Effects of learning culture and teamwork context on team performance mediated by dynamic capability

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Abstract

Purpose – *This study aims to investigate the relationship between learning culture and teamwork context based on the mediating role played by dynamic capability in manufacturing teams of the industrial sector.*

Design/methodology/approach – *It proposes that dynamic capability is a key element for improving the performance of teams, which, in turn, is positively affected by learning culture and teamwork context. This study is based on data from a survey of 201 companies in the Brazilian industrial sector with manufacturing teams, and followed the partial least squares approach to model the structural equation that was used for data analysis.*

Findings – *The results indicate that dynamic capability has a strong positive influence on team performance, and also that, despite learning culture and teamwork context having no direct association with performance, they offer contributions mediated by dynamic capability.*

Research limitations/implications – *This study includes a reduced sample regarding the population of Brazilian industrial companies, being restricted to only one sector of activity. Future studies may obtain larger samples by working with different sectors in different countries.*

Practical implications – *This article alerts managers to the importance of dynamic capability for improving the performance of teams, and points out the role played by learning culture and teamwork context in this relationship.*

Originality/value – *This research presents new insights into how dynamic capability contributes to the performance of teams, based on antecedent factors (learning culture and teamwork context).*

Keywords *Teamwork, Dynamic capability, Teamwork performance, Learning culture, Brazilian industry*

Paper type *Research paper*

1. Introduction

Many studies have emphasized teamwork as a modern form of work organization that provides improvement in financial performance (Lee *et al.*, 2020; Mohamed *et al.*, 2004); internal manufacture indicators related to quality, productivity and flexibility (Bikfalvi *et al.*, 2014); and also organizational context, in terms of motivation, collaboration and involvement of workers (Calabuig *et al.*, 2018; Inamizu *et al.*, 2014). This type of work organization gained increased attention, thanks to the Toyota Production System, which broke with traditional production systems regarding flexibility of volume and variety, quick response to demands and high levels of productivity and quality, thus enabling the elimination of stocks (Inamizu *et al.*, 2014).

Teamwork is understood, in this study, as teams that have a certain level of autonomy to make decisions and organize their work (Bikfalvi *et al.*, 2014). In addition, the teams are made up of individuals with complementary competences committed to purposes,

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performance goals and models of work organization common to all (Katzenbach and Smith, 1993; Salas *et al.*, 2005).

It is important to highlight the importance of teamwork as a form of work organization that stimulates the knowledge management (KM) process. As pointed out by several authors, the multidisciplinary characteristic that permeates teams promotes a knowledge internal acquisition cycle through problem-solving and innovation activities (Calabuig *et al.*, 2018; Bikfalvi *et al.*, 2014; Gonzalez and Melo, 2019). The knowledge generated by the teams, in turn, is rescued and institutionalized by the organization in an explicit way, through the databases and set of organizational rules and procedures; and also tacitly through the skills developed by individuals (Gonzalez and Melo, 2019). This institutionalized knowledge is disseminated through the organization and transformed into new knowledge, when applied in the process of solving problems and innovating other processes (Ilgen *et al.*, 2005; Lee, 2018).

The development of team activities is considered by many authors to be a critical mechanism to increase a firm's ability to achieve competitive advantage and improve its organizational performance (Li and Huang, 2013; Prayag *et al.*, 2020; Shin *et al.*, 2012). In the productive context, manufacturing teams can represent learning teams that facilitate information processing activities and reciprocal exchange among team members (Lee *et al.*, 2020). Team learning can expand and improve the knowledge base of manufacturing teams. Team members can transform tacit knowledge into process improvement or reconstruction of manufacturing competences. The knowledge of team members can increase the manufacturing ability to solve problems, respond to customer demands and improve production performance, in terms of production efficiency and effectiveness (Gonzalez and Melo, 2019).

Teams can be seen as micro work cells where individuals share objectives, standards and working methods, language, knowledge and, in particular, a culture (Bachrach and Mullins, 2019). The culture developed among team members will dictate how individuals relate to each other, as well as how to share and transform knowledge (Naqshbandi and Tabche, 2018). In this context, this research proposes that a culture focused on learning is one that develops patterns of behavior in its individuals capable of sustaining the dynamic capability and the results achieved by the teams (Gonzalez and Melo, 2019; Naqshbandi and Tabche, 2018).

Many organizations face the challenge of finding a way to optimize team performance via dynamic capability (Gonzalez and Melo, 2019). Several studies point to the importance of culture, especially learning culture, for the success of teamwork and the achievement of superior results (Mazur and Zaborek, 2016; Lowik *et al.*, 2016; Corfield and Paton, 2016; Zheng *et al.*, 2011). However, the current literature on team performance has not examined the direct and indirect effects of learning culture on team performance and the mediating effect of dynamic capability on this relationship.

While dynamic capability has become an important and emerging theme in the literature (Eisenhardt and Martin, 2000; Zollo and Winter, 2002; Teece *et al.*, 1997; Zott, 2003), it has only recently been explored in greater depth by looking for associations with other antecedent variables and evaluating the factors promoting this process, as well as the variables impacted by it, particularly organizational and innovative performance (Calabuig *et al.*, 2018; Jones and Knoppen, 2018). There is a lack of empirical studies analyzing how companies develop dynamic capabilities, and how these capabilities are able to improve organizational performance.

This research aims to study the relationship between dynamic capability and manufacturing team performance, positioning learning culture as an antecedent factor in this relationship. According to the dynamic capability theory and the resource-based view (RBV), firms are repositories of knowledge and expertise, with which they build the essential competences

that differentiate them from their competitors (Eisenhardt and Martin, 2000). The RBV highlights that knowledge is a unique resource because of its important tacit, sticky and non-imitable portion (Grant, 1996). Tacit knowledge is not easily transferred between staff or team members, becoming an institutionalized resource or organizational memory (Grant, 1996; Tsai and Ghoshal, 1998). In this context, teams have key characteristics in the process of interaction between individuals, promoting the sharing and application of tacit knowledge in activities that generate competitive advantage and improve team performance. Within manufacturing teams, members participate in the processing of information and assimilation of knowledge by promoting reciprocal exchanges between individuals, which support the process of adapting to changes in its primary knowledge base, i.e. achieving continuous learning (Li and Huang, 2013).

While dynamic capability and learning are critical elements for improving performance, there is a lack of research exploring the potential antecedents of dynamic capability in teams. Based on previous studies, this research proposes that dynamic capability consists of the processes of absorption, generation, storage and adaptation of knowledge (Jones and Knoppen, 2018; Gonzalez and Melo, 2019). This study is based on the premise that the concepts of learning culture and teamwork context directly impact a firm's ability to develop processes related to dynamic capability, as well as the performance of teams. Thus, the aim of this study is to analyze the relationship between dynamic capability, learning culture and teamwork context in relation to the performance of manufacturing teams, and to analyze the role of dynamic capability as a mediator of the effects of learning culture and teamwork context on team performance.

