



THE IMPACT OF STRATEGY, EMOTIONAL INTELLIGENCE, INNOVATION, AND  
CROSS-FUNCTIONAL TEAMS ON OPERATIONAL EFFECTIVENESS

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## **Abstract**

Organizations in this day and age are adamant to create a competitive advantage over other firms, by improving their operational effectiveness through innovation and human capital strategies like cross functional teams. It is, therefore, crucial to evaluate how Emotional Intelligence and Cross-functional teams are relevant to improve Process innovation and operational effectiveness in Colombian companies for an advantage in a globalized market.

This paper analyzes quantitative data from 180 questionnaires using a structural equation model. The questionnaire was made to several industries in Colombia. Initial findings suggest that strategy implementation in the companies has a relevant impact on Cross-functional teams, emotional intelligence, and process innovation, however, it lacks to impact operational effectiveness in quality. Although emotional intelligence and strategies are deficient to create quality in operational effectiveness, Cross-functional teams presented a positive correlation with operational effectiveness, as an important variable for Colombian competitive advantage.

This study offers valuable insights for the organization and the creation of competitive advantage through quality in operations. It provides a critical analysis of Colombian continuous education and it shows the importance of organizational learning to create an innovative space and gain effectiveness in quality results. For this, educational institutions in cooperation with organizations should implement programs that cover innovation, emotional intelligence, teamwork, and operational effectiveness to generate integral knowledge that results in higher levels of organizational competitiveness.

**Keywords:** *Innovation, Strategy, Quality, Continuous Education.*

## **Introduction**

In an increasingly globalized market, competitiveness is a vital factor in survivability and performance (Porter, 1996). Enterprises are required to improve their efficiency and productivity to withstand the competitive dynamics of the market. Organizations worldwide that are struggling to gain market share have understood the importance of strategic organizational planning to achieve significant key operations results. Operational effectiveness largely determines the competitiveness of any given organization. Therefore, enterprises must develop strategies that require significant time and resources to achieve better performance through operational effectiveness (Santa, Ferrer, Jørsfeldt, & Scavarda, 2017). As competitiveness between firms becomes fiercer, the implementation of human capital strategies and emotional intelligence creates a path for efficient cross-functional teams and an organic establishment for innovation in the organization.

According to the Organization for Economic Co-operation and Development (OECD), the World Bank, and the World Economic Forum, the importance of competitiveness in a nation's development is set by multiple parameters to determine the country's competitiveness for worldwide comparison. According to the World Economic Forum's competitive report, Colombia is the 57th country in creating opportunities to improve relevant organizational competitiveness and strategy-making (Schwab, 2019). Both at the national and corporate level, innovation is considered a crucial factor for successful competitiveness and significant productivity (Arocena & Sutz, 2010). However, the organizations' most significant obstacle to encourage process innovation is the lack of confidence between employees in the workplace, different work ethics, and divergent priorities in team-building and execution (Santa, Tegethoff,

& Morante, 2019). Although Colombian organizations have recognized these obstacles, the country is identified as an "innovation failure" (Crespi & Zuñiga, 2012).

Innovation is acknowledged as a critical factor for competitiveness in most businesses. In that sense, organizations that have adequate innovative initiatives are expected to present higher labor productivity than their counterparts, thanks to their ability to implement innovation in continuous or disruptive ways (Crespi & Zuñiga, 2012). For this reason, innovation is essential for structural response to market changes by improving processes, practices, and performance of human capital with innovation as a transversal factor to achieve results in quality. However, devoting considerable amounts of resources in the implementation of innovation strategies might not be sufficient to achieve operational effectiveness, as it may not translate to the expected outcomes (Olson, Slater, & Hult, 2005). For this reason, it is crucial to consider other critical factors related to human behavior, the consolidation of successful cross-functional teams, and an overall strategic view of its results.

Considering the extent of innovation and operational effectiveness in organizations, it is crucial to explore and evaluate the factors that may affect them. Cross-functional teams provide a substantial range of ideas, learning, and improvements inside the organization (Boer, et al., 2001). The creation of cross-functional teams may make or break a company strategy that is willing to create an innovative space for significant results in critical operations and quality outputs. Hence, in the continually changing context that companies face, it has become increasingly important to focus on human resource factors, such as senior management support, training, and employee empowerment, not just to survive but to maximize their operational effectiveness (Beer & Eisenstat, 1996; Dyal & Huang, 2001). Colombia's lack of literature about emotional intelligence and its impact on cross-functional teams and operational effectiveness

uncovers the absence of a competitive environment (Acosta-Prado, Zárate Torres, & Pautt Torres, 2015; Zárate Torres & Matviuk, 2012; Sadri, Weber, & Gentry, 2011; Santa, Tegethoff, & Morante, 2019)

Therefore, the study's objective is to explore how and to what extent strategies and emotional intelligence affect an accurate implementation of cross-functional teams in an ever-changing organization. Consequently, its effect on innovation outputs and operational effectiveness of Colombian organizations.

