

Transformational Leadership and Organizational Commitment: Their Impact on Knowledge Sharing

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Abstract– *The maquiladora industry in Ciudad Juárez (Mexico) is a key economic sector characterized by dynamism and competitiveness that requires effective human capital management, especially in terms of organizational commitment and employee collaboration. However, the literature does not clarify how transformational leadership (TL) influences organizational commitment (OC) and facilitates knowledge sharing (KS) in this sector. This study, therefore, contributes to filling this gap by analyzing the impact of these variables and presenting a sensitivity analysis across different scenarios. To this end, 165 questionnaires were collected, analyzed, and validated using a partial least square (PLS) structural equation modeling (SEM) approach. The results indicate that managers' TL has positive, direct, and indirect effects on KS, with OC as a key mediator. Although TL has the most significant direct effect on OC ($\beta = 0.399$), in the sensitivity analysis, the relationship between the two in their high scenarios is 0.524. These results suggest that transformational leadership practices, such as inspiring, motivating, and developing employees, can be effective tools for fostering greater organizational commitment and facilitating knowledge sharing in the maquiladora industry.*

Keywords– transformational leadership, knowledge sharing, organizational commitment, structural equation modeling.

I. INTRODUCTION

Leadership is the capacity of an individual to inspire, encourage, and facilitate others' contributions to the success and efficacy of the organization they are a part of [1, 2]. In recent decades, the study of leadership has changed, emphasizing the traits of leaders [3] to analyze the relationship with their followers, and different styles have emerged, such as autocratic, democratic, liberal, participative [4], transactional, transformational, and laissez-faire [5], among others.

The importance of leadership in a company can be seen from a strategic perspective, as managers make decisions that affect the company's market position [6, 7], and that is why leadership is therefore considered a vital resource [8]. Therefore, McClanahan [9] asserts that to continue renewing the company and remain competitive in the market, organizations must allocate funds for leaders' development. However, Fitzsimmons and Callan [10] argue that this process currently presents critical deficiencies and that all economic investments made are difficult to quantify if there is no evidence of the effectiveness of its leaders.

Leadership is thought to be a catalyst that enhances businesses' organizational success [3], and the

transformational leadership (TL) approach has shown to be the most successful [11] as it transcends the leader's interests in favor of the needs observed in followers and the company [12], and therefore reinforces collective interest. Leaders in this style influence motivation, inspiration, and empathy [8] and promote workers' charisma, loyalty, and empowerment [13]. Because it encourages long-term cooperation and makes information sharing easier, some studies have linked this style to emotional intelligence [14].

Given the importance of leadership, companies should focus on strategies that strengthen organizational performance [3]. This is the ability to obtain and effectively manage financial, human, and physical resources to accomplish the organization's goals.

The organizational performance of manufacturing companies is an essential factor in economic development. It influences the world economy, as intense competition and the diversity of products available on the market have created uncertainty. With 2,821,093 workers, Mexico's industrial sector was founded in the 1960s and is today known worldwide for its highly skilled labor force. In particular, 304,769 people are directly employed by 331 maquiladoras operating in 24 industrial parks in Ciudad Juárez [15].

Sharing knowledge among groups within an organization is vitally important because it becomes organizational knowledge that impacts a company's corporate culture [16]. This process is not a common habit among groups but rather a value that must be fostered. This requires leaders to establish the necessary strategies to develop organizational commitment to mediate knowledge sharing. According to [7], empowered leaders motivate employees to participate actively in a company's decision-making process. They then begin sharing knowledge because they need relevant information to ensure the decision is adequate.

In recent years, various studies have been conducted on transformational leadership in the Mexican maquiladora industry, such as the one by [3], which examines the impact of TL on organizational performance and concludes that TL directly influences social, operational, and environmental performance. Similarly, the study by [17] analyzed the impact of transformational and transactional leadership on supply chain resilience, using various operational indices as mediating variables; the results indicated that both leadership styles indirectly influence the improvement of supply chain

resilience. In addition to these, a study by [18] was found, which determined that transactional leadership has a positive influence on social performance through the dimensions of contingent reward and active management by exception; however, the variable of passive management by exception was ruled out, as it did not result in a positive impact. However, no study was found in the Mexican manufacturing industry in Ciudad Juárez that analyzes the variables of transformational leadership, organizational commitment, and knowledge sharing.