Although there are several studies associating learning culture and dynamic capability with organizational performance (Hung *et al.*, 2010; Wang *et al.*, 2018; Naqshbandi and Tabche, 2018), there is still no research that simultaneously associates learning culture, teamwork context and dynamic capability with team performance. While Teece *et al.* (2016) argue that dynamic capabilities are present in organizational processes and routines, Zollo and Winter (2002) consider that such capabilities are built by organizations only when a culture of continuous learning has been previously established. Authors such as Shin *et al.* (2016), Jamshed and Majeed (2019) and Gonzalez and Melo (2019) emphasize that teams, because of existing interaction among members, constitute environments that are conducive to the establishment of a focus on learning that is able to sustain their dynamic capability. Given the above, this study starts from the premise that teamwork context, characterized by interaction and collaboration among team members; mutual identification and trust; and shared identity and objectives, favors the development of dynamic capabilities, consequently improving team performance.

2. Theoretical framework and hypothesis

2.1 Learning culture, teamwork context and dynamic capability

Team context refers to a group in an organization that has some autonomy to make decisions and organize work (Bikfalvi *et al.*, 2014). In addition, the team is made up of individuals with complementary competences, committed to the achievement of group or organizational goals and also to meeting customer expectations. The performance results of the teams depend on the coordination of the organization to create mechanisms that enable interaction among individuals, providing spaces for the exchange of individual knowledge and competences (Mathieu, 2008). Thus, team context must be built from spaces of social interaction and sharing, in which individuals share values, beliefs and also primary knowledge that enables the exchange of knowledge and, consequently, exploratory learning (Gonzalez and Melo, 2019; Jaca *et al.*, 2013). The organization must coordinate the learning initiatives of teams so that this knowledge is institutionalized and disseminated to the other teams in the organization.

Recent studies have shown that companies that empower their employees to create and apply new knowledge and that provide an organizational culture focused on learning to support the acquisition, creation, storage and sharing of knowledge achieve more efficiency regarding the use of knowledge, consequently improving their innovative, operational and financial performance (Mazur and Zaborek, 2016; Naqshbandi and Tabche, 2018). The theory of organizational learning suggests that learning is capable of changing individual and collective behaviors, promoting organizational adaptations that allow firms to respond more quickly and efficiently to environmental changes (Li and Huang, 2013).

Analyzing culture at the level of teams, and not just at the organizational level, is important for understanding organizational performance, given that organizational culture is developed in micro niches, as is the case with teams (Shin *et al.*, 2012). Team culture comprises vision, norms and principles and provides initiative for participation; thereby team members become familiar with all knowledge that formulates the culture of a team (Jamshed and Majeed, 2019). Team members share objectives, purposes, values, standards, procedures and knowledge that dictate their ways of acting, exchanging knowledge, solving problems and innovating, differentiating one group from another (Lowik *et al.*, 2016). The empirical evidence is lacking with regard to the role of learning culture in enhancing the performance of manufacturing teams. Therefore, this study seeks to extend the previous cross-sectional analysis (Gonzalez and Melo, 2019; Shin *et al.*, 2012), investigating the role of learning culture in manufacturing team performance.

The difficulties encountered in the development of a learning culture highlight the changes required in the mental and cognitive structure of the members of an organization and its teams (Donate and Guadamillas, 2011; Corfield and Paton, 2016). The theory of learning culture proposes that the team's interests and the common good take precedence over individual interests (Zheng *et al.*, 2011). As a consequence, it is natural to assume that in teams shaped by a learning culture, individuals are more willing to share their knowledge with other members, intensifying the knowledge flow (Ma *et al.*, 2014). Thus, it is possible to propose the following hypothesis:

H1. Learning culture contributes positively to teamwork context.

Organizational culture is a critical factor for the development of an environment that encourages the reconfiguration and renewal of essential competences (Corfield and Paton, 2016). It defines the behavior patterns, values and beliefs that help explain why different initiatives succeed or fail. Culture influences the behavior, feelings and ways of acting of individuals (Mueller, 2012). Previous research shows that the members of a team belong to a particular structure, and that their behaviors and attitudes are influenced by the culture that permeates the team, influencing their ability to innovate and rebuild competences (Jamshed and Majeed, 2019). However, developing a culture focused on learning that promotes the absorption, creation, storage and adaptation of knowledge is still a great challenge for organizations (Islam *et al.*, 2014).

According to Islam *et al.* (2014), adopting a learning culture allows organizations to continually seek new knowledge and apply it to their routines, reconfiguring competences and improving innovative performance. When a firm develops a culture focused on learning, it starts to increase its capability to sustain competitive advantage and improve its level of organizational performance, as it becomes less susceptible to imitation or replication by competitors (March, 1991).

While some studies identify a direct relationship between learning culture and organizational performance (Skerlavaj *et al.*, 2007), others propose that learning culture acts indirectly in relation to performance, being mediated by dynamic capability (Calabuig *et al.*, 2018). There is a consensus in the literature that organizational learning influences dynamic capability. Zheng *et al.* (2011) and Wang *et al.* (2007) propose that dynamic

capability is influenced by learning mechanisms related to the organizational capability to absorb, create, retain and adapt knowledge. However, Zollo and Winter (2002) and Skerlavaj *et al.* (2007) go beyond the issue of organizational learning, arguing that the development of a learning culture is an essential premise for building dynamic capability. In this context, we propose the following research hypothesis:

H2. Learning culture contributes positively to the dynamic capability of teams.

In addition to supporting the development of dynamic capability, learning culture is also related to team performance. Previous research proposes that the behaviors and attitudes of members belonging to a specific team structure are directed according to team culture, influencing team performance (Calabuig *et al.*, 2018; Gonzalez and Melo, 2018). Previous studies (Jamshed and Majeed, 2019; Lau *et al.*, 2020) are focused on investigating team-oriented culture, emphasizing the dynamics of social aspects and interpersonal relationships. Otherwise, few studies have focused on analyzing how teams develop a culture focused on learning and its relationship with team performance and team dynamic capability.

