



**EXPLORING THE RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE,  
TRANSFORMATIONAL LEADERSHIP AND THEIR IMPACT ON OPERATIONAL  
EFFECTIVENESS IN MULTI-SECTORAL ORGANIZATIONS**

**AUTHORS  
LAURA MARÍA GUTIÉRREZ  
DANIEL SOTO**

**PROJECT DIRECTOR  
DR. RICARDO SANTA  
SUB DIRECTOR  
MARTIN NADER**

**UNIVERSIDAD ICESI  
FACULTY OF ADMINISTRATIVE AND ECONOMIC SCIENCES  
BUSINESS ADMINISTRATION PROGRAM  
SANTIAGO DE CALI**

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## **Abstract**

This investigation seeks to evaluate/explore the relationship between two variables of Emotional Intelligence (EI); use of emotions (UOE) and other's emotion appraisal and recognition (OEA), along with Transformational Leadership (TL) and their impact on the Operational Effectiveness (OE) of multisectoral organizations in Valle del Cauca region. The instrument used to measure UOE, OEA and OE was an adaptation of Santa et al. (2019) and Tidd et al. (2013) questionnaire. And for TL the CELID questionnaire was applied (Castro, Nader & Casullo, 2004). 130 answers were collected and for the statistical analysis, Structural Equation Modelling (SEM) was used to test the hypothesis and interaction of the variables. Results show that Transformational Leadership is closely tied to Emotional Intelligence, and even though the latter shows no direct impact on Operational Effectiveness, Transformational Leadership does influence how effective organizations can be. This hints at indirect interactions between all 3 variables that merit further study.

*Key words:* Emotional intelligence (EI), Use of emotions (UOE), Other's emotions appraisal and recognition (OEA), Transformational Leadership (TL), Operational Effectiveness (OE).

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## Introduction

Modern organizations are constantly striving to find new ways in which they can improve their performance to remain competitive. Because of this, constant research is carried out to determine what variables or components inside an organization have the most impact when it comes to increasing operational effectiveness. For example, public administration research often suggests that improving leadership in the public sector is a key to increase organizational performance (Moynihan et.al, 2012). Other findings show that some managerial factors are a stronger source of an improvement in performance than the resources, regulations, market structure, and organization (Fernandez, 2005). These findings highlight the importance of the impact of leadership on the operational effectiveness of an organization.

We set out to research how transformational leadership has an impact on organizations on a national level. The literature shows that transformational leadership is the most researched topic in leadership theory (Judge and Piccolo, 2004) and public administration research (Vogel and Masal, 2015). This fact leads us to better understand why this style of leadership is relevant.

Finally, since research on the impact of leadership alone is extensive in the existing literature, we decided to bring emotional intelligence as a new element to this investigation. Goleman (1995) highlighted the importance of emotional intelligence in leadership, arguing that the most effective leaders are all alike in one crucial way: they all have a high degree of what has come to be known as emotional intelligence. Additionally, a review of the existing literature shows little to no research of this variable on a local or national level, thus making it an interesting topic for further investigation, as it is an element that can influence the overall operational effectiveness of the organizations.

## Literature review

The interaction between leaders and employees is a significant factor that could foster operational effectiveness, as operational effectiveness is a key element before competitiveness in the markets could be achieved (Santa et al., 2021). However, emotional intelligence is one of the key aspects that could support or hinder the relationships among individuals in the organization (Birdi et al., 2008; Bowen et al., 1990; Santa et al., 2020). After an extensive review of the literature, there is no evidence of studies that explore the relationship between emotional intelligence, transformational leadership, and operational effectiveness. Therefore, this study will focus on the interactions among those variables and if they have a positive and significant impact on the operational effectiveness of the organizations that participated.

## Emotional Intelligence

Emotional intelligence is based on the concept of social intelligence proposed by Thorndike in 1920. Thorndike (1920) defined social intelligence as “the ability to understand and manage men and women, boys and girls—to act wisely in human relations” (p.229). Following Thorndike, Gardner (1993) included social intelligence as one of the seven intelligence domains in his theory of multiple intelligences, characterizing it as the union of a person’s interpersonal and intrapersonal intelligences, understanding intrapersonal intelligence as one’s intelligence in dealing with oneself, and is the ability to “symbolize complex and highly differentiated sets of feelings” (Gardner, 1993, p. 239). And interpersonal intelligence refers to one’s intelligence in dealing with others and the ability to “notice and make distinctions among other individuals and their moods, temperaments, motivations, and intentions” (Gardner, 1993, p. 239).

Under the characterizations of emotional intelligence, this concept can be defined as a capacity for recognizing our own and others’ feelings for motivating ourselves and for managing

our emotions, both within ourselves and in our relationships (Goleman, 1995). Also, being concerned with effectively understanding oneself and others, relating well to people, and adapting to and coping with the immediate surroundings to be more successful in dealing with environmental demands (Bar-On, 2000). Emotional intelligence recognizes and uses emotional information to gain influence over other individuals and obtain a superior personal or collective performance (Mayer and Geher, 1996). Emotional intelligence is a set of interrelated skills that allow people to process emotionally relevant information efficiently and accurately (Mayer et al., 1999).

For this study, the perspective of emotional intelligence used is the one proposed by Salovey and Mayer (1990) which characterize emotional intelligence as the ability of an individual to perceive, accurately, appraise and express emotion; to monitor one's own and other's emotion; to discriminate among the positive and negative effects of emotion; to access and/or generate feelings when they facilitate thought; to understand emotion and emotional knowledge; to regulate emotions to promote emotional and intellectual growth, and to use emotional information to guide one's thinking and actions. In the model, the four key dimensions of emotional intelligence are (Salovey and Mayer, 1990; Wong and Law, 2002):

- *Appraisal and expression of emotion in the self (SEA)* refers to the ability of the individual to understand their own deep emotions and the ability to express them naturally. This capacity allows individuals to feel and become aware of their emotions before others. Perceiving emotions represent the most basic aspect of emotional intelligence, as it makes all other processing of emotional information possible.

- ***Appraisal and recognition of emotion in others (OEA)*** relates to people's ability to perceive and understand the emotions of those around them and react accordingly. People who are high in this ability will be much more sensitive to the feelings and emotions of others as well as reading their minds. When an individual rates highly in this dimension will be much more sensitive to the emotions and feelings of others, as is more adept at reading others' emotional responses.
- ***Regulation of emotion in the self (ROE)*** concerns the ability of people to auto-regulate, prevent, reduce, enhance or modify their emotions. An individual with high ability in this area would be able to return quickly to normal psychological states after rejoicing or being upset. Such a person has better control of her emotions and is also less likely to lose her temper.
- ***Use of emotion to facilitate performance (UOE)*** relates to the ability of individuals to make use of their emotions by motivating and directing them towards personal and collective performance. Moreover, constructive and cognitive activities such as thinking, problem-solving and interpersonal communication. An individual who is highly capable in this dimension can auto-encourage and auto-motivates to do better continuously.

It is important to mention that this study will consider the dimensions of others' emotion appraisal and recognition (OEA) and the use of emotions to facilitate performance (UOE).

Because, on one hand, it could be that if a leader not only assesses and recognizes the emotions of his team but also understands them, may be able to make decisions more efficiently, according to their capacities, such as how to distribute responsibilities. And so, orienting and motivating those emotions towards the achieving of the company's goals, looking for personal and collective

performance. The use of emotions to facilitate performance is important to the processes developed by the individual and confirms that this concept relates to the ability of the individuals to use their own emotions to enhance personal and collective performance (Santa et al., 2019). Individuals with a high UOE, tend to be more focused on being operationally effective (Santa et al., 2019).

Taking this into account, on the other hand, these two dimensions, of EI, could allow the organization to plan and execute activities in a better way than its competitors. Also, could allow the company to differentiate itself in the market, achieving operational effectiveness and competitive advantage. Moreover, Santa et al. (2019) suggest that from the perspective of work satisfaction, emotions become the mediator between emotional intelligence and commitment to the organization. Such commitment is reflected in better behavior and performance. Therefore, a team member with a high level of emotional intelligence will have a significant impact on the team's effectiveness (Othman et al., 2008). Furthermore, a team leader with a high level of emotional intelligence recognizes emotions and can use this information to influence the team members (Amabile et al., 2005; George, 2000; Liu and Liu, 2013).