## **Conceptual framework**

### *Strategies*

In a business environment that is characterized by the increasing levels of competition and change; innovation (Ratten, Ferreira, & Fernandes, 2017) and operational effectiveness (OE) (Tutorea & Rotaru, 2012) are essential factors that allow organizations to obtain a competitive advantage and consolidate a dominant market position. In that sense, strategies play a relevant role in the accomplishment of both of these factors. Both strategy and operational effectiveness are necessary to improve performance and gain a competitive advantage over competitors (Tutorea & Rotaru, 2012). Organizations devote a significant amount of time and resources to strategic analysis and development to increase operational effectiveness and performance (Santa, Ferrer, Jørsfeldt, & Scavarda, 2017). Simultaneously, strategies have an essential role in transforming technological innovations and adapting organizations to the forever-changing competitive environment. Studies have shown that if companies wish to survive in complex market environments and increase their competitive advantage against their rivals, strategic

innovation has to be considered as a pivotal factor in the organizational strategy (Cefis & Marsili, 2006; Audretsch, 1995; Dervitsiotis, 2010)

Strategies are defined as guiding principles that generate the desired decision-making pattern when communicated and adopted in the organization (Watkins, 2007), and a standard for assessment (Boer, Kuhn, & Gersten, 2006). Defining long-term goals, the methodology, and guaranteeing the crucial resources and the interaction between these elements is part of the company strategy (Mintzberg, 1987). Furthermore, it is important to clarify that strategies do not specify how the goals will be achieved, thus differencing the concepts of planning and strategy.

Accordingly, the relationship between strategy and operations is vital and must fulfill the corporate objectives. Strategy within the organization makes a difference in each market (Hendela, Turoff, Hiltz, & Fjermestad, 2017). If ably and unambiguously communicated, it has a significant coordinating influence on employees' behavior (Boer, Kuhn, & Gersten, 2006). Thus, the blend of operational efficiency and strategic flexibility is an imperative requirement for developing innovation skills to reach peak performance (Boer, Kuhn, & Gersten, 2006; Johnson, 2006).

### ***Emotional Intelligence***

For the last decade, Emotional intelligence has become a pillar in organizational strategy, leadership, and team building, making it fundamental for a precise analysis in its role in successful multifunctional teams' creation and coordination, innovation in processes, and quality effectiveness. As a result, Emotional Intelligence (EI) has been proposed as an essential and potential construct for human resource management (Bar-On, 1997).

The concept of emotional intelligence is based on the idea of social intelligence introduced by Thorndike in 1920. He defined it "as the ability to act wisely in human relations" (Thorndike, 1920, p. 228). Later on, the concept of emotional intelligence was described as an ability to monitor the self-emotions and emotions of others and use this emotional information to guide thinking and influence the behaviors of others (Goleman, 1995). Hence, emotional intelligence can be founded on the idea of interpersonal and intrapersonal intelligence. Intrapersonal intelligence is defined as the personal ability to symbolize a set of different feelings. While interpersonal intelligence is the personal ability to understand the motivations, intentions, and emotions of those around us (Gardner, 1993).

Emotional intelligence can be categorized as the ability to perceive emotions in oneself and others accurately. The ability to use emotions to facilitate thinking, the ability to understand emotions, emotional language, the signals conveyed by emotions, and the ability to manage emotions to attain specific goals (Mayer & Salovey, 1997). Goleman (1995) complemented saying that this is the capability to influence other people. Also, this author gives importance to empathy with others to achieve optimal relations by recognizing others' emotions and creating strong and lasting social relationships.

The issue of emotions in the workplace emerged as one of the main areas of leadership in the 2000s to understand better the feelings and emotional needs of others through empathy (Ashkanasy & Daus, 2001). As well as a crucial component in "teamwork and cooperation" (Goleman, 1995, p. 163). For cross-functional groups, emotional intelligence can be defined as an atmosphere in which the norms build emotional capabilities that help their participants perform better in emotionally uncomfortable environments and influence their own and other's emotions in constructive ways. Highlighting the importance of being mindful of its members'



emotions and the group as a whole and building trust, identity, and efficacy (Druskat & Wolff, 2001). As mentioned previously, the impact and positive result of emotional intelligence depend on the combination of individual-level factors that each member possesses and a group-level factor defined by the relationship and the group's emotional intrapersonal skill as a whole (Kelly & Barsade, 2001).

