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TRUST-EFFECTIVENESS BRIDGE: HOW TEAM COHESION AND SATISFACTION MATTER?

ABSTRACT

Purpose: The primary purpose of this study is to explore the role of team trust in shaping team effectiveness among undergraduate students engaged in collaborative academic projects. Specifically, the study examines how trust within student teams affects their overall satisfaction with the group experience, their sense of cohesion, and ultimately, the quality and success of their group outcomes.

Methodology: The study was conducted within the Organization and Management course, a core subject in the Economics of Entrepreneurship study program. A total of 89 students were divided into 26 teams, each tasked with analyzing a real-world organization and proposing an improved organizational structure.

Results: The analysis revealed a significant positive relationship between team trust and both team satisfaction and team cohesion. In other words, students who reported higher levels of trust in their teammates were also more likely to feel satisfied with the group experience and perceive their teams as cohesive and well-functioning. Furthermore, both team satisfaction and team cohesion were found to be positively linked to team effectiveness, defined as the quality and success of the group's final output.

Conclusion: The study highlights the central importance of trust in building effective student teams and reinforces findings from organizational behavior literature within a real academic setting. When trust is present, team members are more likely to feel engaged, supported, and motivated, which leads to greater collaboration, smoother communication, and ultimately better performance. These insights have practical implications for both educators and managers.

Keywords: Team cohesion, team effectiveness, team satisfaction, team trust

1. Introduction

Teamwork skills are increasingly important in modern business environments that require employees to work and interact with others daily. These skills are among the most highly valued in the labor market, and most organizations claim that a candidate who collaborates well will also perform well in other areas (Crebert et al., 2004; De Prada et al., 2022; Holubčík et al., 2024). As a result, business schools

have increasingly included team projects and case studies in their curricula to build students' teamwork skills (Fittipaldi, 2020; Zeitun et al., 2013).

Moreover, employers expect business schools to prepare students for the labor market by developing an aptitude for teamwork. For several decades, researchers have studied various aspects of teamwork and team effectiveness to help employers maximize their employees' work performance. The

first research on teamwork was conducted by Trist and Bamford (1951), who investigated how teamwork meets an organization's social, psychological, and technological requirements. Today, one of the most famous studies on teamwork was conducted by Loughry et al. (2007), who developed the Comprehensive Assessment of Team Member Effectiveness (CATME), a theory-driven instrument that rigorously measures team member effectiveness.

This paper begins by outlining the research aim and providing a review of the literature on the relationships between team trust, team cohesion, team satisfaction, and team effectiveness. Based on this review, the research hypotheses are developed. Following the theoretical background, the paper presents findings on how team cohesion and team satisfaction mediate the relationship between team trust and team effectiveness, using data collected from students enrolled in the undergraduate study program in Economics of Entrepreneurship. Finally, the paper summarizes the key findings, discusses its limitations, and offers directions for future research.

2. Purpose of research

Previous research on the importance of teamwork and team effectiveness has primarily been conducted in a business environment, with some studies also examining student teamwork in an academic environment (Pikl & Posarić, 2023; Posarić & Pikl, 2024; Zeitun et al., 2013). While these studies have provided valuable insights, they often relied on general or simplified measures of team effectiveness and rarely employed sophisticated and validated instruments such as CATME. The few studies that applied CATME in academic contexts (Pikl & Posarić, 2023; Posarić & Pikl, 2024) demonstrated its value as a rigorous, professional tool for measuring various dimensions of team effectiveness.

Despite the substantial body of literature on team formation, team satisfaction, and team effectiveness, several critical gaps remain that justify further research in this well-explored field. Firstly, there is limited empirical evidence on how trust within student teams influences team effectiveness through specific mediating mechanisms such as team satisfaction and team cohesion. While some researchers have argued that trust is positively linked to perceived team task performance (Costa, 2003), the complex pathways through which trust influences

actual team outcomes in higher education contexts have not been sufficiently explored. Understanding these pathways is crucial for designing learning environments that promote effective collaboration and cultivate essential teamwork skills among students.