## **Operational Effectiveness**

In a changing world, increasingly globalized, where markets and environment change constantly, organizations need to develop skills, invest, improve and innovate in internal processes and products to face the fierce competence and threats and to obtain a competitive advantage that differentiates them and allows them to position themselves, stand out and compete to survive and sustain over time. These changes are prompting organizations to seek ways to operate more efficiently and to ensure they have effective operational processes (Hill, 2000; Slack et al., 2004). Organizations answer these challenges and threats by delivering value-adding



products or services of exceptional quality, on time and at competitive prices and by improving internal processes, making them more efficient and therefore reducing operational costs (Belton, 2017; Helfat and Martin, 2014; Lin et al., 2016; Pisano, 2017; Prajogo et al., 2018; Teece et al., 1997) Moreover, in dynamic and unstable environments firms need to constantly scan their environment and government policies and develop agile behaviors or competencies to rapidly accomplish changes (Teece et al., 1997). Thus, organizations attempting to meet these objectives need to pay attention to their operational effectiveness, as this is a primary driver of business performance (Slack et al., 2004).

Considering this globalized market, competitiveness is a vital factor for the survivability and improvement of the performance of any organization (Porter, 1996). The competitiveness of the firm is based on operational effectiveness and organizations dedicate significant amounts of time and resources to develop strategies to increase performance through operational effectiveness, given its impact (Santa et al., 2017). In that sense, organizations need to operate better and faster than their competitors, otherwise, they lose their competitive advantage (Tutorea and Rotaru, 2012). Hence, the effectiveness of management and strategies in organizing the processes and activities plays a fundamental role in the alignment of competitiveness (Buckley et al., 1988).

Therefore, operational effectiveness is a primary competence of any organization in establishing processes that encourage organizations to exceed customer expectations (Santa et al., 2014). Operational effectiveness allows the firm to act better and faster than their competitors and offer value-adding services or products, exceeding customers' expectations (Namnai et al., 2015; Porter, 1996; Teece et al., 2016). Operational effectiveness refers to the ability to perform activities, establish processes, and value-adding products and services differently and in a better

way than the competitors (Porter, 1996). This definition includes efficiency, but it is not limited to it. Any activity that allows the firm to develop in a more efficient or better way than their competitors can be considered as improving operational effectiveness (Porter, 1996, 2004, 2013). Therefore, the performance dimensions an organization needs to fulfill to reach operational effectiveness are speed, flexibility, reliability, cost, and quality (Hill, 2005; Santa et al., 2014; Singh et al., 2018):

- **Speed** refers to the answer time of organizations to adapt to changes in customers' requirements and market conditions. Constant market changes require fast answers from the organization, not only in delivering new products or services but also in process changes (Phillips and Jeong, 2001). Improving speed leads an organization to be able to shorten the time between the service request and delivery of the service, with the times and frequency requested by customers (Hill, 2000).
- **Flexibility** includes an organization's ability and the extent to adjust (what, how, and when it does) to changes in response to customers' requirements (Slack et al., 2004). It is considered as a core capability and a key factor in any organization, whether the firm offers products or services, or is a profit-orientated or a non-profit organization (Slack et al., 2006).
- **Reliability** means that firms' processes consistently perform as expected, that is, customers are satisfied by organizations that provide services as agreed (Corbett, 1992).
- **Cost performance** consists of being more efficient and organizing and aligning processes such as purchasing, production, and staff performance to generate a

minimum of waste in all organizational activities (Russell and Taylor, 2008). Cost performance considers the relationship between cost and reaching the organizational goals at the lowest price (Bisbe and Otley, 2004). An appropriate analysis of cost components impacting the total cost performance of an organization allows identifying the areas of improvement (Slack et al., 2004).

- **Quality** consists fundamentally in satisfying customers' requirements and offering the products they need. Some quality aspects are zero-defect production, service methods, post-sale service, service facilities and location, service personnel, service consistency, responsible attitude, repair quality, and any other characteristics that increase customer satisfaction (Love et al., 1995; Yang, 2011). Improving quality provides organizations the opportunity to cover the gap between what they offer and what customers demand and through this position itself. (Santa et.al, 2010). Quality is considered as the consistent provision of products and services that satisfy customers, rather than only minimizing defects and conforming to specifications without any clear market-orientated continuous improvement (Russell and Taylor, 2008).

Considering the previous dimensions, as an organization invests in innovation for better use of resources through these core processes enables the organization to eliminate waste, reduce costs, adapt more appropriate technological innovation and, therefore, perform better than competitors and reach a competitive advantage to sustain over time (Porter, 1996).

Operational effectiveness as a concept has been researched extensively since industrialization first emerged in the world. Because of this the theoretical aspects haven't changed much over time and are no subject to cutting-edge research. What does change is the

method by which OE is achieved, but for our research, it is not necessary to delve deeply into the different methods that current organizations employ today because the instrument that will be used to measure this variable accounts for any particularity that may come up. It is important to highlight that there is a lack of research between UOE, OEA, and operational effectiveness, therefore one of the objectives of this study is to address their possible relationship. Nonetheless, Santa, et al., (2019) have found a positive relationship between the UOE and operational effectiveness, demonstrating that individuals are paying attention to the role of key performance drivers (cost, quality, reliability, flexibility, and speed). Therefore, organizations need to dedicate adequate training and dissemination of the strategic role of operational effectiveness to achieve a sustainable competitive advantage (Santa, et al., 2019).

## **Transformational Leadership**

Leadership has been a topic of interest throughout history; however, it was only in the 20th century that scientific studies began. A rigorous study of the leadership phenomenon began with the work of sociologist Max Weber in the early part of the 20th century. The concept of leadership doesn't have a single definition due in part to how broad and complex it is, for example, Chiavenato (1993) defines leadership as the interpersonal influence in a given situation, directed through the process of human communication towards achieving one or several specific objectives; Harvard professor John Kotter (2008) when referring to leadership says that it is no more than the activity or process of influencing people to willingly act or perform towards achieving certain goals.

The study of leadership can be divided into three stages. Each stage can be characterized by a prominent research strategy and focus of interest. The earliest stage attempted to identify traits of leaders, and the next stage focused on the behavior of leaders. The third stage centered

on the fit between leadership style and the situation leaders face (Tirimizi, 2002). Leadership is now studied from two points of view; the first one sees leadership as a hierarchical position within organizations, the other one sees leadership as a process of social influence that occurs within a social system (Hellan and Winston, 2005).

These previous points of view lead us to four different prevailing theories of leadership: Trait, behavioral, contingent, and transformational (Doyle and Smith, 1999). For this research, we will focus on transformational leadership which is based on achieving the set goals of the leader/organization, as well as points of transformation not just for the organization itself but its members as well. The purpose of transformational leadership is to obtain results without leaving behind the goals of the rest of the members of the organization. Bass (2006,2008) explains that transformational leadership is made up of four main components which are as follows:

- ***Charisma*** is the ability to influence others through the creation of a vision or project that replaces individual goals with those of the leader (It's hard to separate it from the inspiration component).
- ***Inspiration*** represents the ability of the leader to express and involve other people in his projects and objectives.
- ***Intellectual stimulation*** means that the leader enables the creation of new solutions or new ways to solve habitual problems.
- ***Individualized consideration*** means that the leader takes care of every member of the team, looking out for their well-being, providing protection, and ensuring their safety.

Research on leadership has continued and different fields of the study add their elements to what affects it. Emotional intelligence (EI) is an emerging topic for psychological, educational,

and management researchers and consultants (Langhorn, 2004) and the relationship that EI has with leadership has started to gain traction among researchers as a fundamental element of leadership (Wong and Law, 2002). Some emerging leadership theories also imply that emotional and social intelligence are even more important for leaders and managers because cognitive and behavioral complexity and flexibility are important characteristics of competent leaders (Boal and Whitehead, 1992).

Up until the early 2000s, there was little empirical evidence in the literature about the relationship between the EI of both leaders and followers and their job outcomes. One of the reasons for this gap was the lack of a psychologically sound yet practically short measure of EI that can be used in leadership and management studies (Wong and Law, 2002). The development of the Wong and Law Emotional Intelligence Scale (WLEIS) allowed researchers to begin studies into the impact that EI has in the workplace, especially in leadership roles. However, there is little psychometric evidence regarding the Wong-Law Emotional Intelligence Scale in Spanish-speaking countries, which could lead to it also being little used in research and professional practice (Merino et al, 2016). Also, it is important to consider that research on leadership is abundant in several fields, but its link with EI is a more recent endeavor, and literature on the matter is scarce, especially in Colombia.

## **Main objective**

- Explore the relationship between two variables of Emotional Intelligence (EI); use of emotions (UOE) and other's emotion appraisal and recognition (OEA), along with Transformational Leadership (TL) and their impact on the Operational Effectiveness (OE) of multisectoral organizations in Valle del Cauca region.

## Specific objectives

- Identify the degree of importance that the use of emotions (UOE) and other's emotion appraisal and recognition (OEA) has in an organization and its members to achieve its goals.
- Establish the role of emotional intelligence (UOE) to achieve a competitive advantage by improving the operational effectiveness (OE) of different organizations in various economic sectors in the Valle del Cauca region.
- Investigate if transformational leadership (TL) has an impact on the use of emotions (UOE), other's emotion appraisal and recognition (OEA), and operational effectiveness (OE) in different organizations in various economic sectors in the Valle del Cauca region.