Innovation can be described as useful information allowing different information and abilities of employees to convert efficiently (Drucker, 1985). Innovation can be perceived as a set of actions, including interactive processes involving relations between different actors and knowledge exchange, to create an innovative environment and group (Patel & Pavitt, 1994). Emotional intelligence and positive moods have been proved to facilitate creative idea generation. Energizing a group, generating emotions for problem-solving, and keeping calm in a stressful group or interpersonal situations is a skill that can be learned (Ciarrochi, Forgas, & Mayer, 2001). Innovation often requires organizational change; emotionally intelligent leaders can effectively manage the emotions in innovative and fast-changing environments. "Emotional intelligence is the most important ingredient contributing to increase morale, cooperation, teamwork and motivation" (Strickland, 2000 in Foltin & Keller, 2012, p. 22).

### ***Cross-Functional teams***

In today's dynamic business environment, innovation plays a vital role in a company's long-term success. The successful development of such innovative products and their implementation in the market are keys to success (Engelen, Brettel, & Wiest, 2011). Therefore, companies are required to develop and leverage their internal resources to assemble the shared

knowledge required to implement innovative strategies and reach the expected outcomes (Melton & Hartline, 2012).

Thus, organizations engaged in innovation processes are increasingly recurring to cross-functional teams to strengthen their competitiveness (Pinto, Pinto, & Prescott, 1993; Randel & Jaussi, 2003) and responsiveness to market transformations (Tidd & Bessant, 2014). The use of CFT to collaboratively engage in business processes increases as companies implement changes that may demand the participation of different types of members, including clients (Webber, 2002).

Cross-functional teams are defined as permanent or temporary groups (Maltz & Kohli, 2000) to develop opportunities that require diverse expertise and induce people from different functions to work together, establishing and communicating the rewards for collaborative behavior (Pagell, 2004). CTFs are a key managerial mechanism to reduce conflicts in communication, goals, and cross-functional integration processes (Maltz & Kohli, 2000) through formal and informal cooperation processes (Pimenta, Silva, & Tate, 2014).

Cross-functional teams are fundamental in the cooperation of individuals drawn from various functional areas (Pinto, Pinto, & Prescott, 1993). Thus, setting the stage for varying skill levels, experience, and academic backgrounds and in conjunction with different knowledge areas, disciplines, and occupations (Edmondson & Nembhard, 2009; Feng, Jiang, Fan, & Fu, 2010) in which the advantage is provided by the multiple sources of information and perspectives (Keller, 2001). The principle of Cross-functional teams lies in the effectiveness of solving problems, producing quality goods and services, and increasing creativity for innovation (Pinto, Pinto, & Prescott, 1993).

As mentioned before, Cross-functional teams enhance the performance of innovation projects (Brown & Eisenhardt, 1995; Ernst, 2002; Holland, Gaston, & Gomes, 2000). The ability to combine and connect different but complementary knowledge has been considered a key driver of innovation (Pershina, Soppe, & Thune, 2019). This has been backed down by positive empirical evidence that shows the relation between the introduction of cross-functional teams and the firms' innovation outputs (Love & Roper, 2009).

However, innovation outputs are not the only aspects of the organizations affected by cross-functional teams. The perspective offered by Cross-functional teams can be crucial for solving organizational deficiencies, due to their superior problem-solving capabilities and their ability to create share knowledge through communication, ultimately improving the quality outputs of the firm (Proehl, 1996).

### ***Process innovation***

Successful innovation is the key to more frequent market victories and the most potent differentiator. It provides companies a considerable advantage of sustainable growth and market share gain. Innovation is usually understood as the medium organizations use to create new knowledge or any activity in strategy for processes change, new products or services and gain a sustainable competitive advantage (Benamati, Fuller, Serva, & Baroudi, 2010; Evangelista & Vezzani, 2010; OECD & Eurostat, 2018; Verhaeghe & Kfir, 2002).

However, a distinction must be made between product and process innovations. Product innovation relates to new goods or services. In contrast, process innovation relates to new ways of producing existing goods and services (Edquist, Hommen, & McKelvey, 2001).

In essence, processes are established routines within organizations that allow defining activities and how to carry them out by individuals, according to the existing abilities and competencies. In that sense, innovation itself should be considered a process, and as a process, it responds to the way innovation is established so that the expected results can come to the realization (Kahn, 2018).