Another important contribution of this study lies in its methodological approach. By applying the CATME instrument, rigorously adapted to an academic context, this research provides a more reliable assessment of student team effectiveness than is typically found in previous studies. Many prior studies in the field have relied on ad hoc or single-item measures that do not capture the multifaceted nature of teamwork (Fung, 2014; S. DeOrtentiis et al., 2013). This study addresses systematic methodological criticism by using a comprehensive, validated, and internationally recognized tool. In light of these gaps, the primary purpose of this study is to investigate the mediating roles of team satisfaction and team cohesion in the relationship between team trust and team effectiveness in student teamwork.

By clarifying how trust, satisfaction, and cohesion interact to shape team outcomes, the study aims to expand the theoretical understanding of teamwork dynamics in academic settings. At the same time, the findings should offer practical insights for instructors and course designers into how to build and support more effective, cohesive, and satisfying student teams. In this way, the research contributes to both the scientific literature and the practical advancement of teamwork practices in higher education, ultimately helping to prepare students for the collaborative demands of modern professional environments.

3. Literature review

The variables we will explore in this paper are team trust, team satisfaction, team cohesion, and team effectiveness, as observed in student teamwork within the academic environment. Before analyzing the relationship among these variables, we must first define them. *Team trust* refers to a team member's belief that another member will act in ways that are helpful or at least not harmful (e.g., sharing information), fostering a cooperative environment (Gambetta, 1988). *Team satisfaction* can be defined as how team members feel about events within the project team, including satisfaction with the project

work, team members, and being part of the team (Nguyen et al., 2008). *Team cohesion* can refer to how attractive the team is to its members and the strength of their interpersonal bonds (Cook et al., 1997). Finally, *team effectiveness* is a manager's assessment of team members' performance in completing tasks, achieving goals, empowering one another, sharing information, and maintaining a good working environment (Bourgault et al., 2008).

Gamson (1968) suggested that trust is a crucial factor in employees' attitudes toward their organization. Driscoll (1978) found that organizational trust is most useful in predicting overall satisfaction attitudes. Some authors have investigated the positive relationship between team trust and team satisfaction (Costa, 2003; Costa et al., 2001; Fung, 2014), and some have also explored how these constructs relate to organizational trust and organizational satisfaction (Lin & Guo, 2023; Zhao et al., 2022).

When trust exists within a team, individuals feel free to express themselves genuinely without engaging in impression management or political tactics (Lencioni, 2007). As a result, trust is expected to enhance members' overall satisfaction with being part of the team. This sense of satisfaction plays a vital role in team performance, as it impacts members' confidence, perceived competence, motivation, and contentment with their roles (Robbins & Judge, 2019). Consequently, satisfied team members are more likely to invest greater effort in upcoming assignments. When team members have high trust and are willing to be vulnerable, satisfaction can lead to greater team effectiveness than when trust is lower. Trust has frequently been linked to satisfaction and commitment. For example, Gladstein (1984) identified a significant connection between internal group dynamics—such as open communication—and overall satisfaction. In buyer-seller interactions, Smith and Barclay (1997) demonstrated that trust-related behaviors, such as transparent communication and avoidance of opportunistic actions, contribute to mutual satisfaction between parties. Politics (2006) found that job satisfaction mediates between self-leadership, behavior-focused strategies, and team effectiveness. Similarly, Zeitun et al. (2013) observed a positive relationship between team satisfaction and academic performance in group assignments among American students. Based on these findings, we propose the following hypotheses:

H1: The relationship between team trust and team effectiveness is indirect, such that team satisfaction mediates this relationship.

H1a: Team trust has a direct and positive effect on team satisfaction.

H1b: Team satisfaction has a direct and positive effect on team effectiveness.

Team cohesion relies on making the team's existence matter to each individual (Fine & Holyfield, 1996). Without trust, team members will not be willing to be vulnerable or engage in interdependent actions. Building trust is nearly impossible if team members are not open about their mistakes and weaknesses. A lack of trust hinders the team's ability to become cohesive and engage in productive discussions (Lencioni, 2007). When team members trust each other, they are more likely to see the team as a cohesive unit that helps them achieve their goals. This perception of cohesion reflects the belief that the team can work effectively together to achieve interdependent goals. Team members need to perceive themselves as part of a unified group, as research has shown a positive correlation between cohesion and team effectiveness (Beal et al., 2003; Cai, 2023; Chiochio & Essiembre, 2009; Webber & Donahue, 2001). Accordingly, it is anticipated that trust will have a positive association with cohesion (Fine & Holyfield, 1996), serving as a mediating factor in the connection between team trust and overall team performance.