In this context, it is essential to conduct studies that analyze the influence of leadership on knowledge sharing and organizational commitment, as well as to identify the variables that have the greatest impact on each construct, with the aim of contributing to reducing gaps in literature and improving understanding of the relationship between these factors.

In the Mexican Maquiladora Industry (MMI), managers lead departments and make decisions on key areas such as investments, innovation, risk management, and project management. These decisions directly affect supply chain members (customers and suppliers), which can be transcendental for the company's survival in the market. According to Morales, et al. [19], the resilience of these businesses is crucial for survival amid challenges such as shifts in demand, technological advancements, and economic crises, as Mexico's maquiladora sector competes in global, volatile markets. The effectiveness of its executives and their influence on organizational performance are the main reasons for the maquiladora's flexibility in Mexico. Given the importance of administrative personnel in Mexican industry, the following research question arises: What is the relationship between the transformational leadership exercised by managers in SMEs, knowledge sharing, and organizational commitment?

The objective of this study is to identify the level of TL that exists in the managers of Mexican maquiladora companies as an independent variable, relate it to organizational commitment as a mediating variable, and determine how these two variables affect knowledge sharing as a dependent variable, which generates a greater flow of information that facilitates the integral development of the company. The results will allow managers to focus their resources on creating work environments where productivity and efficiency increase, and employees will experience a sense of integration with the process of decision-making, thereby reducing the feedback loop.

II. LITERATURE REVIEW AND HYPOTHESES

A. Transformational Leadership (TL)

In TL, the leader is viewed as a mentor who develops and trains his followers, establishes trust, confidence, security, and loyalty [20], and concentrates on ideals and beliefs for which he is regarded and admired, as well as ethical and professional [21]. This style had four dimensions.

1. Idealized Influence (II). In this dimension, followers respect and revere the leader, and allegiance forms as followers aspire to emulate the leader [11], who is seen as a person with principles, unwavering values, and high ethical standards [22].
2. Inspirational Motivation (IM). In this dimension, the leader acts with high vigor and enthusiasm to motivate followers to improve their work performance [23]. He inspires teamwork for the company's benefit [22] and stimulates an optimistic outlook to achieve organizational goals [24].
3. Intellectual Stimulation (IS). In this dimension, the leader encourages employees to put aside traditional ideas in search of better and more innovative solutions to organizational problems [23], invite them to leave the status quo and take risks in decision-making [11], and act more creatively and intelligently, questioning current working practices and established procedures [22].
4. Individualized Consideration (IC). In this dimension, the leader pays attention to the qualities, skills, and areas of opportunity of his/her followers at the personal level [11]. He seeks to develop everyone's potential and encourages them to continue learning to increase their personal and professional fulfillment [22, 23].

B. Knowledge sharing (KS)

Knowledge management delivers intangible benefits to companies by acquiring, creating, accumulating, and transmitting knowledge, thereby enabling the development of organizational competencies. For Lee, et al. [25], knowledge management enables the creation of sustainable competitive advantages and values and comprises of three dimensions: acquisition, sharing, and application.

Knowledge acquisition consists of introducing and filtering relevant knowledge from external sources [26], which can be defined as the process of diffusion and acquisition from one person to another [27]. Finally, application refers to integration into the company's daily operations [25]. This study focused on KS by considering two latent variables: knowledge donation and knowledge collection. Knowledge donation is the level at which an individual voluntarily shares their knowledge with another, whereas knowledge collection is the process by which an individual collects another individual's information, skills, and knowledge [28].

This study uses ten observed variables to measure the exchange of knowledge from van den Hooff and de Ridder [29] and Liao, et al. [30] and also used by Son, et al. [27].

C. Relationship of TL in KS

TL has proven to be the most effective for organizations because of its influence on followers on personal and emotional levels [11]. The leader is viewed as an authority figure who looks out for, guards, develops, and instructs

subordinates [20], and fosters a shared vision for collective and organizational well-being [11]. Birasnav, et al. [31] demonstrated that transformational leaders increase the benefits of human capital through knowledge management and foster a positive culture that promotes knowledge sharing.

For its part, Son, et al. [27] indicate that the influence of TL and IC processes on Chinese companies' operational and financial performance is associated with, and has a direct and indirect effect on, operational and financial performance. Sudibjo and Prameswari [32] report the impact of TL on innovative work behavior, considering the mediating variables of KS and person-organization fit, and indicate that TL has both direct and indirect effects on innovative work behavior through IC.

