	Mean if	Var. if	StDv. if	Itm-Totl	Alpha if	
Tipos-Lid	137.635	393.844	19.846	0.827	0.729	
Intemo-Lid	150.500	638.294	25.264	0.217	0.848	
Compro-Lid	155.077	604.504	24.587	0.296	0.841	
Benev-Conf	149.481	395.784	19.894	0.796	0.739	
Integ-Conf	147.096	391.853	19.795	0.814	0.734	
Capac-Conf	155.885	565.830	23.787	0.620	0.798	

Source: Own elaboration.

The analysis of relevance, consistency of measurements and repetitiveness (Brown, 1999), of the EPICL instrument was executed with a data matrix of 323 respondents and 48 validated items in the pilot test. Giving way to the following determinations:

From the position of the Cronbach alpha indicator, it is possible to establish that both individually (normal Cronbach alpha = 0.941, standardized = 0.944) and grouped in its dimensions (normal Cronbach alpha = 0.907, standardized = 0.911), the instrument complies with this first indicator being its values higher than 0.9, leading to a high classification (Hair et al., 1999, George and Mallery, 2003, Gliem and Gliem, 2003, Oviedo and Campo-Arias, 2005). The data matrix, the values indicated for the determinant, individual 3.15E-11 and grouped 0.013 give meaning to the existence of variables with very high inter-correlations, and feasibility to the continuation of the factorial analysis. The determinant, in addition, is not equal to zero, establishing the validity of the data (Montoya, 2007). The values of the diagonal of the correlation matrix, both the individual and the grouped analysis, have values approximately equal to the unit, the rest of the elements are small, and it is reasonable to apply factor analysis (Frías-Novarro and Soler, 2012). This factorial analysis will make sense if Bartlett's sphericity test presents a value (significance) p> 0.05 (Franquet, 2008). For this case, the significance or p-value is equal to zero (sig = 0.000), gl and  $\chi^2$  are higher than those reported in tables. Table 4 shows the summary of these calculations.

The Kaiser-Meyer-Olkin (KMO) variable correlation indicator, indicated in Table 4, both individually and in groups, shows that it is appropriate to apply factor analysis for the data matrix under study. Franquet (2008) identified these values as "very good" because it is higher than 0.9 for the individual analysis and "meritorious" for the analysis grouped by its value of 0.893.

KMO, Bartlett's test and correlation matrix, Statistic.					
		Individual	Grouped		
Measurement of the adequacy of the sample Ka	0.931	0.893			
Bartlett's sphericity test Approx. Chi-Square		7,378.885	1,402.466		
	df	1,128.0	15.0		
	Sig.	0.000	0.000		
Correlation matrix Determinant 3.15E-11 0					

### Table 4: Consolidated analysis to determine the relevance of the test.

Source: Own elaboration.

Finally, the anti-image correlation analysis allows identifying few high values in absolute terms and the existence of coefficients in zero. Therefore, it is pertinent to carry out the factorial analysis. In addition, in this anti-image matrix, the feasibility of the application of the factorial analysis with the diagonal of the anti-image correlation matrix is verified, which presents the value of the means of adaptation of each variable known as "Measure of Sampling Adequacy"(MSA). With this measure, it is possible to verify variable to variable, the adequacy of the factorial analysis. The values close to the unit indicate better adaptation (Franquet, 2008). The individual correlation matrix has a single low value, item 21 with 0.474, all other variables have values greater than 0.8, including the analysis for the matrices. These results can be considered as positive indicators for factorial analysis.

The conclusion, on this stage of the factorial analysis, allows to affirm that all the types of analysis on the validity and pertinence, of the data matrix for the application of the factorial analysis, both individually and grouped, are satisfactorily verified and surpassed.

The new model extracted according to six factors supported by the analysis of main components, factor-loading criterion greater than 0.4 and rotation with direct Oblimin, maintains this arrangement fulfilling the condition that at least three indicators with high factorial load must identify the component.

This particularity is the only reason for similarity between the initial and the extracted model. Differentiating in the amount of indicators that form each component and the interpretation of the possible dimension to which they refer, each factor has at least one indicator of the other dimension to which it refers mostly. This interpretation allows generating the model proposed in Figure 2.



Figure 2: Six-factor model generated from the EFA. Source: Own elaboration.

### CONCLUSIONS.

The results of this research prove that the EPICL questionnaire has criterion and construction validity, which indicates that it measures precisely what it intends, with a Cronbach's alpha reliability coefficient = 0.820, indicating that the instrument is reliable, in its pilot test. In the application of the instrument to the population of interest, 323 valid surveys, the Cronbach alpha reliability indicator was higher than 0.9 in all cases placing it in a high classification, confirming its reliability. The value of the determinant, the correlation matrix, the value of the KMO indicator (Individual 0.931 and grouped 0.893) and the adequacy of the MSA values; they check all types of analysis on the validity and relevance of the data matrix both individually and in the grouped.

In addition, the total internal consistency indicates that the instrument has adequate intra-item coherence where each of them contributes. Therefore, this questionnaire constitutes a valid and

reliable tool for the Mexican sugar context, as result of the version made. Therefore, it is possible to measure the relationships proposed in the objectives that gave substance to the instrument.

For the exploratory factor analysis, the negative hypothesis  $(HA_1)$  that indicates the possibility that there are a series of factors associated with groups of variables is accepted. Since there is a set of latent variables that can explain the leadership and trust from of the database studied because there are factor loads with weights that allow this affirmation, since they exceed the established criteria. Being able to identify the latent variables that underlie the phenomenon of leadership and trust.

Given that the EPICL instrument confirms that a questionnaire can be used as a tool for climate diagnosis, and therefore the objectives for which it was designed, it is possible to relate and analyze the impact of leadership styles with commitment, such as Capa-Benítez et al. (2018) and Lo et al. (2009) did it in their investigations. In the same way, there is the possibility of establishing references to the style of leadership against emotional intelligence similar to those made by Navarro and Rodas (2018), Manrique (2018), Zhang et al. (2018), in addition to Zarate and Matviuk (2012).

This instrument bases the correlation between leadership style and trust in analogy with Javed et al. (2018) and Engelbrecht et al. (2017). From these relationships, it is possible to determine if the leadership model perceived by the subordinates is integrated with the elements that define the identity of the social context (Velázquez, et al., 2015).

Therefore, it is possible to affirm, "The perceptive measure of the individual attributes represents a deductive definition of the organizational climate" (Gómez Rada, 2004, p.100). This perception of the organizational climate can be achieved through the measurement of the variables: leadership styles, commitment and emotional intelligence comparing them against self-perceived trust. Considering the trust construct as an indicator of the state of health in the chief-subordinate relationship and therefore a work environment with an emotional charge manageable by the exposed INDIVIDUAL.

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### DATA OF THE AUTHORS.

- Tomás Elio Ochoa Domínguez. Ph.D. UCC Business School, Universidad Cristóbal Colón, Veracruz, México. E-mails: igltomasochoa@gmail.com ORCID: https://orcid.org/0000-0002-7285-6751. Corresponding autor.
- José G. Vargas-Hernández. Ph. D., Posdoctorate, University Center for Economic and Managerial Science, University of Guadalajara. México. E-mail: Jvargas2006@gmail.com ORCID: http://orcid.org/0000-0003-0938-4197.
- 3. Arturo García-Santillán. Ph. D., Posdoctorate, UCC Business School, Universidad Cristóbal Colón. Coordinator, Doctoral program in Management Science, Veracruz, México E-mails: agarcias@ucc.mx ORCID: http://orcid.org/0000-0001-7284-5959.

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