Higher levels of team cohesion lead to a more effective fulfillment of individual needs while encouraging mutual alignment with the group's goals. A cohesive team environment fosters positive attributes and beneficial outcomes, including heightened awareness of issues, openness to change, stronger motivation, improved morale, enhanced decision-making, and increased creativity (Chidambaram, 1996; Soldz et al., 1993). According to the literature, team cohesion influences project success (Larson & Gobeli, 1989) and team effectiveness in non-project settings (Mcshane & Travaglione, 2003). Cook et al. (1997), Robbins and Judge (2019), and Nelson and Quick (2009) stated that high team cohesion positively impacts productivity, job satisfaction, and growth in non-project teams. Teams with strong cohesion tend to achieve more consistent outcomes because they closely align with established production standards. Furthermore, the act of sharing knowledge serves as a mediating factor

in the relationship between team cohesion and individual performance (van Woerkom & Sanders, 2010). However, it remains unclear whether team cohesion can reliably predict project success, efficiency, and member satisfaction, particularly in contexts constrained by limited time and resources. Considering these results, we pose the following hypotheses:

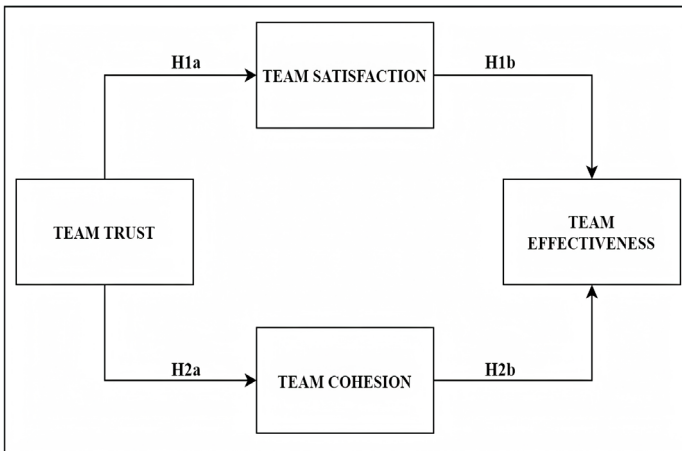
H2: The relationship between team trust and team effectiveness is indirect, such that team cohesion mediates this relationship.

H2a: Team trust has a direct and positive effect on team cohesion.

H2b: Team cohesion has a direct and positive effect on team effectiveness.

Figure 1 shows a conceptual research model.

Figure 1 Conceptual research model



Source: Authors' research

4. Research methods

This study employed a quantitative research design, using an online questionnaire to gather data on team dynamics from undergraduate students participating in a course-based group project. Standardized, previously validated measurement scales were adapted for the team context to assess trust, cohesion, satisfaction, and effectiveness, ensuring reliable, structured data suitable for statistical analysis.

4.1 Data collection, instrument and statistical procedures

A total of 89 undergraduate students enrolled in the Economics of Entrepreneurship study program contributed to data collection in this research. The study was carried out in the second (summer) semester of the 2023–2024 academic year, with 111 students enrolled in the Organization and Management course serving as the sample. The course pre-

pares students to develop organizational and managerial systems for different organizations.

Throughout the course's learning and assessment activities, students were required to analyze a real organization and provide a redesigned organizational structure. The teacher formed the students into teams of about 4; some had 3 or 5. There were 111 students placed in 26 teams. The teacher formed teams using a random-number method. This approach is considered the most effective way to simulate real-world business environments, where individuals often do not have the option to select their team members. The team members selected their team leader among themselves, and the teacher did not influence this decision. Throughout the semester, students worked on these group projects, which culminated in a 15-minute oral presentation and a 5,000- to 7,000-word written report, both delivered at the conclusion of the semester. Teams were expected to work continuously, hold regular meetings, and independently divide tasks.