Given the above, and given that TL is composed of the dimensions of idealized influence and individual consideration, which promote a shared vision to transcend personal interests in favor of the company, it is established that:

Hypothesis 1. TL directly and positively affects knowledge sharing in the MMI

D. Organizational Commitment (OC)

Commitment is the level of loyalty or affinity that a person has for another person, company, institution, or ideal. According to Eliyana, et al. [33], OC reflects employees' loyalty to the organization. According to Choi, et al. [34], OC is a set of beliefs in which a subordinate adapts the company's values, mission, and vision. This aligns with the company's organizational goals. OC can be divided into three dimensions: affective commitment (AC), normative commitment (NC), and continuance commitment (CC) [35].

AC is interpreted as the attachment or emotional bond an employee feels to the organization in which they are members [36]. In other words, it is a willingness to strive to achieve its objectives.

NC is based on an employee's obligation to the company due to external factors and on a psychological belief that they owe a debt to the company [37]. This may be due to social, familial, or cultural pressures.

CC is based on whether they would obtain better benefits by leaving the company than by staying. They decide to stay because they need and are unwilling to lose benefits such as seniority, and the cost of leaving is higher than the cost of staying [38]. Ten observed variables were used to measure OC [39]. These variables have also been used in other studies, such as Donkor, et al. [40], which are available in APPENDIX A.

E. Relationship of TL in OC

A transformational leader is characterized by acting on a personal and emotional level with followers, empowering them, and fostering relationships with them based on charisma, empathy, and loyalty [13]; promoting a positive attitude [24]; encouraging individual and team spirit [22];

being interested in addressing needs and concerns on an individual basis [11]; and establishing a climate of support [24].

Using the TL style, the leader behaves in a way that stimulates followers' commitment to the organization and drives them to achieve its goals. Eliyana, et al. [33] reported that TL had a direct and positive effect on OC and job satisfaction. Zehir, et al. [35] reported another study in Turkey with 1019 participants that examined different leadership styles, used commitment to the supervisor (affective and normative) as a mediating variable, and assessed the impact on organizational performance. The results show that TL has a positive and significant relationship with commitment to the supervisor, thus affecting organizational performance. However, Laissez-Faire leadership showed similarities to TL, and transactional leadership did not establish a direct relationship with supervisor commitment.

Mahdi, et al. [36] reported a study on leadership in managerial and support positions. It analyzes OC in terms of three variables: affective, normative, and permanence in companies in Malaysia. The results showed a significant relationship between leadership behavior and OC. Considering that different studies evaluating these variables have been reported in the literature and that TL presents a solid commitment to the organization and a strong influence on subordinates, the following hypothesis is proposed:

Hypothesis 2. TL directly and positively affects OC in the MMI.

F. Relationship of OC in KS

Anvari, et al. [41] demonstrate that highly committed workers choose to remain with the organization and are more inclined to share their skills. A study of 301 employees of medical science universities in Iran found a significant relationship between affective OC and KS. For their part, Li, et al. [42] identify predictors of knowledge sharing based on a survey of 1386 workers in the energy industry with several subsidiaries. The results showed that OC mediates the relationship between interactive justice and KS.

Paşaoğlu [43] examined how human resource management procedures affected affective commitment in the banking sector in Eskisehir, Turkey. The variables analyzed were training, performance, job security, and information-sharing. The information came from 304 employees and was analyzed using correlation and multiple regression analyses; a positive correlation was found between information-sharing practices and OC. Thus, it is established that:

Hypothesis 3. OC directly and positively affects knowledge sharing in the MMI.

Figure 1 presents the proposed model, in which the constructs are related and the hypotheses to be analyzed are established.

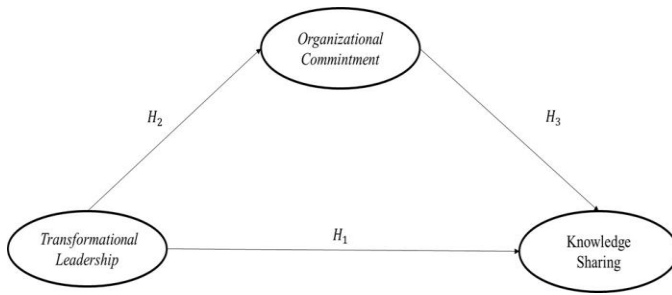


Figure 1. Research model and hypotheses

III. METHODOLOGY

A. Questionnaire design and development

For content validity, a literature review of more than 90 articles used keywords, such as knowledge sharing, transformational leadership and organizational commitment, limiting the search from 2015 to 2025. Once the variables were identified, a questionnaire was designed with an introductory section and three sections. The first section sought to collect demographic data on respondents, including their position, length of service, gender, industry sector, and the size of the company where they work.