## Research method

This is a cross-sectional non-experimental quantitative investigation that aims to examine if there is a correlation between two variables of emotional intelligence (OEA and UOE) and two organizational variables OE and TL, thus looking to explain and quantify the different observable phenomena among them. For three of the variables, an adaptation of Santa et al. (2019) and Tidd et al (2013) self-administered survey questionnaire was used starting with a demographic section (industrial sector, size of the company, education area, and work area) followed by a conceptualized set of variables (OEA, UOE, OE). The model's variables are rated with the use of a 5-point Likert-style scale (Strongly Agree–Strongly Disagree).

The instrument used to measure the transformational leadership variable is the CELID (Cuestionario de Estilo de Liderazgo) (Castro et al., 2004) that operationalizes Bass's leadership theory (Bass and Avolio, 1990). The CELID instrument is derived from the MLQ (Multifactor Leadership Questionnaire) (Bass, 1985,1990) and it gives an idea about the 3 predominant

leadership styles, transformational, transactional, and laissez-faire (absence of leadership). In addition, it has two types of questionnaires, for leaders (CELID-A) and subordinates (CELID-S), each with 34 self-administered response items where the leader records what they perceive as their behavioral frequency based on a 5-point Likert-type scale (Strongly Agree–Strongly Disagree). Also, it can be applied individually or collectively and is answered in 15 minutes. Once the test is applied, it allows an average score to be obtained for each of the leadership styles. This result obtained is transformed into percentiles and compared with the standard scale to identify the individual leadership style. Due to the nature of this study, only the part of the questionnaire that measures transformational leadership was used since this is the leadership variable that was chosen to be used in the structural equation modeling (SEM).

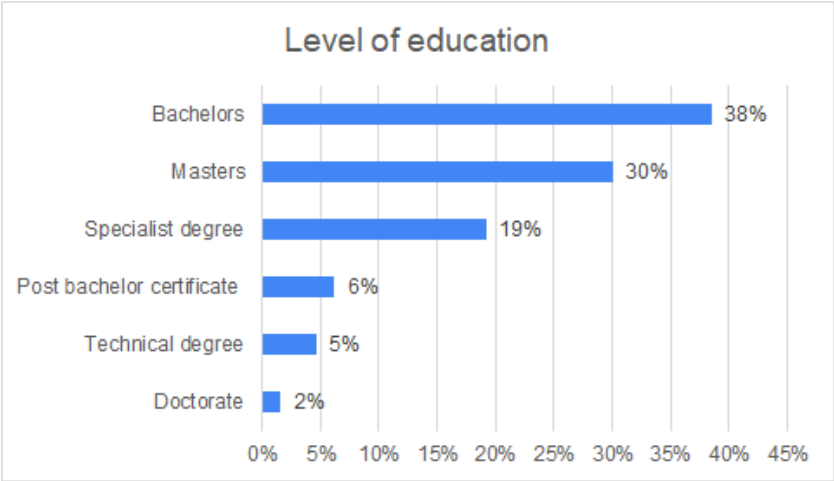
Considering the above, the average mean values of the statements ratings in both instruments will be used to generate the structural equation model (SEM). This methodology was chosen as it fits the requirements of this research and allows the analysis of latent variables and their relationship. Moreover, the instruments will be distributed to the participants that fit the criteria of our investigation, which are members of different organizations in various economic sectors in the Valle del Cauca region.

The 2 questionnaires were then integrated into a single form which was submitted online to 1000 individuals that work for organizations in different economic sectors on a national level. 130 valid responses were received representing a successful response rate of 13%. The demographical data was broken down according to the highest level of education achieved, the type of organizations that the respondent belongs to, and their position inside the organization. The overall data is shown in Figure 1, 2 and 3.

## **Figure 1**

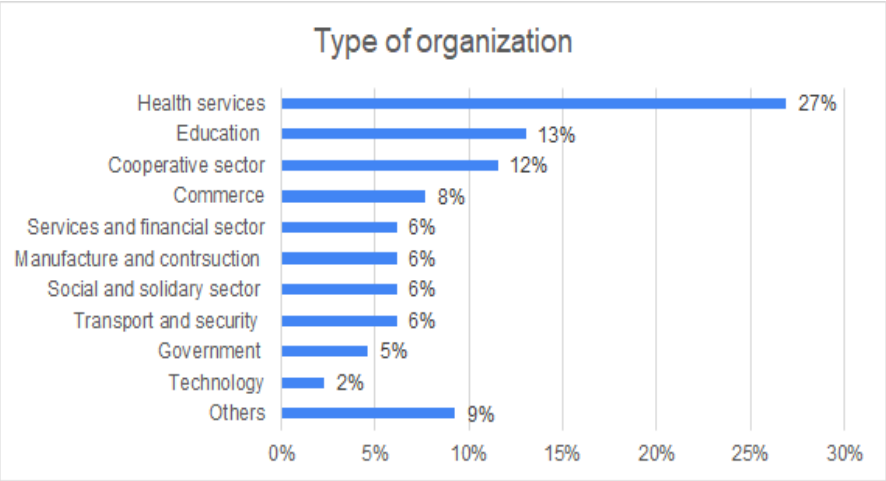


*Level of education*



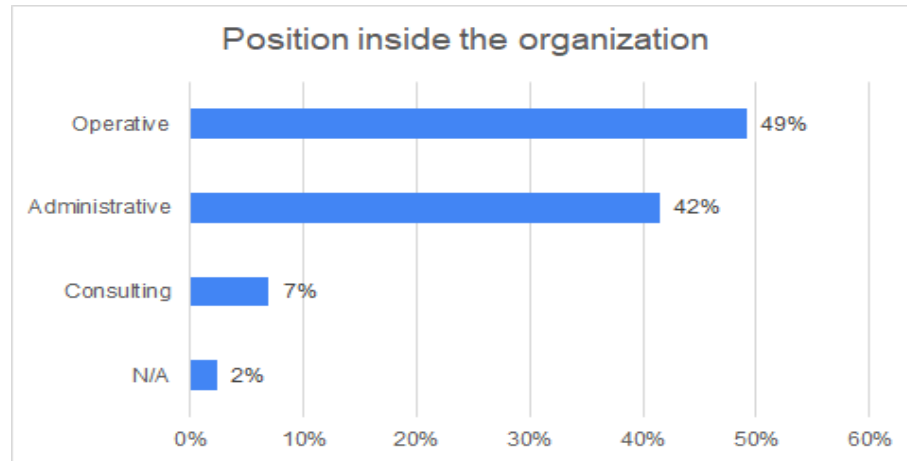
**Figure 2**

*Type of organization*



**Figure 3**

*Position inside the organization*



## Hypotheses

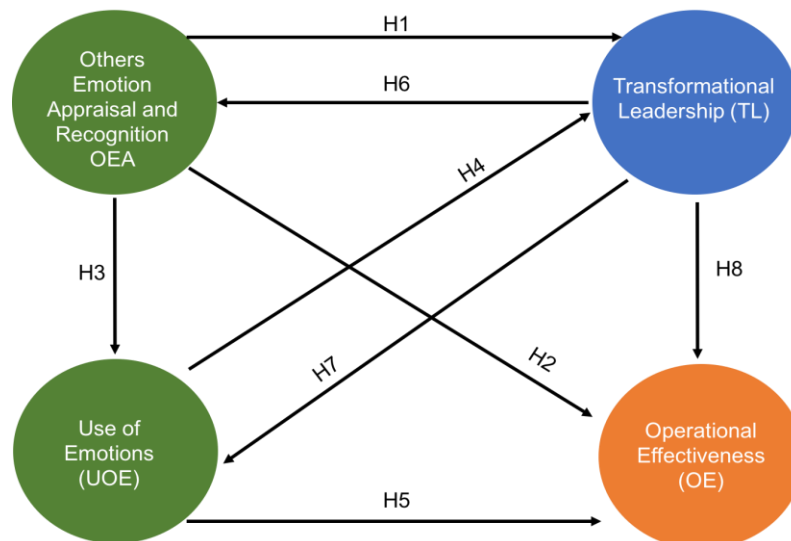
Our purpose is to confirm a hypothetical model that seeks to illustrate a positive relationship between the two aspects of Emotional Intelligence and Transformational Leadership and their impact on Operational Effectiveness with the following hypothesis (see Figure 4 for the hypothesized model):

- **H1:** There is a positive relationship between Others Emotion Appraisal and Recognition (OEA) and Transformational Leadership (TL).
- **H2:** Others Emotion Appraisal and Recognition (OEA) favors the Operational Effectiveness (OE) of organizations.
- **H3:** There is a positive relationship between Others Emotion Appraisal and Recognition (OEA) and Use of Emotions (UOE).