Additionally, an important requirement for all teams was that every team member had to attend an interview with a manager at a selected organization from real business practice, to collect the data needed to complete the assignment. A total of 89 out of 111 participants completed the questionnaire. The data were gathered in June 2024 using LimeSurvey¹, an online survey tool.

Team trust was assessed with a revised version of the scale originally used by Jarvenpaa, Knoll, and Leidner (1998), adapted to the team context. The measure included six statements for which participants indicated their level of agreement on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The internal consistency of this measure, as indexed by Cronbach's alpha, was 0.64—just below the conventionally accepted cutoff of 0.70 (Jarvenpaa et al., 1998), so we decided to use this variable in our model.

Team cohesion was assessed using an adapted measure developed by Podsakoff and MacKenzie (1994) for use in team settings. The measure also had six statements, each rated on a five-point Likert scale. This scale was reliable, with a Cronbach's alpha of 0.94, above the 0.70 threshold recommended by Nunnally (1978).

Team satisfaction was assessed with a scale initially developed by Gladstein (1984) and modified to the team level for this investigation. This measure consisted of five items rated on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The scale demonstrated acceptable reliability, with a Cronbach's alpha of 0.76 (Nunnally, 1978).

Team effectiveness was measured using a 33-item scale developed by Lau et al. (2014) across five dimensions: (1) contributing to the work of the team, (2) interacting with the team, (3) keeping the team on track, (4) maintaining high standards, and (5) possessing relevant knowledge, skills, and abilities. All items were measured on a five-point Likert scale. Internal consistency was measured for each subscale, and the Cronbach's alpha values of 0.86 for category (1), 0.90 for category (2), 0.89 for category (3), 0.74 for category (4), and 0.81 for category (5) were obtained. They are all within or above the acceptable reliability limit (Nunnally, 1978) psychiatrists, and kindred professionals, in this chapter it will be assumed that the reader is already familiar with fundamental issues relating to behavioral

measurement and, consequently, that there will be no need to discuss low-level principles. Rather, the discussion will center on controversial issues that are of immediate importance to the professional clinician or researcher in the behavioral sciences. Whereas the examples chosen for this chapter to illustrate principles of measurement are particularly applicable to clinical diagnosis, the principles are quite general to empirical science. Because some methods of statistical and mathematical analysis are intimately related to the development and use of measurement methods, critical comments will be made about some prominent approaches to statistical analysis, but details regarding their applications will be left to referenced sources rather than be discussed in detail here. (Any reader who is not already familiar with fundamental principles of psychometric theory and analysis, or would like a refresher course in that regard, might want to consult my book *Psychometric Theory*, 1978..

We tested our hypotheses using regression analysis with Model 4 of the PROCESS macro for SPSS (Hayes, 2018), separately for each mediator.

4.2 Data analysis

Table 1 presents the demographic characteristics of the students who participated in the study and comprised the sample of respondents. Of the total respondents, 73% were female, and 27% were male. The majority of students enrolled in the undergraduate study program in Economics of Entrepreneurship are female. In previous years, there was an even greater disparity between the number of female and male students enrolled in the undergraduate study program in Economics and Entrepreneurship. Furthermore, most respondents (76%) were born between 2004 and 2005, 18% were born between 2002 and 2003, and 6% were born between 2000 and 2001. As for the respondents' roles on the team, 78% were team members, as expected, since only one team member can be the team leader.

Likewise, most teams had 4 team members (71%), and only a small number had 5 (17%) or 3 (12%). In the Organization and Management course, at the beginning of the semester, students are divided into four seminar groups in which they attend lectures. The number of students in each seminar group can vary, resulting in groups with more or fewer teams for team project tasks and affecting the size of each team. Only 11% of respondents reported conflicts during teamwork. This can indicate strong team

¹ www.limesurvey.srce.hr

cohesion. Also, 91% of respondents stated they had rules for working on the team. This is crucial information because defined rules can affect team effectiveness. Finally, 93% of the respondents said they conducted their meetings online. This is also

expected because, following the COVID-19 pandemic, students have been taught to work in an online environment and to use various tools to facilitate online collaboration.