The second section of the questionnaire presents the TL items. Finally, the third section asks about KS and OC. Before its application, content validity was assessed with the support of 15 MMI executives and 12 academics with experience in regional adaptation and contextualization. After two rounds with the judges, a final questionnaire was delivered, requiring responses on a five-point Likert scale to determine the level of use of the respondents in their workplace.

B. Data collection

The questionnaire was administered using Google Forms and configured so that it would not accept submissions until all questions had been answered, to avoid missing values. All potential respondents were invited to participate in the study by email. The stratified sampling method was used because it targets managers, coordinators, and administrative staff who work in the manufacturing industry and hold leadership positions, with more than one year in the role and who have staff under their supervision. The information will be collected from August 30 to October 10, 2025.

C. Recording and debugging of information

An Excel database was obtained through Google Forms. SPSS v.25® was used for data analysis due to its ease of handling variables [44]. The information was filtered in three stages, according to Hair [45]:

- Standardize the items and identify extreme values, which are substituted with the median. Extreme values are those with absolute values greater than 4.

- Determine which responders are not committed. For every row or case, the standard deviation was calculated. Since it was assumed that the responder gave each item the same value, it was removed from the analysis if it was less than 0.5.

D. Descriptive analysis of the sample

The median was determined as a measure of central tendency, and the interquartile range as a measure of dispersion, because the items' values were collected on an ordinal scale [46]. Cross-tabulations were used to summarize demographic information.

E. Validation of variables

To validate the latent variables examined, multiple indices are used, such as [47]: Cronbach's alpha and composite reliability index for internal validity, R2 and adjusted R2 for parametric predictive validity, Q2 for nonparametric predictive validity, average extracted variance for convergent validity, and variance inflation factor for multicollinearity.

F. Validation of hypotheses - Structural equation modeling

Given that its use has been reported in engineering and social science research, the structural equation modeling (SEM) approach was applied to test the hypotheses [48], as it helps quantify the relationship between [49] and García-Alcaraz, et al. [50] to model lean manufacturing and sustainability in the industry.

WarpPLS v.7 ® software, which is based on partial least squares (PLS), is used to calculate the magnitude of the ratios, and Kock [51] recommends it for small samples with non-normal distribution in the data or that are obtained on a Likert scale. For model validation, Kock [52] suggested estimating six efficiency coefficient adjustment indices before interpretation.

- The related p-value and average path coefficient (APC), used to calculate the dependence between variables, must be less than 0.05.
- In order to evaluate the predictive validity of the dependent variables, the average R-squared (ARS) and average adjusted R-squared (AARS) were used, obtaining a p-value of less than 0.05.
- Ideally, the average block VIF (AVIF) and the average total collinearity VIF (AFVIF) used to calculate collinearity should be less than 3.3; however, values below 5 are allowed.
- The model's suitability for the data was assessed using Tenenhaus's GoF, which should ideally be higher than 0.36.

G. Sensitivity analysis

The probability of occurrence in low ($P(z) < -1$) and high ($P(z) > 1$) scenarios was evaluated independently and simultaneously in each construct for each relationship or hypothesis in Figure 1, since the β value does not usually adequately explain the relationship between latent variables.

In addition, the conditional probability that the dependent variable will occur in its high or low scenario is shown, given that the independent variable has occurred in its high or low scenario.

The symbols (+) and (−) stand for high and low scenarios, respectively. (&) represents the likelihood that two variables will occur simultaneously, and "If" represents the conditional probability.

IV. RESULTS

A. Descriptive analysis of the sample

A total of 165 surveys, of which 45.5% were from males and 54.5% were from women, were obtained after the cutoff date. Three of the 168 questions were removed because they did not comply with the inclusion criteria used in the purging process. Table 1 shows the positions of the respondents and the number of years they have held each position. It was observed that 120 of the respondents hold administrative positions with staff directly under their supervision, representing 72.72% of the total. Similarly, the majority of respondents (84.84%) belonged to the group with between one and five years of experience in their position.