Process innovation can be defined as a powerful and useful tool that enables the achievement of multiple benefits and competitive advantage (Baer & Frese, 2003) by creating something made in a new or different way (OECD, 2005). Process innovation defines how things are created and how the products or services are delivered to the clients or the next step in the supply chain (Tidd & Bessant, 2014). Ultimately, it represents a new approach to improving organizational performance (Vo, 2011).

Innovations in products and services are vital for the survival and competitiveness of organizations. However, companies have less well-developed process innovation strategies than their product innovation counterpart (Pisano, 1997). Innovation on processes plays an equally or even more critical strategic role than the development of new products (Tidd & Bessant, 2014) due to its most extended lifecycle and its ability to respond to the needs of cost optimization, logistics improvements, customer service, and others (Porter, 1990).

### ***Quality in operational effectiveness***

By developing an accurate business strategy and organizational efficiency approach, processes and operational activities must be planned effectively and according to its competencies and abilities to gain a beneficial result. This primary factor is called operational effectiveness; it is defined as establishing processes, based on core capabilities within

organizations, that encourage them to exceed customer expectations (Santa, Hyland, & Ferrer, 2014). Simply put, operational effectiveness means performing similar activities better than rivals (Porter, 1996). To achieve operational effectiveness, five performance dimensions influence operational effectiveness. These are cost, quality, reliability, flexibility, and speed (Hill, 2005).

Considering quality as a result of other organizational variables and its proper implementation, quality can be achieved when products or services meet customer demands and meet the manufacturing specifications of the delivered product or service (Tegethoff, Santa, Schluep, Morante, & Lucía, 2020). Therefore, creating a need for the best efficiency strategy to achieve a competitive advantage and delivering value-adding products or services of exceptional quality, on time and at a competitive price (Slack, Chambers, & Johnston, 2004). Quality is the result of organizational planning and the development of internal structure and innovation so that it is easier to adapt to changes in the market environment and guaranteeing a sustainable future (Santa, Hyland, & Ferrer, 2014).

Quality not only acts as a measurement of the results of different variables but also serves as the company's operational effectiveness when implemented. Using the quality of all supply chain processes leads to cost reductions, better resource utilization, and greater process efficiency (Beamon, 1999; Gunasekaran, Patel, & McGaughey, 2004). Related to the operational effectiveness and its effect on quality, a more efficient use of resources in crucial processes within a company can derive in the reduction of costs and the effective adoption of technological innovation (Porter, 1996), creating a solid framework for innovation and market competitiveness.

Consequently, considering the supply chain process and the benefits of quality in operational effectiveness, this action leads to cost reductions, improved resource utilization, and improved process efficiency (Beamon, 1999; Gunasekaran, Patel, & McGaughey, 2004). Additionally, the organization needs to offer value-adding products or services of a superior quality to the competition. Quality in operational effectiveness makes sure that products and services have the quality they have been designed for, crucial to achieving quality throughout the organization (Russell & Taylor, 2011).

### **Research model and hypotheses**

Strategies are performed by managers to achieve the company's best performance (Thompson & Strickland, 1995) and the set of plans from top management to achieve results (Wright, Kroll, & Parnell, 1997). Its importance is transversal in all areas of the organization. Therefore, we propose the following hypotheses:

**H1:** Strategies has a direct impact on Emotional intelligence.

**H2:** Strategies has a direct impact on Cross-functional teams.

**H4:** Strategies has a direct impact on Process innovation.

**H7:** Strategies has a direct impact on quality.

Emotions and emotional intelligence become a crucial component in organizational commitment, team cohesion, and group performance. The performance of individuals has a strong relationship with the presence or absence of emotional intelligence, creating a positive

correlation between emotional intelligence of teams leaders and the overall performance of the teams (Wong & Law, 2002) Therefore, we propose the following hypotheses:

**H3:** Emotional intelligence has a direct impact on cross-functional teams.

**H5:** Emotional intelligence has a direct effect on process innovation.

**H8:** Emotional intelligence has a direct effect on quality.

A significant number of organizations use Cross-functional teams to develop their innovation projects (Griffin, 1997), and its importance in firms seeking to increase their innovation results has been highlighted by various authors (Love & Roper, 2009; Kusunoki, Nonaka, & Nagata, 1998; Taggar, 2002; Carlile, 2004; Leonard, 1995; Leenders & Wierenga, 2002; Jugend, da Silva, Oprime, & Pimenta, 2015). Simultaneously, the quality and productivity brought by CFT's convert them into a unique managerial tool, not only for innovation projects but also for other organizational tasks (Proehl, 1996; Tidd & Hull, 2006). Therefore, we propose the following hypotheses:

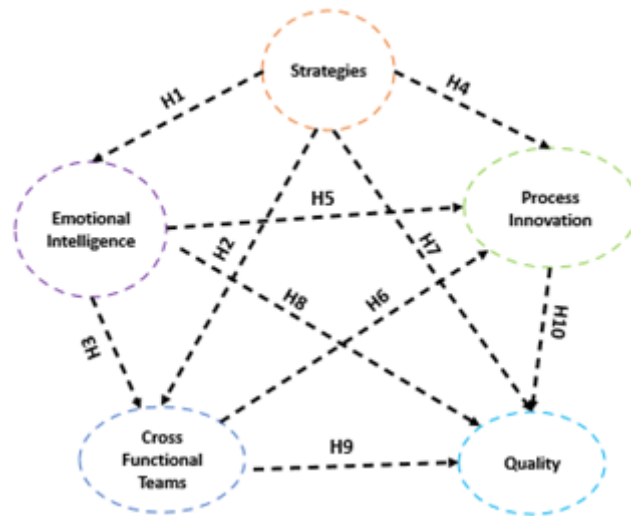
**H6:** Cross-functional teams have a direct impact on process innovation.

**H9:** Cross-functional teams has a direct effect on quality.

As competitiveness in the market rises, innovation plays an essential role in fostering operational effectiveness and organizational learning (Chatterjee, 2009; Vasquez Ordás, Montes Peón, & Pérez López, 2005) to achieve the highest quality in product and service without compromising costs, reliability, speed, and flexibility. More specifically, Brown & Eisenhardt

(1995) have shown that efficient processes enhance organizations' operational effectiveness. Because of this reason, we propose the following hypothesis.

**H10:** Process innovation has a direct impact on quality.



*Figure 1. Theoretical Framework and Proposition.*

## **Research method**

For an accurate test and analysis of the hypothesis mentioned above, confirmatory-correlation research was implemented to determine the relationship between different variables and explain its results. According to the research method and lineaments, recommendations, a survey instrument, a measurement construct, and the best model-fit has been applied. A self-administered survey questionnaire was designed with two main sections aimed at managers, engineers, and administrative personnel. This varied sample segment because inside an organization environment, there are different assumptions, expectations, and knowledge about process innovation and operational effectiveness (Orlikowski & Gash, 1994; Schein, 1996). One section focused on a demographic background (industrial sector, size of the company, education,



and work area). A second section focused on a conceptualized set of variables (Innovation self-assessment, Emotional intelligence, Cross-functional teams, and Operational Effectiveness). The model was built to test using both descriptive and inferential statistical analyses with the collected data. With variables rated with a 5-Point-Likert scale from "Strongly Agree" to "Strongly Disagree."

To conclude the hypothesis, the study was made with 180 questionnaires, within different areas like production, purchasing, planning, quality control, and marketing, in various Colombian companies of the technological, medical, and manufacturing industries. This methodology was chosen as it fits this research's requirements and allows the analysis of latent variables and their relationship, and the required sample is met by the collected data (Nachtigall, Kroehne, Funke, & Steyer, 2003).

### **Data Analysis**

The study used SPSS (SPSS Inc and IBM Company, Chicago, Ill, USA) and Analysis of Moment Structures (AMOS, Development Corporation, Spring House, Penn, USA) to perform multivariate analysis on the results. These Software applications were used to measure the reliability and validity of the conceptualized model by estimating the model variables predictive relationships and model fit indices. The internal consistency was measured and confirmed using Cronbach's alpha and the items' totality correlation. All constructs have values greater than 0.7, being the cut-off level set for basic research.

To confirm the overall fit of the hypothesized model and determine the relationships between observed and continuous latent variables, Confirmatory Factor Analysis (CFA) was used. (Cooksey, 2007; Hair, Black, & Babin, 2010; Tabachnick & Fidell, 2019). Furthermore,

the internal consistency was measured and confirmed using Cronbach's alpha and the items' totality correlation. All constructs have values greater than 0.7, being the cut-off level set for basic research, as shown in table 1 (Nunnally, 1978; Taber, 2017).