Team learning culture emphasizes the cognitive aspects of learning (Lau *et al.*, 2020), and the social aspects, related to the way individuals interact, contribute to each other and knowledge sharing determine the cognitive process of team learning (van den Bossche *et al.*, 2006). Previous studies have shown that team culture plays a moderating role in providing positive results for an organization (Lau *et al.*, 2020; Calabuig *et al.*, 2018), improving work productivity (Patel and Conklin, 2012), reducing internal conflicts, improving the collective sense and stimulating interaction and multidisciplinarity (Tzabbar and Vestal, 2015). However, the literature presents a gap in analyzing the relationship between learning culture and team performance. In this work, team performance is studied from two main aspects: efficiency and effectiveness (Jamshed and Majeed, 2019; Wang, 2008; Li and Huang, 2013). Our hypothesis is that learning culture stimulates the development of new routines. From a consolidated primary knowledge base among individuals, the team rebuilds its competences, interfering directly in the results of operations, related to efficiency, and also in the results regarding the fulfillment of customers' expectations, related to effectiveness. In this context, we propose the following research hypothesis:

H3. Learning culture contributes positively to team performance.

2.2 Teamwork context and dynamic capability

A team can be considered the smallest unit in which members of an organization work together (Shin *et al.*, 2012). Team members share and apply common knowledge to perform tasks and achieve organizational goals and objectives. In this way, team context is the environment where individuals will be encouraged to create, share and apply new knowledge to reconstruct competences and processes (Teece *et al.*, 1997; Calabuig *et al.*, 2018). The context of manufacturing teams is usually characterized by individuals with complementary skills and competences. The development of dynamic capability depends on the degree of autonomy that is given to these individuals to create and apply new competences, and also on the degree of interaction and socialization that is built in this context. Teams with task divisions and a very strict hierarchy tend to be less likely to develop dynamic capability and innovation (Gonzalez and Melo, 2019).

Although dynamic capability is a topic that has been widely explored by researchers, there is a lack of studies on dynamic capability within teams. In the context of teamwork, individuals need to learn collectively and establish mental models and shared understandings about how to perform tasks (Prayag *et al.*, 2020; Nonaka and Takeuchi, 1995). The team learning process offers the organization the opportunity to transform tacit knowledge into dynamic capability and innovation (Gonzalez and Melo, 2017).

Teamwork allows the firm to benefit from synergy through learning and knowledge exchange among team members. Blazevic and Lievens (2004) indicate that learning in teams increases efficiency in the use of knowledge, promoting the firm's organizational results and innovative performance.

Dynamic capability is an emerging concept in the area of management research, and still requires studies associating it with antecedents and potential results (Wang and Ahmed, 2007). According to their RBV, organizations in the same industry show different results because they have different resources and capabilities to develop their processes (Zollo and Winter, 2002). In this context, dynamic capability refers to the set of processes and skills specific to a firm that enables it to continuously improve its key processes (Eisenhardt and Martin, 2000). Teece *et al.* (1997) define dynamic capability as the firm's ability to integrate, build and reconfigure its internal and external competences to respond quickly to external changes. According to the dynamic capability theory, knowledge is the main resource for an organization to achieve sustainable competitive advantage (Teece *et al.*, 1997).

Dynamic capability requires the application of primary knowledge combined with new knowledge to transform competences. Teams engage in exploratory and exploitative learning to share, combine and use knowledge (Jaca *et al.*, 2013; Jones and Knoppen, 2018; Kozlowski and Ilgen, 2006). The learning model determines the pattern of changes and renewal of competences that teams can achieve (Kozlowski and Ilgen, 2006). Exploitative learning involves research within a well-defined, limited context related to the firm (March, 1991). It allows team members to combine primary knowledge and apply best practices and lessons learned from past experiences (Gonzalez, 2017). Based on exploitative learning, teams can solve problems and refine the processes that generate waste, increasing efficiency. In addition, the team's mastery of existing knowledge can facilitate the knowledge absorption process (Jones and Knoppen, 2018; Kozlowski and Ilgen, 2006).

Exploratory learning involves experimentation with new alternatives and the search for technology and market information which the firm does not master (March, 1991). More substantial changes in processes, as in the case of innovations or reengineering, involve exploratory learning, requiring creative thinking and the sharing of ideas by team members. Exploration increases the depth and complexity of knowledge mastered by individuals (Gonzalez, 2017; Gupta *et al.*, 2006). In addition, it allows the team and organization to acquire new knowledge, offering new ways to treat and solve problems, as well as to innovate (Martini *et al.*, 2013; Gonzalez, 2017). Therefore, both exploratory and exploitative learning influence the dynamic capability of teams.

The firm's knowledge-based view (KBV) highlights the value of tacit knowledge for being unique and difficult to imitate (Grant, 1996). As teams share values, mental models and primary knowledge, the flow of tacit knowledge becomes more favorable and intense (Lee, 2018). Moreover, the processes of knowledge generation and adaptation are facilitated in teams, because the multidisciplinary and complementary characteristics of team members contribute to problem-solving and improve performance. Thus, based on the context of teamwork, it is possible to present the following hypotheses:

H4. Teamwork context contributes positively to the dynamic capability of teams.

H5. Teamwork context contributes positively to team performance.

2.3 Dynamic capability and team performance

The RBV proposes that the firm's resources, as well as its heterogeneity, allow it to achieve competitive advantage (Teece *et al.*, 1997). In view of the environmental changes and the challenges posed by competitors, the RBV has been complemented by two concepts:

dynamic capability and the KBV (Hitt *et al.*, 2016; Gutierrez *et al.*, 2018). While Teece *et al.* (1997) point out that dynamic capability reflects the way in which the firm reconfigures its capabilities and competences to change the business environment, Eisenhardt and Martin (2000) emphasize that this reconfiguration occurs through cross-functional routines, such as the development of new products, coordination processes for internal collaboration and knowledge creation, as well as procurement and alliance processes.

Dynamic capability is developed and incorporated into organizational routines rather than simply being purchased from the market (Jones and Knoppen, 2018). Winter (2003) points out that the firm's functional activities, i.e. those that allow it to exist within a market, constitute operational capabilities. Dynamic capabilities, in turn, are those that allow the organization to understand its environment and the value of its resources, and to respond appropriately to market changes to improve its operational capabilities. For this reason, Winter refers to dynamic capabilities as first-level capabilities.

The KBV proposes that the advantages derived from organizational resources and skills are, in reality, a reflection of the access to and integration of a superior resource, i.e. knowledge (Grant, 1996; Denford, 2013). In this context, the firm can be seen as a repository of knowledge with which competitive advantage and differentiation can be achieved (Grant, 1996). Nielsen (2006) points out that dynamic capability can be understood as a set of KM activities that change, renew and exploit the knowledge-based resources of the firm. Thus, competitive advantage is achieved through continuous adjustments to and improvements in the organization's knowledge base (Wang *et al.*, 2007).