TABLE I
POSITION AND YEARS IN THE SAME

Position	Years in role			Total
	1-5	5-10	+10	
Administrative staff	106	9	5	120
Coordinator	25	7	1	33
Manager	9	1	2	12
Total	140	17	8	165

Table 2 illustrates the number of employees in the company and the industrial sector to which they belong, and shows that most of the companies are large, as 95 of them have more than 500 employees (57.57%) and that the representative industrial sectors are automotive and services, with 39 and 35 cases, respectively.

TABLE 2
EMPLOYEES AND INDUSTRY SECTOR

Number of workers	Industry Sector								Total
	A	L	P	M	E	M	C	S	
501 o más	30	20	3	2	3	24	7	6	95
201-500	2	3	1	0	2	3	1	5	17
101-200	2	2	1	0	0	0	1	5	11
51-100	4	3	1	2	2	1	1	2	16
0-50	1	1	0	3	2	1	1	17	26
Total	39	29	6	7	9	29	11	35	165

A-Automotive, L-Electrical/electronics, P-Plastics, M-Metals, E-Packaging, D-Packaging, D-Medical, C-Communications, S-Services

B. Item descriptive analysis

The descriptive analysis of each item comprising the constructs verified and incorporated into the model is shown in Table 3; however, the items eliminated during the validation process were not included. All TL items have medians greater than 4; in OC, two of the remaining 4 variables represent affective commitment. Finally, in KS, the variables with a median greater than 4.2 are related to the exchange of donated knowledge. The low scores show that respondents' agreement on the interquartile range was sufficient.

TABLE 3
MEDIAN AND INTERQUARTILE RANGE FOR VARIABLE

ITEM	M	IQR
TRANSFORMATIONAL LEADERSHIP		
TL1. Act in ways that builds others respect for him/her.	4.44	1.35
TL2. Specify the importance of having strong sense of purpose.	4.23	1.44
TL3. Consider the moral and ethical consequences of decisions.	4.36	1.54
TL4. Emphasize the importance of having a collective sense of mission.	4.17	1.53
TL5. Have a clear common view of the final aims to transmit and achieve the commitment of all followers.	4.36	1.40
TL6. Have the ability to motivate and guide followers on the.	4.25	1.60
TL7. Seek new opportunities for the department/organization unit.	4.24	1.60
TL8. Act as leaders of the organization.	4.1	1.64
ORGANIZATIONAL COMMITMENT		
CO1. I find that my values and that of the organization are very similar.	3.52	1.79
CO2. I am very happy being a member of this organization.	3.58	1.75
CO3. I enjoy talking about my organization to people outside.	3.5	1.93
CO4. It will be very hard for me to leave my organization right now, even if I wanted to.	3.2	2.11
SHARE KNOWLEDGE		
KS1. I often share with my colleagues the new working skills that I learn.	4.32	1.50
KS2. My colleagues often share with me the new working skills that they learn.	3.81	1.82
KS3. I often share with my colleagues the new information I acquire.	4.23	1.48
KS4. My colleagues often share with me the new information they acquire.	3.8	1.70
KS5. Sharing knowledge with my colleagues is regarded as something normal in my firm.	3.95	1.75
KS6. My colleagues often share with me the working skills they know when I ask them.	4.02	1.70
KS7. I often share with my colleagues the working skills I know when they ask me.	4.36	1.46
KS8. My colleagues often share with me the information they know when I ask them.	4.05	1.69
KS9. I often share with my colleagues the information I know when they ask me.	4.39	1.39
KS10. Staff in our firm often exchange knowledge of working skills and information.	3.95	1.80

C. Validation of the latent variables

The validation indices for each construct are shown in Table 4, and they were all satisfied. For parametric validity, for instance, R-squared and adjusted R-squared indices greater than 0.02 are displayed. Furthermore, the variables were incorporated into the model, as Cronbach's alpha indices exceed 0.7 for each construct, indicating internal validity.

TABLE 4
VALIDATION OF LATENT VARIABLES

Index	TL	OC	KS
R2		0.159	0.257
Adj. R2		0.154	0.247
Composite reliability	0.932	0.908	0.924
CAI	0.916	0.864	0.836
AVE	0.631	0.712	0.859
Full collinearity VIF	1.211	1.271	1.348
Q2		0.152	0.260

D. Structural equation model

Table 5 shows the SEM efficiency indices. It can be seen that it has adequate predictive validity, given that the P values are less than 0.05 for the first three indices and that there are no collinearity problems, as shown by the last three indices.