*Table 1. Cronbach's Alpha*

<b>Table 1</b>		
<b>Variables</b>	<b>Number of items</b>	<b>Cronbach's Alpha</b>
Strategy	4	0.906
Process Innovation	4	0.885
Emotional Intelligence	4	0.907
Quality	5	0.847
Cross Funtional Teams	5	0.785

*Source.* Own elaboration

An important measurement for a correct model analysis is the ratio between chi-squared by degrees of freedom (CMIN/DF) (Wheaton, Muthén, Alwin, & Summers, 1977), suggesting a ratio of approximately five or less as a reasonable criterion. Carmines and McIver (1981) proposed a range of ratios between 2:1 or 3:1 to indicate acceptable reliability of the model and data. As for the model, CMIN/DF = 1.577, making it reliable for further analysis. To support the theoretical model, goodness-of-fit (GFI) and comparative fit index (CFI) were analyzed, with CFI yielding 0,937, being 0,9 an acceptable result and further supporting the model by representing the variables and corresponding data (Bentler, 1990; Marsh , Hau, & Wen , 2004).

Each hypothesis's reliability in the model was evaluated using the root mean square error of approximation (RMSEA), being a value below 0,08 acceptable for accurate analysis (Bentler, 1990; Jöreskog & Sörbom, 1982; Marsh , Hau, & Wen , 2004). As for the model, the RMSEA value was 0,057. This analysis is an indication that it is possible to make inferences based on the results of the model, and the data obtained is acceptable to explain the investigation.

Table 2. Baseline Comparisons

Table 2					
Baseline Comparisons					
Model	NFI (Delta1)	RFI (rho1)	IFI ( Delta2)	TLI (rho2)	CFI
Default model	0.848	0.820	0.938	0.926	0.937
Saturated model	1.000		1.000		1.000
Independence model	0.000	0.000	0.000	0.000	0.000

Source. Own elaboration

## Results and discussion

The findings from the structural equation model (Table 3) show a strong relationship between strategies and Emotional Intelligence ( $\beta = 0.40$ ,  $p < 0.001$ ), strategies and Cross-Functional Teams ( $\beta = 0.41$ ,  $p < 0.001$ ), and strategies and Process innovation ( $\beta = 0.65$ ,  $p < 0.001$ ), therefore supporting hypothesis H1, H2, and H4. These results demonstrate the crucial importance of strategies in an organization, especially in the innovative process and Cross-functional team building, with a high impact on emotional intelligence as a core attribute for organizational learning. For companies, a willingness to accept change by innovation must be part of their strategic thinking. Creating an open-minded environment for constantly unlearning and learning crucial practices is highly important for implementing key strategic shifts (McGill & Slocum, 1993). Furthermore, cultural change inside the organization is needed to obtain the benefits of new strategies (Nieva & Sorra, 2003).

While strategies showed a strong relationship with Emotional Intelligence, Cross-Functional Teams, and Process innovation, it is clear how there is a null relationship between strategy and quality. It does not seem to affect the companies studied by the questionnaire ( $\beta = -0.18$ ,  $p < 0.001$ ). The strategies are failing to define competitive factors through the performance

of quality processes inside organizations. Its focus on a strategic level has a low impact on quality's operational effectiveness, as shown in the investigation. The organization's strategic goals for competitive advantages may come from innovation in processes and the flexibility it can gain, and the capability to create performing cross-functional teams.

On the other hand, emotional intelligence shows a strong relationship with Cross-Functional Teams in the organization being a defining variable to secure positive results, as demonstrated by the model ( $\beta = 0.45$  &  $p < 0.001$ ). The impact of emotional intelligence is what can be expected in an organic organizational environment. It can be a crucial element for a well-crafted Cross-functional team strategy since a person's reaction and use of emotions are essential for adequate team cohesion and, subsequently, functional performance. When differences cannot be reconciled in diverse teams, performance gaps from unproductive conflicts may occur, and proper emotional intelligence levels may mitigate diverse goals and lacking team effort (Kaufmann & Wagner, 2017). On an individual level, a team member with high emotional intelligence will significantly impact a team's effectiveness and cohesion (Othman, Abdullah, & Ahmad, 2008).