Several studies point to a positive relationship between dynamic capability and organizational and innovative performance. For example, Hung *et al.* (2010) studied Thai high-tech companies and found that dynamic capability has a positive impact on organizational performance, with learning culture and organizational alignment as antecedents, whereas Tavani *et al.* (2018) studied the Iranian industry and concluded that this type of capability has a positive impact on the development of new products, with absorptive capability and collaborative network as antecedents. Given the above, the sixth research hypothesis is proposed:

H6. Dynamic capability contributes positively to team performance.

2.4 Mediating effect of dynamic capability

From the above hypotheses, we developed a mediation model which proposes that dynamic capability is the mediating construct of the relationship between learning culture and teamwork context and team performance. Many studies propose that developing a learning culture can optimize the acquisition of knowledge by individuals, teams and organization, consequently improving their performance (Wang *et al.*, 2018; Durst *et al.*, 2019; Oyemoni *et al.*, 2019). Based on the RBV perspective, Wilkens *et al.* (2004) propose that learning culture is a resource and a dynamic capability of the firm that can contribute to the development of skills, which, consequently, impact performance.

Teamwork context is developed within an organization over time, assuming specific characteristics of cohesion, identification, interdependence, mutual trust, autonomy and sharing of goals among team members (Gonzalez and Melo, 2019; Jones and Knoppen, 2018). These characteristics affect the model of knowledge exchange and interaction followed by teams, impacting their efficiency and effectiveness (Wang *et al.*, 2018). Through interaction and knowledge exchange, team members accumulate a mass of primary knowledge that leverages the process of absorbing external knowledge and exploiting internal knowledge (Li and Huang, 2013; Gonzalez and Melo, 2018) .

In this sense, this research assumes that both learning culture and teamwork context contribute to better performance, because the former stimulates decision-making and trial-and-error processes that result in the development of new skills, and the latter affects the way individuals interact and motivate themselves within the team's structure so as to achieve collective goals. Thus:

H7a. Dynamic capability mediates the relationship between learning culture and team performance.

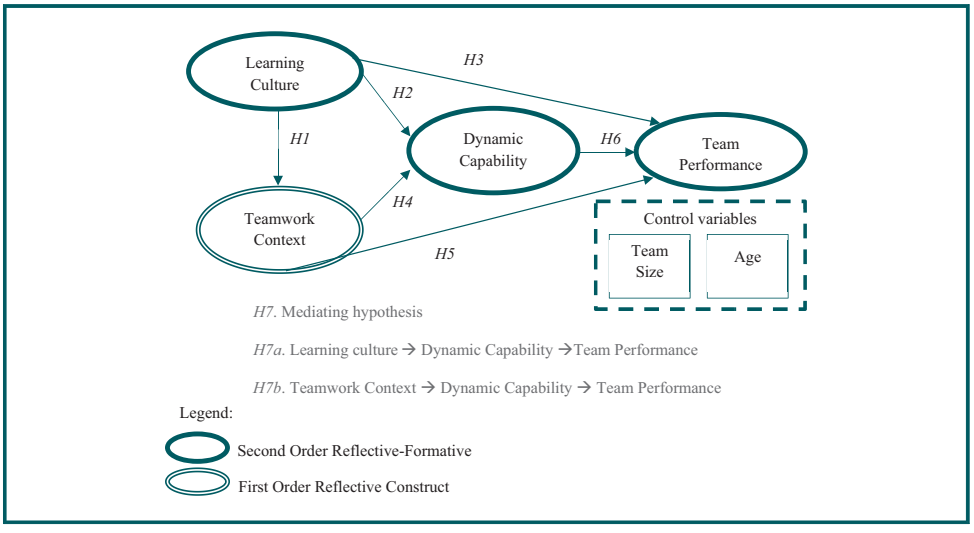
H7b. Dynamic capability mediates the relationship between teamwork context and team performance.

Based on a review of the theoretical framework, we propose a conceptual model in Figure 1, which illustrates the interrelationships between dynamic capability, its antecedents and the outcome variable. This model includes team performance as an endogenous variable, two exogenous variables (learning culture and teamwork context) and a mediating variable (dynamic capability). Six direct relations among the four constructs are proposed, in addition to two indirect relations, referring to the mediating effect of dynamic capability. These relations are presented in this section as hypotheses to be tested. The model proposes that learning culture is directly related to teamwork context and is an antecedent of dynamic capability, which, in turn, defines the level of performance of teams. In addition, the model includes a seventh hypothesis related to the mediating effect of dynamic capability in the relationship between learning culture and teamwork context and the performance of teams. The four constructs included in the model and the evaluated hypotheses are discussed in the following sections.

3. Method

This study uses the survey method to examine the hypotheses pertaining to learning culture, teamwork context, dynamic capability and team performance presented above. A self-administered survey was conducted with a sample of companies in the Brazilian industrial sector. The goal was to reach a large sample of companies to achieve greater power of generalization. This study presents an exploratory research approach, that is, based on the four constructs mentioned above, already described and presented in the

Figure 1 Conceptual framework



current literature. Analyses of existing relationships among them are carried out, exploring the way in which each construct is related to each other.

3.1 Sample and data collection

The empirical study was carried out using a questionnaire developed to collect data and, later, test the research hypotheses, containing instructions on how to answer the questions, the research variables and questions about the company's demographics. The primary sample consisted of 7,012 industrial companies registered with the Industrial Register of the State of São Paulo of the Center for Industries of the State of São Paulo (CIESP), available at http://ebgebrasil.com.br/industrias/sp. The researchers randomly selected a group of 1,200 companies to participate in the survey, and the data collection procedure, carried out from November 2019 to March 2020, consisted in sending an email to the CEO or managers of the areas of production or engineering to explain the research objective and formalize the invitation to participate in the study. This invitation emphasized that the company's manufacturing area, or at least part of it, must be organized in work teams. The email included a link to the online questionnaire. By clicking on the link, the respondent could access the questionnaire, fill it out and then submit it automatically, saving all answers in the research database. The survey reached a total of 221 questionnaires answered (18.42%). Eight questionnaires were not used for being duplicated, and another 12 were discarded because they were answered by teams whose time of existence was less than the 12 months minimum required. The online questionnaire could not be submitted if it were incomplete. Thus, the survey reached a total of 201 valid questionnaires, a response rate of 16.75%. Regarding non-respondents, 46 companies reported not having work teams in their manufacturing areas, and 25 company representatives claimed they did not have time to respond or had already responded to similar surveys in recent months. Although the final response rate is relatively low, which may limit the potential for the study's generalization, it is in line with other research in the area (Gutierrez *et al.*, 2018; Jones and Knoppen, 2018).