TABLE 5
MODEL FIT INDICES

Index	Value
AARS	0.201, P=0.002
APC	0.338, P<0.001
ARS	0.208, P=0.001
AVIF, ideally ≤ 3.3	1.142
AFVIF, ideally ≤ 3.3	1.277
Tenenhaus GoF (GoF), ideally ≥ 0.36	0.391

E. Direct effects and hypothesis validation

The results of the suggested model with direct effects between latent variables are displayed in Table 6. For instance, the association between TL and KS has a β of 0.268 and $p<0.001$, indicating that when the standard deviation of TL increases by 1 unit, KS increases by 0.268 units. Consequently, the two variables are strongly associated. The interpretation of all other relationships and hypotheses was the same.

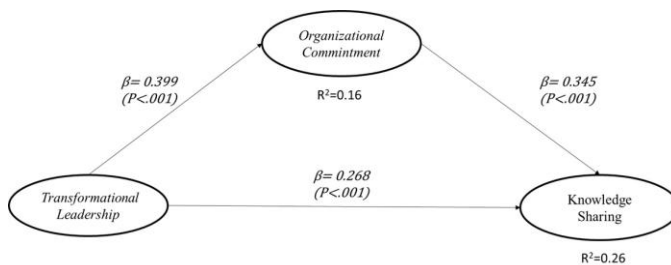


Figure 2. Evaluation of the initial model

TABLE 6
SUMMARY OF EFFECTS

Hypothesis	DE		IE	Total effect
	β	Decision		
H ₁ : TL→OC	0.268 (<0.001)	Supported	0.138 (<0.001)	0.406 (<0.001)
H ₂ : TL→OC	0.399 (<0.001)	Supported		0.399 (<0.001)
H ₃ : OC→KS	0.345 (<0.001)	Supported		0.345 (<0.001)

F. Sensitivity analysis

The probability of each variable in the various scenarios, whether they occur individually at their high (+) and low (-) levels, simultaneously (&), or conditionally (IF), is displayed in Table 9. For instance, the likelihood that a TL+ event will result in OC+ is 0.067; additionally, if TL is offered independently and at its high level, it is 0.127 and at its low level, it is 0.164; for OC, it is 0.182, and at its low level, it is 0.152. Lastly, the probability of OC+ given that TL+ has occurred was 0.524.

TABLE 7
SENSITIVITY ANALYSIS

	Level	Probability	TL		OC	
			+	-	+	-
OC	+	0.182	&=0.067 if=0.524	&=0.018 if=0.111		
	-	0.152	&=0.000 if=0.000	&=0.036 if=0.222		
KS	+	0.176	&=0.067 if=0.524	&=0.012 if=0.074	&=0.055 if=0.300	&=0.012 if=0.080
	-	0.176	&=0.006 if=0.048	&=0.073 if=0.444	&=0.006 if=0.033	&=0.073 if=0.480

V. DISCUSSION OF RESULTS

This study aimed to identify the TL possessed by managers in the Mexican maquiladora industry, determine whether it has a direct relationship with OC, whether OC serves as a mediating variable, and whether these two variables affect KS. Statistical analyses indicate that TL has a positive impact on OC, which implies that the leader influences followers in a personal way, creating a sense of loyalty by integrating them into decision-making, encouraging and motivating them towards a collective mission, instilling the moral values of the company, and creating a sense of organizational belonging so that the worker feels satisfied and happy and does not leave the company.

In addition, this relationship between TL and OC is mainly due to the affective bond that this leadership style fosters, which aligns with the findings of Eliyana, et al. [33]. However, this is different from Zehir, et al. [35] because normative commitment is present and less relevant than affective commitment. An essential finding of this research is the commitment to permanence, which was not significant, affirming that followers influenced by a transformational

leader remain in the company because of an emotional bond rather than labor necessity.

Likewise, OC was found to mediate the relationship between TL and KS, consistent with the findings of Anvari, et al. [41] and Li, et al. [42], who examined the direct effect of TL on KS and the indirect effect of OC. In other words, the impact of TL on KS is more significant when OC serves as a mediating variable, allowing us to conclude that the emotional relationship is the factor that drives the results, and that a qualitative variable such as this influences the achievement of quantitative benefits in the organization. This may be because these variables affect companies' operational and financial performance, as Son, et al. [27].