Hypothesis H5 and H8 show that the Emotional Intelligence relationship with process innovation and quality does not have the same positive outcome as it does with Cross-Functional Teams ( $\beta = 0.00$ ,  $p < 0.966$ ) ( $\beta = 0.14$ ,  $p < 0.169$ ). Individuals' lack of contribution to innovation processes creates a significant gap in how the strategic level perceives innovation's importance and how individuals interact in an innovative environment and shape organizational competitiveness. As individuals in the analyzed companies with high emotional intelligence have little relationship with innovation, preparedness for change should be developed in all areas to gain an efficient result, acknowledging that emotions play an important role in employees'

readiness to create and innovate (Fenwick, 2003). The deficient use of innovation may be the first cause of Colombian companies' failure due to the lack of competitive advantages. It can be defined as an "underutilized strategy" (Gómez & Mitchell, 2014) in the country's private environment. The same analysis applies to emotional intelligence's impact on quality and its effectiveness. Although Cross-functional teams impact quality, operational effectiveness negatively correlates with an individual's control over emotions. Products or services that generate competitiveness advantage are not perceived as a responsibility by individuals but more as a team's motivation for better performance.

A significant result is H9, which shows a substantial relationship between cross-functional teams and quality effectiveness ( $\beta = 0.74$ ,  $p < 0.001$ ). Although the model shows emotional intelligence little correlation with quality, the use of Cross-functional teams is the gateway for effective operational quality, as is a crucial element for organizations to capture individual talent. Findings suggest that the relationships with performance are multi-dimensional, meaning that quality is improved by cross-functional teams and sharing information, as collaboration is not only encouraged but necessary.

As for the relation that Cross-Functional teams have with Process innovation, the model shows that Cross-Functional teams do not present a significant input on how innovation is effectively used in the process ( $\beta = 0.12$ ,  $p < 0.001$ ). Innovation is not determined as the sum of individual actions or strategies, but more as a whole dimension in an organization composed of product innovation, process innovation, position innovation, and paradigm innovation (Tidd & Bessant, 2014). In the Colombian organizational environment, product innovation has become a standpoint for competitive advantage, leaving the other dimensions aside and unnoticed for substantial growth and market gain. However, literature states that teams are vital for innovation

in production and are more likely to develop innovative solutions and ideas than individuals (Wuchty, Jones, & Uzzi, 2007). Moreover, teams with shared knowledge are crucial to producing a broader range of resources for decision making, promoting innovation, and solving problems (Zhang & Guo, 2019).

Finally, there is a partial relationship between process innovation and quality, as shown in the results above ( $\beta = 0.23$ ,  $p < 0.001$ ). The company's willingness to embrace change and openness to learning is crucial in fostering operational effectiveness and competitiveness (Chatterjee, 2009; Vasquez Ordás, Montes Peón, & Pérez López, 2005). The partial relationship found in the study is explained by (Kafetzopoulos & Skalkos, 2018; Zhang & Lado, 2001), stating that local businesses have problems improving operational effectiveness through innovative processes. Despite Reichstein and Salter (2006) portray process innovation as new inputs introduced to achieve higher product quality, the application may produce mixed results depending on other variables that affect the organization.

*Table 3. Regression Weights*

<b>Table 3</b>					
<b>Regression Weights: (Group number 1 - Default model)</b>					
<b>Hypothesis</b>	<b>Estimate</b>	<b>S.E</b>	<b>C.R</b>	<b>P</b>	<b>Label</b>
Strategy → Emotional Intelligence	0.399	0.093	4.286	***	H1- Supported
Strategy → Cross Funtional Teams	0.353	0.086	4.125	***	H2- Supported
Emotional Intelligence→Cross Funtional Teams	0.386	0.080	4.816	***	H3- Supported
Strategy→ Process Innovation	0.890	0.175	5.074	***	H4- Supported
Emotional Intelligence→ Process Innovation	-0,006	0.140	-0,042	0.966	H5- Not supported
Cross Funtional Teams → Process Innovation	0.188	0.219	0.859	0.390	H6- Not supported
Strategy→ Quality	-0,137	0.105	-1.306	0.191	H7- Not supported
Emotional Intelligence→ Quality	0.105	0.076	1.374	0.169	H8- Not supported
Cross Funtional Teams→ Quality	0.660	0.149	4.422	***	H9- Supported
Process Innovation→ Quality	0.126	0.068	1.863	0.062	H10-Partially supported

*Source.* Own elaboration

Furthermore, individuals' knowledge and abilities are fundamental to the company's performance and the achievement of a sustainable competitive advantage. In that sense, the

results obtained in this study have shown that the Colombian context's particularities substantially impact the selected variables' outcomes. The cultural background has a significant impact on the dynamics within an organization and its consequent results.

Considering the cultural dimensions proposed by Hofstede (2011), based on six different cultural dimensions that vary between countries, the study results can gain some context. The implementation of any strategy can have different outcomes depending on the different settings and cultural characteristics in which it is developed (Hofstede, 1984).