In this study, the non-response bias was also estimated. This test assesses whether there is a significant difference between the initial and final respondents (Armstrong and Overton, 1977), and was performed using the independent samples *t*-test, with teamwork context, learning culture and dynamic capability as variables. The results obtained showed no significant difference between the two groups.

After data collection, we assessed the common method bias using Harman's single-factor test (Podsakoff *et al.*, 2003). Based on the analysis of unrotated principal components, we found 15 factors with eigenvalues greater than 1.0, the largest of which accounted for 17% of the total variance. As no isolated factor emerged, and no factor was responsible for most of the variance, we infer that the common bias of the method is unlikely (Podsakoff *et al.*, 2003).

3.2 Measures

The studied constructs were operationalized based on the 41 measurement items that make up the research questionnaire, which were extracted from validated scales observed in the literature and assessed using a seven-point Likert scale. The measurement items of the four constructs of the study are detailed below.

3.2.1 Learning culture. This study assesses learning culture based on the questionnaire proposed by Watkins and Marsick (2003), which addresses the dimensions of learning within the organization. Respondents are asked to determine the degree to which each question reflects their organization's situation regarding the development of a learning culture (1 = strongly disagree to 7 = strongly agree). In this study, learning culture is evaluated at the three levels proposed by Watkins and Marsick (2003): individual, team and organizational. The individual level contains four measurement items; the team level

contains five measurement items; and the organizational level contains four measurement items. The reliability for each group of measurement items was 0.815, 0.795 and 0.766, respectively; and the overall reliability of the construct was 0.815.

3.2.2 Teamwork context. In this study, teamwork context is evaluated based on two central aspects, proposed by Ilgen *et al.* (2005) and replicated in several studies, such as those by Mathieu *et al.* (2008), Gonzalez and Melo (2019) and Jaca *et al.* (2013). The first aspect refers to the team members, who constitute the smallest particle of the teamwork context. By putting knowledge and skills into practice, individuals are able to promote the creation of new knowledge and the reconstruction of competences (Gonzalez and Melo, 2019). The second aspect analyzed concerns the forms of interaction and performance of employees within the team. According to Cohen and Bailey (1997), teams develop a unique internal configuration over time, which directs the way individuals interact with each other, develop and organize activities and mobilize resources and knowledge. Six items are used to measure the teamwork context, adapted from Gonzalez and Melo (2019), reaching a global reliability of 0.840.

3.2.3 Dynamic capability. This study adopted 13 measurement items to assess dynamic capability, evaluated on a seven-point scale, which were adapted from previous studies by Wang *et al.* (2007) and Zheng *et al.* (2011). Four items were used to assess the ability to absorb knowledge; three items were used to assess the ability to generate knowledge; three items were used to assess the ability to retain knowledge; and, finally, three items were used to assess the ability to adapt knowledge. The reliability measured by Cronbach's alpha for each group was 0.780, 0.796, 0.826 and 0.792, respectively, and the overall reliability of the construct was 0.832.

3.2.4 Team performance. Team performance refers to the results or perceived success of teams regarding the achievement of goals, deadlines, costs and operational efficiency (Li and Huang, 2013; Hung *et al.*, 2010). Wang *et al.* (2008) propose that the combination of efficiency and effectiveness perceived by the respondents be considered in the assessment of performance. In this study, efficiency is measured by three items, reaching a reliability of 0.819; and effectiveness, in turn, is also measured by three items, reaching a reliability of 0.804. The two groups of items were extracted from the study by Li and Huang (2013), and the overall reliability of the construct was 0.853.

3.2.5 Control variables. The study was statically controlled by two variables: team size and age. To measure the former, the respondents were asked to indicate the average number of members composing their manufacturing teams. In the questionnaire, this question was open-ended so the respondent could enter the average number of employees working in the teams. Regarding the latter, only teams with at least 12 months of existence, and thus with a developed internal context and cultural standards, were considered. The respondents were asked to enter the approximate average time of existence of the manufacturing teams in their companies.

4. Results and analyses

The final sample is made up of companies from different industrial sectors. Of the total 201 companies, 47 are from the machinery and equipment sector (23.38%), 35 are from the automotive sector (17.41%), 29 are from the metallurgy and ferrous metallurgy sectors (14.43%), 25 are from the food industry (12.44%), 18 are from the chemical industry (8.96%), 15 are from the computer and home appliance sector (7.46%), 10 are from the pharmaceutical and cosmetics industry (4.98%), 8 are from the paper and pulp sector (3.98%), 7 are from the textile sector (3.48%) and 7 are from the consumer goods sector (3.48%).

Team size and age were the control variables considered in this study. The mean size of the manufacturing teams reported by the respondents was 9.2 (SD = 4.2), ranging from 4 to 16 individuals, whereas their age ranged from 12 to 90 months ($M = 45.20$, SD = 12.7).

Of the companies surveyed, 128 (63.82%) had their entire manufacturing area organized in work teams, whereas this division was only partial in 73 (36.18%) of them.

Regarding the respondents, 75.6% ($n = 152$) are men and 24.4% ($n = 49$) are women. As for the field of expertise, it was found that 45.8% ($n = 92$) are engineers and technologists; 26.9% ($n = 54$) are business administrators; 13.9% ($n = 28$) are chemists and pharmacists; 8.0% ($n = 16$) are lawyers; and 5.4% ($n = 11$) are from other fields. The mean age of the respondents was 40.3 years, ranging from 28 to 67 years, with a mean time of professional experience in the area of 12.8 years.

This study adopted the partial least square–structural equation modeling (PLS-SEM) technique for data analysis, using Smart-PLS software (version 3.0). PLS-SEM is a technique that has been widely used in management studies, including several studies on dynamic capability, teamwork context, learning culture and organizational learning (Gonzalez and Melo, 2019; Gonzalez and Melo, 2018; Jamshered; Majeed, 2019). Hair *et al.* (2013) highlight the use of PLS-SEM because it is a technique with fewer restrictions regarding the normality of the data, and is also applied to smaller samples compared to SEM. In addition, PLS is also recommended for models with complex relationships (Fornell and Bookstein, 1982) and for studies dealing with theoretical development based on constructs (Hair *et al.*, 2013), as is the case of this study, which aims to analyze the relationship between four constructs (teamwork context, learning culture, dynamic capability and team performance).

4.1 Estimation of the measurement model

Firstly, a confirmatory factor analysis (CFA) was performed to assess the reliability and validity of the research model. The reliability measures of the constructs used in this study, based on Hair *et al.* (2013), are composite reliability (CR), Cronbach's α and Dijkstra–Henseler Rho_A, and the minimum value for all three measures is 0.70 (Hair *et al.*, 2013). Table 1 shows that all constructs have an adequate level of reliability.