The above can be concluded from the social movements of this era. Workers at this time belong to a generation focused on being rather than possessing, as in older generations, which explains the excellent results obtained in the TL analysis.

VI. CONCLUSIONS

The model evaluated in Figure 2 indicates the values, and based on the results obtained, we can conclude the following:

H1. Since the second variable's standard deviation increases by 0.268 units for each additional unit of the first variable, there is sufficient statistical evidence to confirm that TL has a direct, favorable impact on KS in the MMI. This finding implies that the leader focuses on exchanging knowledge with his followers (donated and collected) by employing intellectual stimulation and inspirational motivation. The results of this study are similar to those of Anvari, et al. [41], who found that motivation is a driver of knowledge sharing and that one dimension of TL is inspirational motivation.

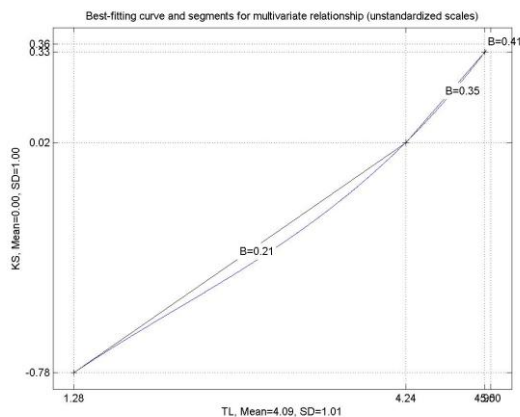


Figure 3. Relationship between TL and KS

Figure 3 shows a positive relationship between TL and KS, with an upward trend across all levels analyzed. At low levels, the effect is significant but moderate ($\beta=0.21$), indicating that initial increases in TL generate limited improvements in KS. As TL increases, the relationship strengthens ($\beta=0.35$), reflecting greater effectiveness in practices such as motivation and intellectual stimulation. At high levels, it intensifies even further ($\beta=0.41$), demonstrating

an accelerating effect. Overall, the results suggest that TL not only drives KS but that its effect becomes stronger as leadership becomes more established within the organization. The practical implications proposed based on these results may include: designing mentoring programs that emphasize authentic communication and consistency between values and actions to reinforce the trust and commitment that facilitate KS (donation and collection), as well as incorporating real-time knowledge management.

H2. Since the OC improves by 0.399 units when TL's standard deviation increases by one unit, there is enough statistical evidence to confirm that TL directly and favorably affects OC in the MMI. This means that the leader establishes a relationship with his/her follower, which benefits the latter by increasing his/her commitment to the company. These results are similar to those reported by Li, et al. [42], who propose that managers can influence both organizational commitment and knowledge sharing.

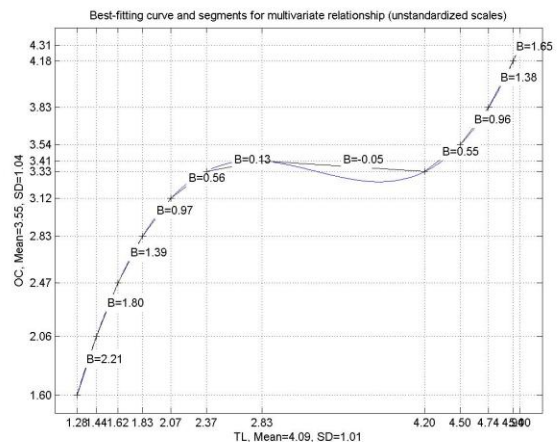


Figure 4. Relationship between TL and OC

On the other hand, Figure 4 shows a nonlinear relationship between LT and OC, revealing a curvilinear pattern with varying marginal effects across the range of LT. At low TL levels, high and significant β coefficients are observed ($\beta=2.21$), indicating that small increases in LT generate substantial improvements in OC, suggesting a critical recovery effect in deficient contexts. As TL increases, the slope progressively decreases and even becomes insignificant ($\beta=0.05$, $P < 0.28$), indicating a zone of diminishing returns or a plateau where increased TL does not translate into significant improvements in OC. However, at high levels of TL, the relationship intensifies again ($\beta=1.65$) demonstrating an accelerating effect where advanced TL practices once again generate significant increases in OC. Overall, a complex, non-monotonic relationship is observed, in which the impact of TL depends on the level at which it is exercised, highlighting the existence of critical thresholds and possible intermediate saturation effects. Some practical implications may include

implementing leadership development programs for middle and senior managers that prioritize the dimensions of inspirational motivation and idealized influence, combined with practices that strengthen employees' trust and emotional commitment. Additionally, implementing governance mechanisms and metrics to support TL and OC—that is, institutionalizing practices that reinforce transparency, ethics, and social responsibility, as well as incorporating codes of conduct, feedback, and recognition for leaders.