- **H4:** There is a positive relationship between the Use of Emotions (UOE) and Transformational Leadership (TL).
- **H5:** Use of Emotions (UOE) favors Operational Effectiveness (OE) in organizations.
- **H6:** There is a positive relationship between Transformational Leadership (TL) and Others Emotion Appraisal and Recognition (OEA).
- **H7:** There is a positive relationship between Transformational Leadership (TL) and Use of Emotions (UOE).
- **H8:** Transformational Leadership (TL) favors Operational Effectiveness (OE) in organizations.

**Figure 4**

*Research Model with Hypotheses*



## Data analysis

Collected data were interpreted using the statistical software Analysis of Moment Structures (AMOS Development Corporation, Spring House, Penn, USA). Confirmatory factor analysis (CFA) was used to examine and study the relationships between observed variables and to check and confirm the overall model fit (Cooksey, 2007; Hair et al., 2010). Factor loadings were estimated, by confirming that items loaded on only one construct and our latent constructs correlated with each other.

The Chi-square equals 409.971 and CMIN/DF of 1.847 with a 0.000 significant level (see Table 1). Note that Wheaton et al. (1977) suggested a ratio of approximately five or less ( $CMIN/DF \leq 5.0$ ) as a reasonable criterion, Marsh and Hocevar (1985) recommended using ratios as low as two or as high as five, and Carmines and McIver (1981) suggested ratios in the range of 2:1 or 3:1 as indicatives of an acceptable fit between the hypothetical model and the sample data. Thus, the model has an acceptable fit.

**Table 1**

*Model statistics CMIN*

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	54	409.97	222	.00	1.847
Saturated model	276	.000	0	0	
Independence model	23	1714.7	253	.00	6.778

Even if P-value is significant, the reliability of each of the constructs in the model was evaluated using several fit statistics, the root mean square error of approximation (RMSEA) was acceptable as the model had a value of 0.081 (see Table 2). It is considered that values less than

0.05 are good, between 0.05 and 0.08 are acceptable, between 0.08 and 0.1 are marginal, and values greater than 0.1 are poor (Fabrigar et al., 1999).

**Table 2**

*Model statistics RMSEA*

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.081	.069	.093	.000
Independence model	.212	.202	.221	.000

Goodness-of-fit indices (GFI) were calculated to support the model, resulting in a GFI of 0.792 (see Table 3). 1 is the value of an ideal fit, which shows a good Goodness-of-fit index (Jöreskog and Sörbom, 1982).

**Table 3**

*Model statistics Goodness-of-Fit-Indices*

Model	RMR	GFI	AGFI	PGFI
Default model	.042	.792	.741	.637
Saturated model	.000	1.000		
Independence model	.204	.256	.188	.234

The baseline comparisons fit indices suggest that the hypothesized model fits the observed variance-covariance matrix well relative to the null or independence model (see Table 4). The values of the baseline comparisons are above 0.7 and supported the model with results above 0.7- 0.8 (Bentler, 1990).

**Table 4**

### Baseline Comparisons

Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rho1	Delta2	rho2	
Default model	.761	.728	.874	.853	.871
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Using Cronbach's alpha coefficient and the items-to-total correlation, internal consistency in each construct was assessed (see Table 5). According to Hulin et al. (2001), a generally accepted rule is that  $\alpha$  of 0.6-0.7 indicates an acceptable level of reliability, and 0.8 or greater a very good level. Therefore, the scale is reliable and the constructs are correlated with each other.

**Table 5**

#### *Chronbach's Alpha ( $\alpha$ )*

Constructs	Items	Chronbach's Alpha ( $\alpha$ )
Other Emotions Appraisal - OEA	3	.677
Use of Emotions - UOE	3	.635
Transformational Leadership - TL	14	.885
Operational Effectiveness - OE	16	.906

## Results and discussion

The structural equation modeling (SEM) results are shown in Table 6 and the comparison between the Hypothesized Model and the Structural Model in Figures 5 and 6. The relationship between OEA and TL was found to be non-significant ( $b=.28$ , n.s), therefore rejecting H1. But between UOE and LT there is a positive relationship ( $b=.53$ ,  $p<0.05$ ), marginally supporting H4.

In the same vein, the relationship between OEA towards UOE is marginally supported ( $b=.37$ ,  $p<0.05$ ) demonstrating a positive relationship and corroborating H3. From these results, we can determine that the ability to appraise others' emotions does not necessarily lead to effective transformational leadership. However, that same ability does lead to a better display of the use of emotions to facilitate performance, and the UOE variable relationship with transformational leadership was shown to be marginally supported. This displays a chain interaction between these variables where an individual that has a high ability to appraise others' emotions should then be able to make use of those emotions to facilitate performance and this, in turn, can be an indicator of effective transformational leadership which can lead to better operational effectiveness.

There is a strong and positive relationship between TL and the two variables of EI (OEA:  $b=.64$ ,  $p < 0.001$ ; and UOE:  $b=.48$ ,  $p < 0.001$ ), corroborating hypotheses H6 and H7. This means that a person that displays high levels of transformational leadership will in turn have a high degree of emotional intelligence, specifically referring to OEA and UOE. The strong results obtained from H6 and H7 along with the results from H1, H3, and H4 show that there is an interesting and strong interaction between TL and EI, but said interaction can be interpreted as a leader being almost required to be someone that has high levels of emotional intelligence, while a person that possesses a high degree of EI does not necessarily make a leader. This is very important because it shows that a person displaying EI qualities is not enough to be considered for effective leadership positions. However, EI is a strong factor in the performance of leaders who thanks to their ability to appraise and use the emotions of others, can use this information to influence team members towards common goals (Amabile et al., 2005; George, 2000; Liu and Liu, 2013). As Bessant (2018) said no man is an island, and as such, the leader's ability to move

his continent of people will result in better performance and effectiveness for the organization, and this mobilization is done thanks to his ability to use others emotions.

Emotional Intelligence seems to have no direct impact on OE, thus H2 which explores if OEA favors OE is not supported in the results ( $b=.10$ , n.s) and the same happens with H5 that looked into how UOE favors OE ( $b=.16$ , n.s). Nevertheless, it was found that the favorability of TL towards OE was marginally supported ( $b=.37$ ,  $p<0.05$ ) confirming what was established in H8. These results are in line with existing literature about the direct impact that leadership has on OE (Moynihan et al., 2012. Fernandez, 2005). Overall, the results show that although EI doesn't have a direct impact on OE, it is still an important element of leadership that in turn does impact OE, so the interactions between some of these variables may not be as direct as previously thought, but they influence each other. An example of this is found in more recent literature that shows how a single individual can have a significant impact on operational effectiveness when he/she is part of cross-functional teams (Messu et al., 2020), so even though a single individual with high EI is not enough to improve OE, a leader that can effectively mobilize people thanks to his ability to facilitate performance (UOE) will have a significant impact on the overall operational effectiveness of the organization. These indirect interactions between the variables present interesting questions that merit further analysis.

**Table 6**

*Regression Weights: (Group number 1 - Default model)*

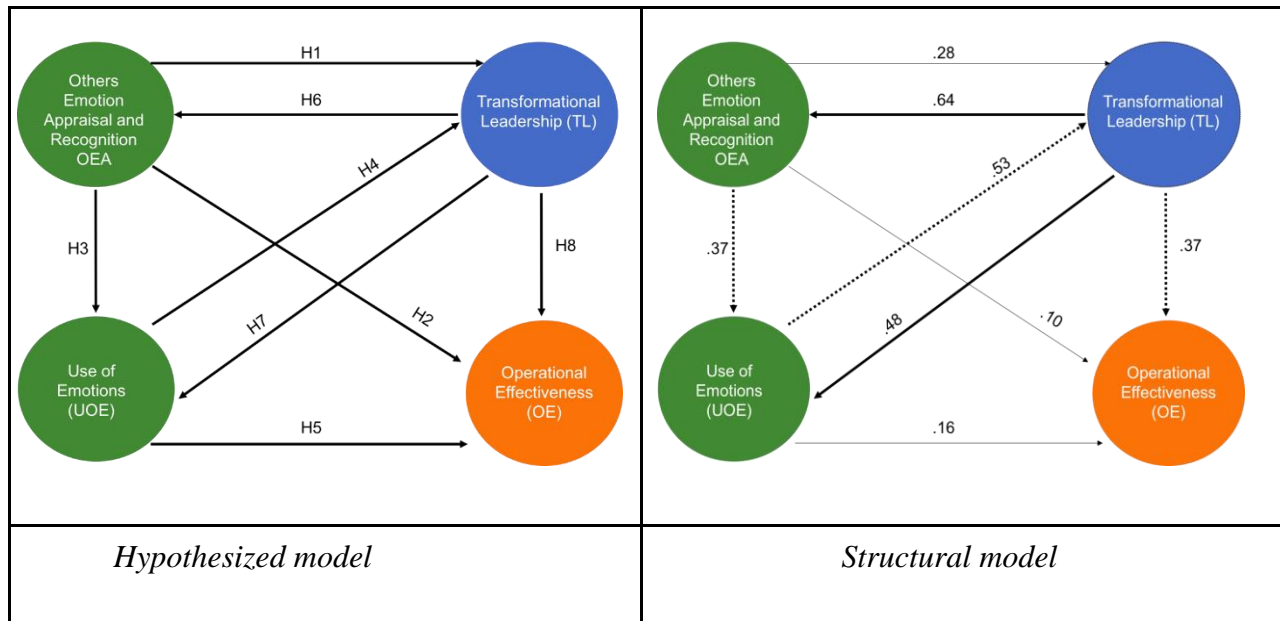
		Estimate	S.E.	C.R.	P	Label
TL	← OEA	.199	.107	1.860	.063	Not supported
OE	← OEA	.086	.143	.602	.547	Not supported
UOE	← OEA	.293	.120	2.442	.015	Marginally supported
TL	← UOE	.481	.148	3.263	.001	Marginally supported