The evaluation of formative measurement models requires the analysis of multicollinearity between the items making up the constructs, as well as the analysis of the factor loadings of the constructs' items to validate them (Hair *et al.*, 2013). The amount of multicollinearity was measured based on the variance inflation factor (VIF) and on the tolerance value of the independent constructs. The tolerance values for all constructs were lower than 0.10, as recommended by Cohen *et al.* (2003), and the value of the items' VIF varied between 1.35 and 2.93 (Table 1), indicating that there is no multicollinearity between them. All of them were statistically significant at a p level of 0.05 after performing bootstrap analysis with 5,000 resamples.

Convergent validity is assessed by estimating the average variance extracted (AVE), which indicates the amount of variance shared by the items making up the constructs. The AVE values of all constructs were higher than the minimum acceptable value of 0.50, as recommended by Hair *et al.* (2013). In addition, CFA measures the factor loading, which indicates the contribution of each item in relation to the variance of the latent construct, to complement the assessment of convergent validity. As shown in Table 1, all items have a factor loading greater than 0.70, indicating that they are relevant to the formation of constructs (Hair *et al.*, 2013).

The discriminant validity of the measurement model, in turn, is used to assess how different from other constructs a latent construct is (Hair *et al.*, 2013). To fulfill the condition of discriminant validity, the square root of each construct's AVE values must be higher than the

Table 1 Reliability, multicollinearity and convergent validity

Variable	*Items*	*Loading*	α	*CR*	*AVE*	ρA	*VIF*[a]
Learning culture							
Individual level	Ind1	0.842	0.815	0.798	0.682	0.801	1.66
	Ind2	0.881					1.78
	Ind3	0.793					2.28
	Ind4	0.822					2.19
Team level	TL1	0.765	0.795	0.776	0.673	0.798	2.34
	TL2	0.810					2.56
	TL3	0.798					2.31
	TL4	0.774					1.95
	TL5	0.803					1.67
Organizational level	Org1	0.741	0.766	0.784	0.665	0.775	1.84
	Org2	0.720					1.56
	Org3	0.731					1.35
	Org4	0.755					1.38
Dynamic capability							
Absorption capability	Abs1	0.812	0.780	0.816	0.706	0.769	1.66
	Abs2	0.886					2.63
	Abs3	0.838					1.85
	Abs4	0.873					2.56
Generation capability	Gen1	0.803	0.796	0.804	0.718	0.813	1.90
	Gen2	0.818					2.47
	Gen3	0.773					2.75
Storage capability	Stor1	0.830	0.826	0.793	0.692	0.831	2.93
	Stor2	0.813					2.36
	Stor3	0.821					2.14
Adaptation capability	Adap1	0.773	0.792	0.788	0.735	0.775	1.74
	Adap2	0.781					1.68
	Adap3	0.765					2.43
Teamwork context	TC1	0.780	0.778	0.765	0.788	0.790	1.95
	TC2	0.766					1.73
	TC3	0.787					1.44
	TC4	0.790					2.06
	TC5	0.808					1.63
	TC6	0.827					2.23
Team performance							
Efficiency	Ef1	0.818	0.819	0.828	0.819	0.832	2.45
	Ef2	0.806					2.81
	Ef3	0.822					2.74
Effectiveness	Eft1	0.791	0.804	0.844	0.831	0.817	2.67
	Eft2	0.856					2.80
	Eft3	0.883					1.78

Notes: α: Cronbach's α; CR: composite reliability; ρA: Dijstra–Henseler's rho; AVE: average variance extracted; [a]percentage of the item's variance explained by the latent variable

other correlations (Fornell and Larcker, 1981). Table 2 shows that all constructs are statistically different from the others, as the square root of their AVE is superior to the correlations. In addition, to complement the discriminant analysis test, Table 2 also presents the heterotrait–monotrait (HTMT) values. All values above the diagonal are lower than 0.85, indicating that there is discriminant validity (Henseler *et al.*, 2015).

4.2 Structural model and hypothesis testing

The bootstrap resampling technique with 5,000 resamples was applied using Smart-PLS to test the significance of path coefficients (β) within the structural model (Hair *et al.*, 2013). The results of the structural model (Table 3 and Figure 2) show that learning culture has a significant and positive relationship with teamwork context (β = 0.422, $p < 0.001$), and also with dynamic capability (β = 0.464, $p < 0.001$), supporting *H1* and *H2*, respectively. In

Table 2 Discriminant validity – correction matrix and heterotrait–monotrait (HTMT) ratio

Constructs	*Ind*	*TL*	*Org*	*Abs*	*Gen*	*Stor*	*Adap*	*TC*	*Ef*	*Eft*
Ind	*0.826*	0.344	0.288	0.120	0.190	0.216	0.145	0.264	0.238	0.222
TL	0.320	*0.820*	0.218	0.188	0.288	0.268	0.253	0.337	0.206	0.280
Org	0.263	0.193	*0.815*	0.293	0.283	0.317	0.388	0.246	0.337	0.315
Abs	0.131	0.164	0.267	*0.840*	0.304	0.283	0.293	0.293	0.284	0.250
Gen	0.188	0.224	0.243	0.328	*0.847*	0.316	0.351	0.290	0.335	0.314
Stor	0.105	0.235	0.288	0.253	0.265	*0.832*	0.222	0.283	0.298	0.268
Adap	0.089	0.318	0.315	0.342	0.388	0.213	*0.457*	0.393	0.227	0.356
TC	0.174	0.406	0.163	0.274	0.328	0.245	0.178	*0.888*	0.279	0.258
Ef	0.219	0.215	0.301	0.255	0.401	0.274	0.266	0.243	*0.905*	0.380
Eft	0.186	0.191	0.388	0.271	0.367	0.318	0.314	0.218	0.416	*0.912*

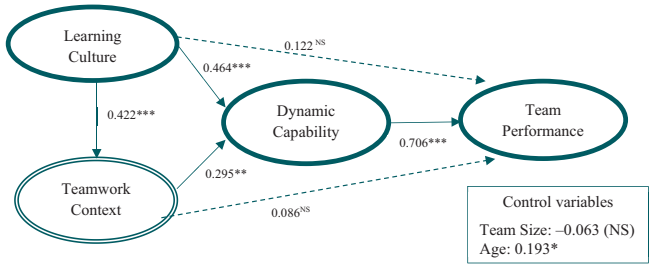
Notes: The values of the diagonal cells (italics) refer to the square root of the AVE values; below the diagonal elements are the correlations between constructs; above the diagonal elements are the HTMT ratio values