Table 1 Demographic characteristics of the sample

Demographics	Category	Frequency	Percent
Gender	male	24	27%
	female	65	73%
Year	2000–2001	5	6%
	2002–2003	16	18%
	2004–2005	68	76%
Role	team member	69	78%
	team leader	20	22%
Number of team members	3	11	12%
	4	63	71%
	5	15	17%
Conflicts	yes	10	11%
	no	79	89%
Rules	yes	81	91%
	no	8	9%
Meeting place	contact	6	7%
	online	83	93%

Source: Authors' research

Table 2 provides descriptive statistics (minimum, maximum, mean, and standard deviation) for items related to team trust, team satisfaction, team cohesion, and team effectiveness. The lowest mean value for items related to team effectiveness is 3.88, while the highest is 4.91, indicating that respondents rated their team effectiveness highly.

In contrast, team satisfaction showed greater variability. While most items received satisfactory ratings, certain statements, such as "I am very happy to work in this team" (Mean = 3.91) and "The way in which the team worked together was most adequate" (Mean = 3.90), were noticeably lower. Furthermore, the item "The development of teamwork was not adequate" (reverse-coded, Mean = 2.57) suggests that a subset of respondents experienced some dissatisfaction with team processes or collaboration dynamics. These findings point to opportu-

nities for enhancing emotional connectedness and confidence in team interactions.

Measures of team cohesion were generally high, with mean scores ranging from 4.04 to 4.19. The lowest values appeared on reverse-coded items such as "There is no "team spirit" in my group" (Mean = 2.52) and "There is a noticeable lack of confidence among those with whom I work" (Mean = 2.49). Although these low scores actually reflect positive perceptions of team spirit and mutual confidence, the variation suggests that not all team members experience cohesion uniformly.

Regarding team trust, two items had lower mean values (2.52 and 2.49), suggesting that trust may be a relative weakness for some participants.

Table 2 Descriptive statistics of items related to the main constructs

Descriptive Statistics					
Items	N	Minimum	Maximum	Mean	Std. Deviation
EFE1	89	3	5	4.52	0.605
EFE2	89	4	5	4.79	0.412
EFE3	89	3	5	4.57	0.562
EFE4	89	3	5	4.78	0.517
EFE5	89	3	5	4.62	0.554
EFE6	89	3	5	4.58	0.540
EFE7	89	3	5	4.62	0.533
EFE8	89	2	5	4.54	0.708
EFE9	89	2	5	4.69	0.576
EFE10	89	2	5	4.51	0.676
EFE11	89	3	5	4.64	0.506
EFE12	89	2	5	4.24	0.840
EFE13	89	1	5	3.88	1.064
EFE14	89	3	5	4.61	0.650
EFE15	89	1	5	4.24	0.905
EFE16	89	3	5	4.55	0.640
EFE17	89	3	5	4.57	0.705
EFE18	89	3	5	4.58	0.636
EFE19	89	3	5	4.46	0.641
EFE20	89	3	5	4.34	0.722
EFE21	89	2	5	4.36	0.711
EFE22	89	2	5	4.31	0.777
EFE23	89	1	5	4.07	1.009
EFE24	89	3	5	4.43	0.655
EFE25	89	3	5	4.63	0.591
EFE26	89	2	5	4.58	0.704
EFE27	89	2	5	4.57	0.672
EFE28	89	4	5	4.91	0.288
EFE29	89	1	5	4.47	0.755
EFE30	89	2	5	4.42	0.618
EFE31	89	3	5	4.46	0.585
EFE32	89	2	5	4.28	0.754
EFE33	89	1	5	4.18	0.899
SAT1	89	1	5	3.91	1.174
SAT2	89	1	5	4.09	1.018