OE	← UOE	.174	.205	.848	.397	Not supported
OEA	← TL	.897	.189	4.750	***	Supported
UOE	← TL	.534	.161	3.322	***	Supported
OE	← TL	.459	.196	2.340	.019	Marginally supported

Figure 5 and 6.

Models



Conclusions

In the development of this research, we verified the already well-documented influence that leadership can have on operational effectiveness (Judge and Piccolo, 2004; Vogel and Masal,

2015; Fernandez, 2005), however emotional intelligence is a concept that has barely been approached in the region and currently sees no practical application.

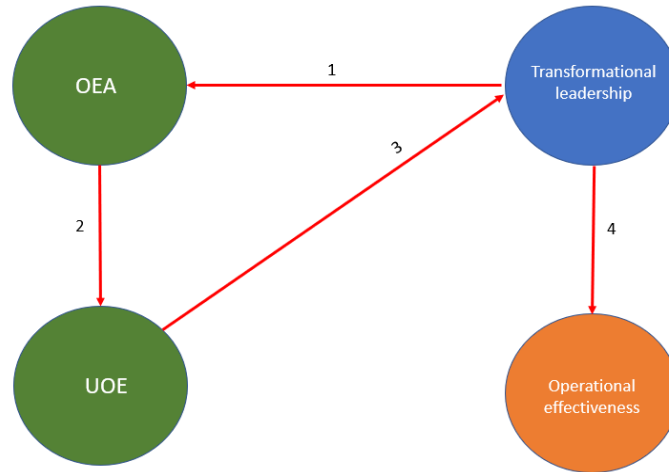
The analysis of the results show that transformational leadership has a strong relationship with emotional intelligence traits, in this case, OEA and UOE. Given the premise that leadership has a direct impact on operational effectiveness, the results show an indirect interaction/relationship between emotional intelligence and OE in the form of a chain interaction that goes as follows

- **First** (1) transformational leadership being strongly related to OEA and UOE
- **Second** (2) OEA is positively related with UOE
- **Third** (3) UOE positively influences transformational leadership
- **Fourth** (4) transformational leadership has a clear direct influence on operational effectiveness.

This chain interaction between the variables shown in Figure 7, presents a clear influence of EI on two of the variables that are regarded in literature as some of the most important for organizational effectiveness, thus warranting further study to fully comprehend the way these variables influence each other be it directly or indirectly.

**Figure 7**

*Chain relationship from EI and OE*



The results of this investigation provide initial pieces of evidence that emotional intelligence variables have an influence in elements of organizations that are key to their overall success, specifically referring to leaders and operational effectiveness.

Organizations should be aware that when seeking to fill a managerial or leadership position, a person with low levels of emotional intelligence will lack a significant trait related to transformational leadership which may be reflected in the effectiveness not just of his or her individual work, but also the overall operations of the team managed by said leader. Because of this, when designing selection processes, emotional intelligence should be considered as an item to be evaluated for prospective members of the organization looking to have the best performance possible.

The current work climate in organizations is vastly different than what it has been before. The pandemic and following economic problems that have affected the vast majority of organizations calls for CEOs and managers to look into the well being of their employees in a

way that goes beyond anything that has been required prior to 2019. Because of this, leadership inside organizations is required to be aware of the emotional state of its members if they to continue to focus on obtaining the best results without burning out their human resources, and so we recommend that emotional intelligence becomes one of the core elements to require and develop for the leaders, managers and CEOs of today, this is because having a high level of emotional intelligence doesn't necessarily mean that you are a "warm and fuzzy" person; it means that you are good at paying attention to how you interact with people, how people react to you and how to be deliberate and strategic with building relationships. These abilities are key for any organization to remain competitive today so like it was mentioned before organizations should not only look for this when hiring new people, but also look into developing these traits in the current leadership of any organization.

According to what was found in this research, consciously humanizing the work environment is necessary, an action that is reflected in the proper use of the emotional intelligence of each leader with his team. This would not only bring with it greater performance, motivation, and therefore, operational effectiveness at the individual level, but it would translate into a collective result that contributes to the company to achieve its proposed goals and achieve a greater impact on its teams and position itself in the market with an added value that differentiates and distinguishes them from their competitors and thus survive over time. In this sense, consciously humanizing can be seen as a strategic alternative to achieve the business competitiveness that every organization seeks, by turning the environment around to achieve it, realizing that human capital is the most important asset of the company and that each individual is a totally different world, with its concerns, fears, emotions, feelings and responsibilities. Thus, each employee is not only a worker, but is also a son / daughter, father / mother, brother / sister.

Through this route, the same desired end is achieved but covering what is really important, achieving more significant impacts on your teams. Finally, it is time to stop seeing the individual as a mere object of production and see him as he really is, bet on giving him the value he deserves, take the time to get to know him in order to identify how to increase his well-being and bet on developing his talent.

Finally, the contribution of this paper to the literature is as follows; first, it gives initial indications that emotional intelligence is a trait found in transformational leaders, thus showing the importance of assessing this variable when looking to find people that fit this leadership style. Second, it shows that although emotional intelligence doesn't appear to have a direct impact on operational effectiveness, it has interesting interactions that may lead to it having an indirect influence on this variable. Third, it strengthens existing literature regarding the value of leadership ability as a means to increase overall operational effectiveness in organizations. Finally, it begins to fill a void in the knowledge regarding the interaction of these variables in organizations on a national and regional level.

## **Limitations**

A convenience sample was used, deliberately choosing the respondent population based on their experience, sector, operations and practice knowledge, expertise, and position. Secondly, due to the pandemic COVID-19 and the national civic unrest in May 2021 the collected data was not the expected one. Thirdly, according to the above, the present investigation cannot be characterized to one sector, as it contains data from several economic sectors. As a consequence, it is proposed that it is necessary to develop further studies, where the model used in this research can be applied in a specific sector, to be able to generalize, with more significant data collected.

Nevertheless, the model fit depicted in this study shows congruence, therefore, allowing us to infer accordingly.

## **Ethical considerations**

This research is regarded as a minimum risk investigation following the resolution N° 008430 of 1993 from the ministry of health of the Republic of Colombia. The investigation is an academic study whose methodology requires no physical interaction with its target population. Which, due to their particular characteristics, they are not regarded as a vulnerable population. Even though in a worst-case scenario potential risks can be:

1. Management of information regarding informed consent/privacy/confidentiality: if the result of our investigation or the way we portray the results allows for particular individuals to be identified we would be violating their privacy. All the information is collected using informed consent that complies with the university guidelines and legal requirements. In order to prevent the mismanagement of information, results would be presented in general, not specifically any person or sector so no one can feel identified.

2. Misuse of the results regarding the use of others emotions: results may shed some light on how emotionally intelligent people may influence others. Which to a certain degree can have unintended negative effects on people, such as leading to workplace abuse due to the ability of a person in a management position to exert a negative influence over the other members of the organization.

For this reason, the results will simply show how a level of emotional intelligence can have an impact on the behavior of the people surrounding the subject, and the way this can benefit an organization, without delving into how a person can influence another's behavior.

However, the findings of the investigation would be valuable since any organization must be aware of the full scope of a person's capabilities and how they affect their work be it negatively or positively. As stated before, the risks of this investigation are minimal as long as the information is handled with the proper care.