Table 3 Structural model analysis

Hypothesis	*Relationship*	*Path coefficient*	t-*Statistics*	p-*Value*	*Sig. level*	*Results*	f^2
H1	LC → TC	0.422	3.531	0.000	***	Supported	0.286
H2	LC → DC	0.464	4.760	0.000	***	Supported	0.303
H3	LC → TP	0.122	0.951	0.315	NS	Not Supported	0.070
H4	TC → DC	0.295	2.064	0.003	**	Supported	0.166
H5	TC → TP	0.086	0.735	0.286	NS	Not Supported	0.054
H6	DC → TP	0.706	12.844	0.000	***	Supported	0.515
Control variables	TS → TP	−0.063	0.343	0.567	NS	Not Supported	−0.036
	Age → TP	0193	1.836	0.025	*	Supported	0.138

Notes: $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

Figure 2 Results of PLS path modeling



Notes: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; NS –Not significant

contrast, it did not show a significant relationship with team performance (β = 0.122, $p > 0.05$), refuting *H3*. Table 3 also shows that teamwork context, similarly to what occurred with learning culture, has a significant and positive relationship with dynamic capability (β = 0.295, $p < 0.01$), supporting *H4*; however, it did not show a significant relationship with team performance (β = 0.086, $p > 0.05$), refuting *H5*. Dynamic capability, in turn, showed a strongly significant and positive relationship with team performance (β = 0.706, $p < 0.001$), supporting *H6*. Additionally, the age control variable showed a significant and positive relationship with performance, whereas the relationship between the size of the teams and performance was not significant.

The results of the PLS analysis indicated a strong explanatory power of the model with coefficients of determination (R^2) of dynamic capability and team performance of 0.526 and 0.513, respectively. The overall quality of the model was assessed by the goodness-of-fit index (GoF), which is estimated from the geometric mean of the latent variables' AVE and the mean R^2 of the endogenous variables (Tenenhaus *et al.*, 2005). The estimated GoF was 0.518, exceeding the cut-off value of 0.36 (Wetzels *et al.*, 2009). In addition, the proposed model's predictive quality was assessed using Stone–Geisser (Q^2). A Q^2 value above zero suggests that the model has acceptable predictive validity (Geisser, 1975). In the model of this study, Q^2 is 0.54 for dynamic capability and 0.51 for team performance, supporting the hypotheses presented. The effect size (f^2) values were estimated to measure the level of importance of an independent variable in relation to a dependent variable of the structural model. The threshold values for small, medium and large effects are 0.02, 0.15 and 0.35, respectively (Chin, 2010). As shown in Table 3, with the exception of the refuted hypotheses (*H3* and *H5*) and the age control variable, which have low f^2 values, the other hypotheses have medium or high f^2 values.

Regarding the mediating effects, we initially applied the non-parametric bootstrap method (bootstrap sample size = 500), as suggested by Preacher and Hayes (2008). As shown in Table 4, the indirect relationship between learning culture and team performance (β = 0.145, $p < 0.01$) and the indirect relationship between teamwork context and team performance (β = 0.088, $p < 0.05$) were significant, supporting *H7a* and *H7b*.

The three-step procedure recommended by Baron and Kenny (1986) was used to test whether the mediating effect was complete or partial. Both learning culture and teamwork context have a significant relationship with team performance (Path c). The relationship of learning culture and teamwork context with dynamic capability (Path a) and the relationship between the mediating variable (dynamic capability) and the independent variable were also significant. Subsequently, the relationship between the two independent variables and the dependent variable, controlled by the mediating variable (Path c′), was examined. If Path c′ is insignificant, it is safe to assume that the relationship is completely mediated; in the opposite case, it is only partially mediated. The results in Table 5 show that dynamic capability has a mediating effect on the relationship between the two dependent variables and team performance, supporting *H7a* and *H7b*.

Table 4 Results of the bootstrap method for mediating effects

IV	*M*	*DV*	*Effect of IV on M (a)*	*Effect of M on DV (b)*	*Direct effect (c′)*	*Indirect effect (a × b)*	*Total effect (c)*	*Conclusion*
LC	DC	TP	0.431**	0.337	0.128	0.145	0.273	*H7a* supported
TC	DC	TP	0.261*	0.337	0.092	0.088	0.180	*H7b* supported

Notes: IV – independent variable; M – mediator; DV – dependent variable; LC – learning culture; TC – teamwork context; DC – dynamic capability TP – teamwork performance; *$p < 0.05$; **$p < 0.01$

Table 5 Results of Baron and Kenny (1986) method for mediating effects

IV	*M*	*DV*	*IV → DV (c)*	*IV → M (a)*	*IV → DV (c′)*	*M → DV (b)*	*Conclusion*
LC	DC	TP	0.284**	0.415***	0.138	0.477***	Full
TC	DC	TP	0.315**	0.246**	0.184	0.477***	Full

Notes: IV – independent variable; M – mediator; DV – dependent variable; LC – learning culture; TC – teamwork context; TP – teamwork performance; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

5. Discussions and conclusions

The results of the empirical research, carried out with teams of industrial companies, show that dynamic capability was strongly and positively related to team performance, as shown by the proposed model. The other two factors studied, learning culture and teamwork context, had their effects mediated by dynamic capability.

Many studies show that organizations achieve competitive advantage and improve their performance through teamwork (Blazevic and Lievens, 2004) and the development of dynamic capability (Lin *et al.*, 2020; Eisenhardt and Martin, 2000). However, there is a lack of studies in the literature looking more deeply into the relationship between dynamic capability and team performance by analyzing the role of antecedent constructs. Thus, this study investigates this relationship based on the impact of two antecedent constructs: learning culture and teamwork context. The results found support the hypothesis that the organizational management process needs to be aligned with the organization's contextual variables for it to develop dynamic capabilities, offering preliminary evidence for the RBV and the KBV, and that although learning culture does not directly contribute to the performance of teams, its influence on this performance is positive and indirect, being mediated by dynamic capability.

In this sense, while developing a learning culture does not directly impact the performance of teams, it is the main factor positively interfering with dynamic capability, which is in line with previous research on the effect of culture on performance (Jamshed and Majeed, 2019; Gold *et al.*, 2001; Zahra *et al.*, 2006; Hung *et al.*, 2010). The development of a learning culture generates an environment focused on the creation and transformation of skills through the professional growth of individuals, knowledge exchange, stimulation of the creative process and institutionalization of individual knowledge, which promotes dynamic capability, as demonstrated in the results of the research model. Improvement in the team's performance is more directly associated with the use of what the team members have learned to optimize processes, rebuilding competences. Learning culture also had a strong and positive association with teamwork context, a relationship that has been analyzed by only a few studies, most of which treat learning culture as a contextual element (Jamshed and Majeed, 2019; Calabuig *et al.*, 2018; Gonzalez, 2017; Shin *et al.*, 2012). Regarding teamwork context, the research model of this study considered the variables related to the way individuals organize themselves and develop their tasks, including cohesion, interdependence, shared identity and degree of autonomy, in line with Cohen and Bailey (1997) and Gonzalez and Melo (2019). This makes it possible to conclude that the characteristics of a learning culture, focused on knowledge exchange and cooperation among individuals, improve the teams' internal conditions and strengthen the firm's dynamic capability.