H3. Since KS rises by 0.345 units when OC raises the standard deviation by one unit, there is enough statistical evidence to confirm that OC directly and favorably affects KS in the MMI. This finding supports the idea that when workers feel a sense of belonging to a company, they are more open to sharing their knowledge and skills with others and acquiring new ones. These results are similar to those of Anvari, et al. [41] and Li, et al. [42], who analyzed the impact of TL and KS, with OC as the mediating variable, suggesting that OC is a key variable for better KS outcomes.

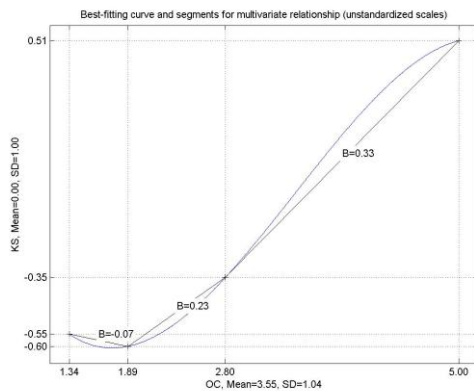


Figure 5. Relationship between OC and KS

Figure 5 shows a segmented, nonlinear relationship between OC and KS. At very low levels of OC, the effect is negative and not significant ($\beta = -0.07$), suggesting that a lack of emotional connection to the organization inhibits knowledge sharing. Starting at an intermediate threshold, the relationship becomes positive and significant ($\beta = 0.23$), indicating that increases in commitment begin to translate into a greater willingness to share information and skills. At high levels of OC, the effect intensifies ($\beta = 0.35$), demonstrating a behavior of increasing returns. This suggests that commitment not only facilitates knowledge sharing but also enhances it as it becomes more established. Overall, the curve indicates that OC acts as a key enabler of KS, but its impact depends on reaching sufficient levels to generate trust, reciprocity, and organizational alignment. Some practical implications based on these results are: Conduct a situational diagnosis of OC within the company; implement talent management interventions that strengthen the dimensions of OC (affective, normative, and continuance); implement recognition and engagement strategies; and establish knowledge-sharing

committees or forums where employees' contributions are explicitly valued and linked to organizational objectives. Finally, provide internal knowledge platforms (intranets, repositories, communities of practice).

Conclusions of the sensitivity analysis

The importance of TL+ is evident in sensitivity analysis, as it favors OC+ and KS+ by 0.524; however, if TL- occurs, the probability of OC+ is only 0.111, and that of KS+ is 0.074. Thus, TL+ should be sought to facilitate worker OC and strengthen KS. In addition, TL- is a risk because there is a 0.222 probability that OC- will also occur, but a 0.444 probability that KS- will appear. This implies that it is essential to develop TL among a company's administrative staff, as this will lead to better results that enhance knowledge sharing.

Finally, it is observed that OC+ facilitates KS+ with a probability of 0.300, and that, in that state, the probability of KS- occurring is only 0.033, a low value. Similarly, OC does not favor KS+ because the probability is only 0.080, but it is a risk in that state because it favors KS- with a probability of 0.480. In conclusion, TL facilitates OC and KS, whereas OC facilitates KS alone. This implies that OC is fundamental to knowledge sharing, and the company must encourage organizational commitment among its employees and managers.

VII. LIMITATIONS AND FUTURE RESEARCH

The results presented are derived from models evaluated using data corresponding to the maquiladora industry in Ciudad Juárez (Mexico) and therefore may differ from those obtained in other industrial sectors. Likewise, the dependent variables do not explain the entire variance, suggesting the existence of other relevant factors that were not considered in this study. In future research, it is recommended to analyze the impact of other leadership styles, such as transactional and laissez-faire, as well as to expand the geographical scope through studies in other regions of Mexico and Latin America, conduct comparative analyses between countries, or develop longitudinal research to examine the behavior of these variables across different generations.

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