## References

- Amabile, T.M., Barsade, S.G., Mueller, J.S. and Staw, B.M. (2005) 'Affect and Creativity at Work', *Administrative Science Quarterly*, Vol 50, No. 3, pp 367-403.
- Bar-On R. (2000). *Emotional and social intelligence: insights from the emotional quotient inventory*, In Bar-On R. Parker J. D. A. (Eds.), the handbook of emotional intelligence: theory, development, assessment, and application at home, school, and in the workplace, San Francisco, CA: Jossey- Bass, 363-388.
- Bass, B.M. (1985). *Leadership and performance beyond expectations*. New York: Free Press.
- Bass, B.M. & Avolo, B. (1990). *Manual for the Multifactor Leadership Questionnaire*. Palo Alto, CA: Consulting Psychologists Press.
- Bass B.M. & Riggio R.E. (2006). *Transformational leadership (2ed.)*. Mahwah, USA: Lawrence Erlbaum Associates, Inc.
- Bass, B. (2008). *The Bass handbook of leadership. Theory, research & managerial applications (4ta. Ed.)* New York: Free Press.
- Belton, P. (2017) *Competitive Strategy*, Macat Library, London.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107(2), 238-246. doi:10.1037/0033-2909.107.2.238



- Birdi, K., Clegg, C., Patterson, M., Robinson, A., Stride, C.B., Wall, T.D. and Wood, S.J. (2008) 'The impact of human resource and operational management practices on company productivity: a longitudinal study', *Personnel Psychology*, Vol 61, No. 3, pp 467-501.
- Bisbe, J. and Otley, D. (2004) 'The effects of the interactive use of management control systems on product innovation', *Accounting, Organizations and Society*, Vol 29, No. 8, pp 709-737.
- Boal, K. B. , & Whitehead, C. J. (1992). A critique and extension of the stratified systems theory perspective. In R. L. Phillips & J. G. Hunt (Eds.), *Strategic leadership: A multiorganizational-level perspective* (pp. 237-254). New York: Praeger.
- Bowen, D.E., Chase, R.B. and Cummings, T.G. (1990) *Service management effectiveness: Balancing strategy, organization and human resources, operations, and marketing*, *Service management effectiveness: Balancing strategy, organization and human resources, operations, and marketing.*, Jossey-Bass, San Francisco, CA, US.
- Buckley, P.J., Pass, C.L. and Prescott, K. (1988) 'Measures of international competitiveness: A critical survey', *Journal of Marketing Management*, Vol 4, No. 2, pp 175-200.
- Carmines, E., & McIver, J. (1981). *Unidimensional Scaling Sage Publications : The International Professional Publishers.*: Indiana University.

- Castro Solano, A., Nader, M. & Casullo, M. M. (2004). La evaluación de los estilos de liderazgo en población civil y militar: Un estudio con el MLQ (Multifactor Leadership Questionnaire) de Bass y Avolio. *Revista de Psicología*, 22, 65-88.
- Chiavenato, Idalberto. (1993). *Iniciación a la planeación y el control de la producción / A beginner's course in production control and planning*. México, D.F.; McGraw-Hill
- Cooksey, R.W. (2007) *Illustrating Statistical Procedures: For Business, Behavioural & Social Science Research*, Tilde University Press, Prahran VIC 3181, Australia.
- Corbett, L.M. (1992), "Delivery windows – a new view on improving manufacturing flexibility and on-time delivery performance", *Production and Inventory Management Journal*, Vol. 33 No. 3, pp. 74-9.
- Doyle, M.E. & Smith, M.K. (1999). *Born and bred Leadership, heart and informal education*. London, UK: YMCA George Williams College/Rank Foundation.
- Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999).Evaluating the use of exploratory factor analysis in psychological research.*Psychological Methods*, 4(3), 272–299.
- Fernandez, S. (2005). Developing and testing an integrative framework of public sector leadership: Evidence from the public education arena. *Journal of Public Administration Research and Theory*, 15, 197-217.
- Gardner, H. (1993) *Multiple intelligences: the theory in practice*, Basic Books, NY.
- George, J.M. (2000) 'Emotions and Leadership: The Role of Emotional Intelligence', *Human Relations*, Vol 53, No. 8, pp 1027-1055.

- Goleman D. (1995). Emotional intelligence: why it can matter more than IQ?, New York: Bantam Books.
- Hair, J.F., Black, W.C. and Babin, B.J. (2010) *Multivariate Data Analysis: A Global Perspective*, Pearson Education, Global Edition.
- Helfat, C.E. and Martin, J.A. (2014) 'Dynamic Managerial Capabilities: Review and Assessment of Managerial Impact on Strategic Change', *Journal of Management*, Vol 41, No. 5, pp 1281-1312.
- Helland, M.R. & Winston, B.E. (2005). Towards a deeper understanding of hope and leadership. *Journal of leadership and Organizational Studies*, 12 (2), (pp. 42-54).
- Hill, T. (2005) *Operations Management*, Palgrave Macmillan, New York, NY.
- Hill, T. (2000), *Operations Management: Strategic Context and Managerial Analysis*, Palgrave, Basingstoke.
- Hulin, C., Netemeyer, R., and Cudeck, R. (2001). Can a Reliability Coefficient Be Too High *Journal of Consumer Psychology*, Vol. 10, Nr. 1,55-58
- Jöreskog, K., & Sörbom, D. (1982). Recent developments in structural equation modeling. *Journal of Marketing Research*, 19(14), 404–416.
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89, 755-768

- Kotter, J. (2008). Choosing Strategies for Change. *Harvard Business Review*, July–August 2008 issue.
- Langhorn, S. (2004), "How emotional intelligence can improve management performance", *International Journal of Contemporary Hospitality Management*, Vol. 16 No. 4, pp. 220-230.
- Lin, H.-F., Su, J.-Q. and Higgins, A. (2016) 'How dynamic capabilities affect the adoption of management innovations', *Journal of Business Research*, Vol 69, No. 2, pp 862-876.
- Liu, X.Y. and Liu, J. (2013) 'Effects of team leader emotional intelligence and team emotional climate on team member job satisfaction: A cross-level', *Nankai Business Review International*, Vol 4, No. 3, pp 180-198.
- Love, C.E., Guo, R. and Irwin, K.H. (1995) 'Acceptable quality level versus zero-defects: some empirical evidence', *Computers & Operations Research*, Vol 22, No. 4, pp 403-417.
- Marsh, H. W., & Hocevar, D. (1985). Application of confirmatory factor analysis to the study of self-concept: First- and higher order factor models and their invariance across groups. *Psychological Bulletin*, 97(3), 562–582.
- Mayer, J.D. and Geher, G. (1996) 'Emotional intelligence and the identification of emotion', *Intelligence*, Vol 22, No. 2, pp 89-113
- Mayer, J.D., Caruso, D., & Salovey, P. (1999). Emotional intelligence meets traditional standards for intelligence. *Intelligence*, 27, 267–298.

- Merino, C. Lunahuana-Rosales, M. Radhan, R. (2016). Validación estructural del Wong-Law Emotional Intelligence Scale (WLEIS): Estudio preliminar en adultos. *Liber*, vol.22, n.1, pp.103-110. ISSN 1729-4827.
- Messu, D. Santa, R. Tegethoff, T. Morante, D. (2020). El impacto de la inteligencia emocional, la innovación y el trabajo en equipos interdisciplinarios, en la efectividad operacional.
- Moynihan, D. P., S. K. Pandey, and B. E. Wright. 2012. “Setting the Table: How Transformational Leadership Fosters Performance Information Use.” *Journal of Public Administration Research and Theory* 22(1): 143–164.
- Namnai, K., Ussahawanitchakit, P. and Janjarasjit, S. (2015) Modern cost Management innovation and performance: A conceptual model, 7, Jordan Whitney Enterprises, Inc.
- Othman, A.K., Abdullah, H.S. and Ahmad, J. (2008) 'Emotional Intelligence, Emotional Labour and Work Effectiveness in Service Organisations: A Proposed Model', *Vision*, Vol 12, No. 1, pp 31-42.
- Phillips, D.T. and Jeong, K.Y. (2001) 'Operational efficiency and effectiveness measurement', *International Journal of Operations & Production Management*, Vol 21, No. 11, pp 1404-1416.
- Pisano, G.P. (2017) 'Toward a prescriptive theory of dynamic capabilities: connecting strategic choice, learning, and competition', *Industrial and Corporate Change*, Vol 26, No. 5, pp 747-762.

Porter, M. (1996) 'What is strategy', Harvard Business Review, Vol 74, No. 6, pp 61–78.

Porter, M. (2004) Competitive Advantage, Free Press, New York.

Porter, M. (2013) On Competition, Harvard Business School Publishing Corporation.

Prajogo, D.I., Toy, J., Bhattacharya, A., Oke, A. and Cheng, T.C.E. (2018) 'The relationships between information management, process management and operational performance: Internal and external contexts', International Journal of Production Economics, Vol 199, No., pp 95-103.