This study also showed that teamwork context has a positive impact on dynamic capability, whereas its impact on team performance was not significant. Similar to what happened with learning culture, teamwork context was found to be an important factor for the development of dynamic capability, and had a direct and positive impact on team performance. Regarding the environment where the study was carried out, manufacturing teams of industrial companies, it appears that these teams are usually formed by specialized employees with little multidisciplinarity regarding the content of the work developed. This characteristic of specialization in a specific body of knowledge is essential to the refinement and reconstruction of competences, promoting dynamic capability (Teece *et al.*, 1997; Eisenhardt and Martin, 2000). However, as verified in a study carried out by Li and Huang (2013), teams with a high degree of expertise and lower level of multidisciplinarity are more limited in terms of the complexity of the knowledge generated, absorbed and explored.

In this way, this study contributes to KM theory by demonstrating how the learning culture and the teamwork context influence team performance with dynamic capability as a moderating factor. Within the scope of KM, the dynamic capability is defined by authors, such as Nielsen (2006) and Teece *et al.* (2016), as a reconstruction of knowledge to keep the organization competitive in the market. In this context, both the teamwork context and the learning culture present significant constructs in this process of renewing knowledge and competences, and, consequently, important for the performance of teams.

5.1 Practical implications

The results presented in this research come from the existing body of literature and the findings of the study to provide useful insights into practitioners in relation to the importance of team dynamics for enhanced team performance. Based on the study's findings, teams should be encouraged to consider the aspects of learning culture such as stimulating knowledge sharing, dialogue, mutual trust, shared identity and common goals, among individuals. The results of this research indicate that learning culture does not directly impact team performance, but plays an extremely relevant and direct role regarding dynamic capability and team context. In this way, learning culture is very important for the viability of the social development of teamwork. Considering that the success of teamwork consists of the development of an environment that favors the exchange of knowledge and multidisciplinarity among the members, learning culture plays a key role as a supporter of this team context and of dynamic capability.

Team context does not directly impact team performance either. As with learning culture, the contribution of context is also mediated by dynamic capacity. The study's findings state that manufacturing team managers should be concerned with the development of an environment focused on autonomy, shared identity among individuals, prioritizing collective actions over individualistic initiatives, mutual trust and affinity among members. These characteristics also support the development of dynamic capability in manufacturing teamwork.

Finally, the results of this study alert managers to the need for developing dynamic capability to improve performance in team efficiency and effectiveness. Dynamic capability is based on exploratory and exploitative learning, which presupposes the reconstruction of the team's competences according to market needs. Dynamic capability, in this way, becomes the central factor for the performance of manufacturing teams, as it not only influences performance directly, but also mediates the contributions of the two other factors: learning culture and team context.

5.2 Limitations and directions for future studies

This study has some limitations that open opportunities for future research. The first refers to the small sample size. Future studies may work with larger samples, including also other sectors of activity such as the service sector.

The author of this study chose to work with manufacturing teams of industrial companies. These teams are formed by employees with different levels of training and, usually, with a high degree of expertise. It is suggested that future research should consider multidisciplinary teams, such as, for example, project and product design teams.

While this research studied learning culture within the context of teams, future studies could consider it in relation to the organization as a whole, as it is organizational culture that gives rise to team culture. Finally, this study used team size and age as control variables; however, future research may use other variables, such as the company's area of expertise, level of expertise and team tenure.

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Appendix. Measurement items

LC. Learning culture

Ind. Individual level

- Ind1. In my company, people identify the skills and knowledge needed to perform tasks in the future.
- Ind2. In my company, people are rewarded for learning new skills.
- Ind3. In my company, people engage in honest and open dialogue with each other.
- Ind4. In my company, people build relationships of mutual trust.

TL. Team level

- TL1. In my company, teams are free to adapt their goals according to the needs perceived.
- TL2. In my company, teams treat people equally.
- TL3. In my company, team performance is treated as more relevant than individual performance.
- TL4. In my company, teams review their beliefs and way of acting based on group discussions and reflections.
- TL5. In my company, teams are rewarded for results achieved in group.

Org. Organizational level

- Org1. My company makes the lessons learned available to all employees.
- Org2. My company allows employees to control resources related to their processes.
- Org3. My company encourages interdepartmental work in problem-solving and improvement situations.
- Org4. In my company, leaders use their knowledge and experience to guide and teach their employees.

TC. Teamwork context

- TC1. Team members interact with each other to achieve common results.
- TC2. Teams are formed by individuals who have complementary skills, facilitating the formation of multidisciplinary teams.
- TC3. Tasks performed by team members require collective and coordinated action.
- TC4. Team members share values and beliefs.
- TC5. Team members have affinity with and trust each other.
- TC6. Team members have autonomy to make decisions about their processes.

DC. Dynamic capability

Abs. Absorption capability

- Abs1. My company absorbs new knowledge from suppliers, competitors and customers.
- Abs2. My company absorbs new knowledge from patents.
- Abs3. My company absorbs new knowledge from research institutes.
- Abs4. My company absorbs new knowledge from new employees.

Gen. Generation capability

- Gen1. New knowledge is generated internally through individual learning.
- Gen2. My company has research and development activities that generate new knowledge.
- Gen3. My company builds strategic alliances with other companies and institutes that promote the internal generation of new knowledge.

Stor. Storage capability

- Stor1. The knowledge generated and absorbed is recorded.
- Stor2. The recorded knowledge is easily interpreted and used by individuals.
- Stor3. The recorded knowledge is disclosed among individuals.

Adap. Adaptation capability

- Adap1. Individuals apply the knowledge generated in different processes through learning.
- Adap2. My company favors the integration of knowledge from different areas, individuals and teams.
- Adap3. My company combines primary knowledge with new knowledge created or absorbed.

TP. Team performance

Ef. Efficiency

- Ef1. Ability of teams to complete activities and tasks.
- Ef2. Quality level of completed work.
- Ef3. Level of operational efficiency of the activities carried out, i.e. carrying out activities without losses.

Eft. Effectiveness

- Eft1. Ability to achieve collective goals.
- Eft2. Team's ability to meet planned deadlines.
- Eft3. Team's ability to comply with planned budgets.

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