In that sense, Cross-Functional collaboration relies on its members' ability to create a shared vision and collective goals (Ramamoorthy, Kulkarni, Gupta, & Flood, 2007). This approach coincides with the "we" mentality of collectivist countries. Therefore, it is not surprising to find out that in a collectivist culture, like the Colombian, CFT's significantly impact quality (H9). In contrast, individuals are less effective in producing quality outputs that can have a significant impact on the organization's competitiveness (H8).

The study showed significant results that illustrate the Colombian reality of organizational education and especially continuous education. Since the last century, a contemporary concept about education has been proposed based on the need for change in policies with a curriculum based on competencies that create meaningful learning and may impact positively the workplace (Ramani & Leinster, 2008; Pinilla Roa & Cárdenas Salga, 2014). In Valle del Cauca, a different set of activities are implemented that differ from the critical concepts analyzed in this study. Nevertheless, the academic sector is reluctant to recognize and implement the essential components that organizations need, either through

continuous or complementary education that shows a real short impact on regional competitiveness (Messu, Santa, & Tegethoff, 2020).

Taking this into account, it is clear that despite a robust educational cluster in the region (Morante, Santa, & Tegethoff, 2020), there is a lack of collaboration and integration between the academic and the business sector. This derives from the misunderstanding of local enterprises' real needs, and therefore the adequate programs that can educate their employees to be more effective within the company. Despite the investments of higher education institutions in science, technology, and innovation, these continue to be insufficient to achieve the desired progress in the Colombian context (Pineda , Morales, & Ortiz, 2011). The absence of an appropriate educational program is shown that employees do not have the necessary tools to innovate, either when they work individually (H5) or when they work within teams (H6). Demonstrating that continuing education programs in the region do not contribute significantly to the local enterprises' competitiveness.

## **Conclusions**

The study aimed to understand the key variables that determined the degree of competitive advantages in Colombian businesses and were valuable to understand the strengths and weaknesses that shape the organizational environment and how there is still significant room for improvement. Critical aspects like strategic management, emotional intelligence, and Cross-functional teams have created organizational effectiveness and competitiveness opportunities. However, key activities like process innovation have a long way to impact the organization's quality as they should. The gap between innovation in processes and other vital aspects like



cross-functional teams and quality is crucial to understand the lack of advantage that Colombian organizations may gain.

The strategic management approach to reducing costs and gaining flexibility in operations has become imperative in the Colombian business environment, creating a deficiency in how organizations perceive the quality of products and services to gain competitiveness in the market. As seen in the regression weights, strategy impact on emotional intelligence and cross-functional teams has positively affected the organization and its alignment in human resources management to create quality effectiveness. The role individuals have taken on the organization has been uplifted by using cross-functional teams to outperform operations and create quality goods. However, strategic management still has no impact on quality effectiveness, creating a necessity for strategic analysis and reformulation.

The importance of process innovation to gain significant operations results has been underestimated by Colombian companies and is the evident "loser" in today's management. The training and coaching to foment innovation as a crucial value in companies is deficient and has been implemented poorly in its strategic view. It has become evident in Colombia, especially Valle del Cauca, that the absence of competitiveness compared to other regions is caused by poor implementation of innovation and individuals' aversion to adapt to imminent change. However, there is an encouraging outlook, which shows that process innovation is starting to result in a substantial advantage in creating quality goods and subsequently creating a more competitive outline for Colombian businesses.

In the Colombian environment, the individual's emotional intelligence is not enough to satisfy the quality effectiveness needed to gain a competitive advantage over competitors. The

cultural forms and work ethics in the Colombian context make it laborious to perform innovation processes and gain operational effectiveness. Hence Cross-functional teams have become crucial in most of the organization areas to create a working environment that facilitates individuals' performance. In that sense, an important implication of this study is that CFT's acts as a mediator between individuals and the quality outputs of the organization in this local context. In other words, individuals need to act within CFT's to have a significant impact on the enterprise's quality results. Top-level management is bound to implement a strategic vision that creates cross-functional teams centered around crucial areas that create a better environment for innovation and encourage employees to acquire knowledge and capabilities for their success.

Finally, considering the failures in the appropriate training and formation of employees in terms of emotional intelligence and innovation, organizations must reevaluate their in-house formation programs and develop closer collaboration with the region's educational institutions. At the same time, the educational institutions of the region must implement quality programs regarding innovation, emotional intelligence, teamwork, and operational effectiveness to generate knowledge that is useful for companies and that results in higher levels of organizational performance and competitiveness (Messu, Santa, & Tegethoff, 2020).

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