Russell, R.S. and Taylor, B.W. (2008) Operations management - Quality and competitiveness in a global environment, 5th edn, John Wiley & Sons, Inc, London.

Salovey P. and Mayer J. D., Emotional intelligence, Imagination, Cognition and Personality, 9(3), 185-211 (1990).

Santa, R., Ferrer, M., Bretherton, P., Hyland, P. (2010), "Contribution of cross-functional teams to the improvement in operational performance", Team Performance Management, Vol. 16 Iss: 3 pp. 148 – 168

Santa, R., Hyland, P. and Ferrer, M. (2014) 'Technological innovation and operational effectiveness: their role in achieving performance improvements', Production Planning & Control, Vol 25, No. 12, pp 969-979.

Santa, R., Ferrer, M., Jørsfeldt, L.M. and Scavarda, A. (2017) 'The impact of the quality of the service from IS/IT departments on the improvement of operational

performance: the point of view of users of technological innovations',

International Journal of Business Information Systems, Vol 28, No. 2, pp 125-146.

Santa, R., Achuri, T., Gomez, A., Franco, M., Tegethoff, T., Morante, D.

(2019). "Exploring the relationship between emotional intelligence, strategies and linkages, and operational effectiveness".

Santa, R.; Morante, D. y Tegethoff, T. (eds.) (2020). *Regiones inteligentes. El factor humano*. Cali: Escuela Militar de Aviación "Marco Fidel Suárez" (EMAVI) y Editorial Universidad Icesi. DOI: <https://doi.org/10.18046/EUI/ee.7.2020>

Santa, R., Tegethoff, T., Shuluep, I., Morante, D., Cruz, M.L. (2021). *The challenges of strategic innovation: achieving operational effectiveness in developing countries*. International Journal of Innovation Management 25 (3), 24

Singh, R.K., Clements, E.J. and Sonwaney, V. (2018) 'Measurement of overall equipment effectiveness to improve operational efficiency', International Journal of Process Management and Benchmarking, Vol 8, No. 2, pp 246-261.

Slack, N., Chambers, S. and Johnston, R. (2004), Operations Management, 4th ed., Pearson Education, Melbourne.

Slack, N., Stuart, C., Johnston, R. and Betts, A. (2006) Operations and Process Management: Principles and practice for strategic impact, Pearson, Harlow, England.

Teece, D., Pisano, G. and Shuen, A. (1997) 'Dynamic capabilities and strategic management', Strategic Management Journal, Vol 8, No. 7, pp 509-533.

- Teece, D., Peteraf, M.A. and Leih, S. (2016) 'Dynamic Capabilities and Organizational Agility: Risk, Uncertainty, and Strategy in the Innovation Economy', *California Management Review*, Vol 58, No. 4, pp 13-35.
- Thorndike, E.L. (1920) 'Intelligence and its uses', *Harper's Magazine*, Vol 140, No., pp 227-235.
- Tidd, J., Bessant, J., & Pavitt, K. (2013). *Managing innovation : integrating technological, market and organizational change*. Nueva York: John Wiley y Sons.
- Tirimizi, S.A. (2002), "The 6-L framework: a model for leadership research and development", *Leadership & Organization Development Journal*, Vol. 23 No. 5, pp. 269-79
- Tutorea, M. and Rotaru, M. (2012) 'Operational Effectiveness and Strategy', *Review of Management & Economic Engineering*, Vol 11, No. 3, pp 11-32.
- Vogel, R., and Masal, D. (2015). Public leadership: A review of the literature and framework for future research. *Public Management Review*, 17, 1165-1189.
- Wheaton, B., Muthén, B., Alwin, D., & Summers, G. (1977). Assessing Reliability and Stability in Panel Models. *Sociological Methodology*, Vol 8, 84-136.
- Wong, C.-S. and Law, K.S. (2002) 'The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study', *The Leadership Quarterly*, Vol 13, No. 3, pp 243-274.



Yang, J.C. (2011) 'What is Quality', Quality Control Journal, Vol 36, No. 8, pp 52–56.

Evaluación de la relación entre inteligencia emocional y liderazgo transformacional y su impacto en la efectividad operativa

## Annex

1. Integrated questionnaire to determine EI and TL relations and impact in OE



<b>Cualquier inquietud contactarse con:</b>	
<p><b>Daniel Soto Cadavid</b></p> <p><b>Universidad Icesi</b></p> <p><b>danielstocadavid@gmail.com</b></p>	<p><b>Laura María Gutiérrez</b></p> <p><b>Universidad Icesi</b></p> <p><b>lauraguti_0123@hotmail.com</b></p>
<p><b>Dr. Martín Nader</b></p> <p><b>Universidad Icesi</b></p> <p><b>mnader@icesi.edu.co</b></p>	<p><b>Dr. Ricardo Santa</b></p> <p><b>Universidad Icesi</b></p> <p><b>rasanta@icesi.edu.co</b></p>

Estimado participante,

### **ACUERDO DE CONFIDENCIALIDAD**

- Toda la información proporcionada será tratada con estricta confidencialidad.
- Las respuestas serán agregadas y analizadas usando métodos estadísticos avanzados y utilizadas para examinar los temas de investigación.
- En ningún momento la información será divulgada a terceros en su forma desagregada.
- Usted puede retirarse en cualquier momento.
- Los estándares éticos pertinentes fueron utilizados por los investigadores en la construcción de este proyecto de investigación.

La Universidad Icesi está dirigiendo este estudio, que tiene como objetivo principal, avanzar en la investigación de cómo la inteligencia emocional influye en la efectividad operativa y los estilos de liderazgo (transaccional y transformacional) de sujetos en diferentes áreas organizativas, regiones y sectores económico y productivos.

Para apoyar la investigación, requerimos de la opinión de funcionarios de diferentes niveles de diferentes organizaciones en la ciudad de Cali institución que están involucrados en la aplicación de las estrategias de innovación y procesos operativos, por ejemplo, administradores, gerentes, ingenieros, desarrolladores, profesores, personal de entrenamiento, técnicos, personal de seguridad, oficiales, entre otros.

Es propósito de este proceso de investigación, establecer un nuevo modelo que dé cuenta de posibles inconsistencias reportadas en la literatura especializada, y posibles vacíos. Aunado a lo anterior, es propósito de esta investigación probar las hipótesis resultantes mediante el análisis de Modelación por ecuaciones estructurales (Structural Equation Modeling – SEM).

En cuanto a producción académica se prevé la escritura de artículos científicos, los cuales corresponderán a la relación y efecto de la inteligencia emocional en la eficacia operativa, la innovación y el desempeño en el rol. Todo ello desde un enfoque de capacidades humanas.

La confidencialidad de este cuestionario es segura. Bajo ninguna circunstancia su nombre o el nombre de la institución para la cual usted trabaja, aparecerá en publicaciones asociadas con esta investigación. Además, la participación en esta investigación no afecta su empleo en ninguna manera.

Si los tópicos o temas presentados en esta investigación son de su interés, por favor solicite al investigador principal del proyecto una copia de los resultados o las publicaciones.

Gracias por su tiempo y colaboración.

**Dr. Ricardo Santa**  
Universidad Icesi  
Cl. 18 #122-135, Cali, Valle del Cauca  
Colombia  
rsanta@icesi.edu.co

**Dr. Martín Nader**  
Universidad Icesi  
Cl. 18 #122-135, Cali, Valle del Cauca  
Colombia  
mnader@icesi.edu.co

### Antecedentes demográficos

1. Seleccione la región geográfica en donde reside la empresa para la que trabaja, su nivel de educación y el cargo que desempeña en la organización.

Caribe	<input type="checkbox"/>
Andina	<input type="checkbox"/>
Pacífica	<input type="checkbox"/>
Orinoquía	<input type="checkbox"/>
Eje Cafetero	<input type="checkbox"/>
Antioquia	<input type="checkbox"/>
Otro:	

Secundaria	<input type="checkbox"/>
Técnica	<input type="checkbox"/>
Pregrado	<input type="checkbox"/>
Diplomado	<input type="checkbox"/>
Especialización	<input type="checkbox"/>
Maestría	<input type="checkbox"/>
Doctorado	<input type="checkbox"/>

Mi Cargo en la Organización es:

\_\_\_\_\_

\_\_\_\_\_

Género:

Hombre	<input type="checkbox"/>
Mujer	<input type="checkbox"/>
Otro	<input type="checkbox"/>

2. Cuál de las siguientes clasificaciones de la industria describe mejor su organización (seleccione una):

Manufactura	<input type="checkbox"/>	Tecnología	<input type="checkbox"/>
Cuidado de la salud	<input type="checkbox"/>	Comercio al por menor	<input type="checkbox"/>
Agrícola	<input type="checkbox"/>	Gobierno	<input type="checkbox"/>
Productos químicos	<input type="checkbox"/>	Transporte	<input type="checkbox"/>
Minería, minerales, metales primarios	<input type="checkbox"/>	Petróleo y gas	<input type="checkbox"/>
Aeroespacial	<input type="checkbox"/>	Alimentos y bebidas	<input type="checkbox"/>
Textil	<input type="checkbox"/>	Educación Superior	<input type="checkbox"/>
Construcción	<input type="checkbox"/>	Automotor	<input type="checkbox"/>
Banca y servicios	<input type="checkbox"/>	Otro	<input type="checkbox"/>

3. Número total de empleados actuales de Tiempo completo y parcial:

1-100	<input type="checkbox"/>
101-250	<input type="checkbox"/>
251 +	<input type="checkbox"/>

4. Clasificación de la empresa:

Microempresa	<input type="checkbox"/>
Pequeña	<input type="checkbox"/>
Mediana	<input type="checkbox"/>
Grande	<input type="checkbox"/>

5. Formación profesional:

Ingeniería	<input type="checkbox"/>	Contabilidad	<input type="checkbox"/>
Administración	<input type="checkbox"/>	Mercadeo	<input type="checkbox"/>
Informática	<input type="checkbox"/>	Finanzas	<input type="checkbox"/>
Ciencias de la salud	<input type="checkbox"/>	Técnica	<input type="checkbox"/>
Otro, especifique:			

6. Su área de responsabilidad:

Ingeniería	<input type="checkbox"/>	Contabilidad	<input type="checkbox"/>
Administración	<input type="checkbox"/>	Mercadeo	<input type="checkbox"/>
Informática	<input type="checkbox"/>	Finanzas	<input type="checkbox"/>
Gerencia	<input type="checkbox"/>	Trabajos generales	<input type="checkbox"/>
Producción	<input type="checkbox"/>	Gerencia de proyectos	<input type="checkbox"/>
Salud	<input type="checkbox"/>	Logística	<input type="checkbox"/>
Otro. Especifique:			

Sección A - Inteligencia Emocional					
Indique en una escala de 1 a 5, sabiendo que 1 indica que está en completo desacuerdo y 5 indica que está completamente de acuerdo, que tan relevante son para usted las siguientes declaraciones:  En mi cargo...	Completament e en	En desacuerdo	Ni de acuerdo ni en	De acuerdo	Completament e de acuerdo
	1	2	3	4	5
Tengo una buena idea de por qué tengo ciertos sentimientos la mayor parte del tiempo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tengo un buen control de mis propias emociones.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soy capaz de controlar mi temperamento y manejar las dificultades de manera racional.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Siempre me pongo metas y luego hago todo lo posible para lograrlas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Siempre puedo calmarme rápidamente cuando estoy muy enojado.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soy un buen observador de las emociones de los demás.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Siempre me digo que soy una persona competente.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Siempre sé las emociones de mis compañeros por su comportamiento.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soy bastante capaz de controlar mis propias emociones.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Siempre sé si soy feliz o no.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soy sensible a los sentimientos y emociones de los demás.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soy una persona auto motivada.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Realmente entiendo lo que siento.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tengo una buena comprensión de las emociones de las personas que me rodean.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Siempre me animo a hacer mi mejor esfuerzo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tengo una buena comprensión de mis propias emociones.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>Sección B - Efectividad Operativa</b>					
<b>Indique en una escala de 1 a 5, sabiendo que 1 indica que está en completo desacuerdo y 5 indica que está completamente de acuerdo, que tan relevante son para usted las siguientes declaraciones:</b>	<b>Completament e en</b>	<b>En desacuerdo</b>	<b>Ni de acuerdo ni en</b>	<b>De acuerdo</b>	<b>Completament e de acuerdo</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>En mi cargo...</b>					
<b>Calidad</b>					
La innovación me permite entregar a la organización y/o el Estado Colombiano servicios o productos mejorados.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Estoy buscando un flujo constante de productos y/o servicios que satisfagan a los clientes (internos y/o externos).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Me esmero porque los servicios/productos que ofrezco respondan a lo acordado.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mis productos / servicios cumplen con los requisitos de los clientes (internos y/o externos).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acepto responsabilidad por los productos o servicios de baja calidad que pudiese ofrecer a la institución y/o el Estado Colombiano.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Costos</b>					
Contribuir en la reducción de costos en la organización es importante para mí.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trato de reducir desperdicios a través de procesos eficientes y un alto desempeño personal.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Es importante para mí reducir los costos en el cumplimiento de mis responsabilidades.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Me preocupo por que la unidad o departamento en el que trabajo sea efectiva en el manejo de costos.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Velocidad – Flexibilidad</b>					
Ofrezco y garantizo servicios / productos a tiempo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soy capaz de ofrecer un producto o servicio en la frecuencia y el tiempo esperado por los clientes / usuarios (internos y/o externos).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Me preocupo en reducir el tiempo entre la requisición del servicio o producto y el tiempo de entrega.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poseo la capacidad de adaptarme a nuevos requerimientos con el fin de responder a las demandas del cliente / usuario (internos y/o externos).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yo podría ofrecer servicios o productos más personalizados.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>Sección C – Estilos de Liderazgo CELID-A</b>					
<b>Hay una serie de afirmaciones acerca del liderazgo y del acto de liderar. Por favor, indique cuánto se ajusta cada una de ellas al <u>ESTILO DE LIDERAR QUE USTED POSEE</u>. 1 indica total desacuerdo con la afirmación, 5 indica total acuerdo con la afirmación y 3 es intermedio (ni de acuerdo ni en desacuerdo).</b>	Completament e en desacuerdo	En desacuerdo	Ni de acuerdo ni en	De acuerdo	Completament e de acuerdo
	1	2	3	4	5
Mi presencia tiene poco efecto en el rendimiento de mis colegas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No trato de cambiar lo que otros hacen mientras las cosas salgan bien.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Colegas y subordinados se sienten orgullosos de trabajar conmigo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pongo especial énfasis en la resolución cuidadosa de los problemas antes de actuar.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Evito involucrarme en el trabajo de otros.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No les digo a subordinados donde me encuentro físicamente en algunas ocasiones.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demuestro que creo firmemente en el dicho “si funciona, no lo arregles”.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Le doy a otros lo que quieren a cambio de recibir su apoyo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Evito intervenir en el trabajo de otros, excepto cuando no se consiguen los objetivos.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Me aseguro que exista un fuerte acuerdo con los demás entre lo que espero que hagan y lo que pueden obtener de mi por su esfuerzo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Siempre que lo crean necesario, pueden negociar conmigo lo que obtendrán a cambio por su trabajo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hago saber a los otros que pueden lograr lo que quieren si trabajan conforme a lo pactado conmigo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Me preocupo de formar (entrenar, educar) a aquellos que lo necesitan.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Centro mi atención en los casos en lo que no se consigue alcanzar las metas esperadas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hago que las personas se basen en el razonamiento y en la evidencia para resolver los problemas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trato que los demás obtengan lo que deseo a cambio de su cooperación	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Estoy dispuesto a instruirles o enseñar a otros siempre que lo necesiten.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No trato de hacer cambios mientras las cosas marchen bien.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Doy charlas para motivar a los demás.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Evito tomar decisiones.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cuento con el respeto de colegas y subordinados.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Potencio la motivación de éxito de los demás.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trato de que los demás vean los problemas como una oportunidad para aprender.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trato de desarrollar nuevas formas para motivar a otros.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hago que otros piensen sobre viejos problemas de forma nueva.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dejo que los demás sigan haciendo su trabajo como siempre lo han hecho, si no me parece necesario introducir algún cambio.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soy difícil de encontrar cuando surge un problema.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Impulso la utilización de la inteligencia para superar los obstáculos.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Les pido a los demás que fundamenten sus opiniones con argumentos sólidos.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Les doy nuevas formas de enfocar los problemas que antes les resultaban desconcertantes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Evito decirles a otros cómo se tienen que hacer las cosas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Es probable que esté ausente cuando se me necesita.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Otros tienen plena confianza en mí.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Confían en mi capacidad para superar cualquier obstáculo.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Si desea hacer algún comentario general que pueda servir a los investigadores, por favor escríbalo aquí:


*Agradeceríamos si pudiera hacer referencia a tres nombres de personas que puedan estar interesados en participar en este proyecto de investigación:*

<b>Nombre de contacto</b>
<b>Nombre de la compañía</b>
<b>Numero celular del contacto</b>
<b>Correo electrónico del contacto</b>

<b>Nombre de contacto</b>
<b>Nombre de la compañía</b>
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<b>Numero celular del contacto</b>
<b>Correo electrónico del contacto</b>

**Muchas gracias por brindar su tiempo y asistencia en esta investigación. Apreciamos mucho su colaboración**