Descriptive Statistics					
Items	N	Minimum	Maximum	Mean	Std. Deviation
SAT3	89	1	5	3.90	1.077
SAT4	89	1	5	4.17	0.895
SAT5	89	1	5	2.57	1.322
COH1	89	1	5	3.90	0.966
COH2	89	1	5	4.11	1.005
COH3	89	1	5	4.16	0.976
COH4	89	1	5	4.19	0.915
COH5	89	1	5	4.07	1.042
COH6	89	1	5	4.04	1.010
TRUST1	89	1	5	4.06	1.059
TRUST2	89	1	5	4.16	0.976
TRUST3	89	1	5	4.38	0.886
TRUST4	89	1	5	2.52	1.463
TRUST5	89	1	5	2.49	1.399
TRUST6	89	1	5	4.11	0.994

Source: Authors' research

5. Research results and discussion

To test hypotheses, we used regression analysis with Model 4 of the PROCESS MACRO for SPSS (Hayes, 2018). This analysis was conducted twice for each mediator. The results of the first regression analysis showed that team satisfaction mediates the relationship between team trust and team effectiveness. These results are shown in Table 3. The direct effect of team trust on team effectiveness is not significant, but the indirect effect is significant. According to Hair et al. (2022), the results suggest an indirect-only mediation effect, or full mediation in this case. Accordingly, Hypothesis H1 can be accepted. Also, there is a positive relationship between team trust and team satisfaction (p -value < .01), as well as between team satisfaction and team effectiveness (p -value < .10). These results suggest that hypotheses H1a and H1b can be accepted. These results align with previous research on the relationship between team trust and team satisfaction (Costa, 2003; Costa et al., 2001; Fung, 2014). They also align with the proposition by Robbins and Judge (2003) that satisfaction is crucial for team effectiveness. These are valuable findings because this study was the first to conduct research of this type

on a sample of students and can help teachers better understand students' teamwork and team members' satisfaction.

The results of the second regression analysis showed that team cohesion mediates the relationship between team trust and team effectiveness. These results are shown in Table 3. The direct effect of team trust on team effectiveness is not significant, but the indirect effect is significant. According to Hair et al. (2022), the results suggest that we have an indirect-only mediation effect, or full mediation in this case. Accordingly, Hypothesis H2 can be accepted. Also, there is a positive relationship between team trust and team cohesion (p -value < .01) and between team cohesion and team effectiveness (p -value < .05). These results suggest that hypotheses H2a and H2b can be accepted. The results align with previous research (Beal et al., 2003; Chiochio & Essiembre, 2009; Fine & Holyfield, 1996; Webber & Donahue, 2001) and are valuable findings because this study was the first to conduct research of this type on a sample of students, which can help teachers better understand students' teamwork and the relationships between different team members.

Table 3 Results of conditional process mediation analyses without control variables

Model	Direct effect			Indirect effect	Total effect
	(X → Y)	(X → M)	(M → Y)	(X → M → Y)	c
	c'	a	b	a x b*****	
Team Trust → Team Satisfaction → Team Effectiveness	0.3766	0.6579*	0.8790**	0.0210	0.9549
Team Trust → Team Cohesion → Team Effectiveness	0.1273	0.9440***	0.8767****	0.2442	0.9549

Note: * p < .01; ** p < .10; *** P < .01; **** p < .05; ***** 95% bootstrap confidence interval

Source: Authors' research

The results in Table 4 indicate that when control variables are included, the mediation effects remain consistent with those in the baseline model. In the extended model, the control variables included respondents' gender and their team-member role. For both mediators—team satisfaction and team cohesion—the indirect effects remain significant, confirming full mediation in both pathways, just as in the model without control variables. Interestingly, the indirect effects are even stronger in the extend-

ed model, suggesting that controlling for additional variables strengthens the mediating role of team satisfaction and team cohesion in the relationship between team trust and team effectiveness. The direct effects remain nonsignificant in both models, further supporting the indirect-only mediation. Overall, these findings show that the results are robust and that the inclusion of control variables does not alter the fundamental conclusions drawn from the baseline model.

Table 4 Results of conditional process mediation analyses with control variables

Model	Direct effect			Indirect effect	Total effect
	(X → Y)	(X → M)	(M → Y)	(X → M → Y)	c
	c'	a	b	a x b*****	
Team Trust → Team Satisfaction → Team Effectiveness	0.2423	0.6544*	1.1716***	0.7667	1.0089
Team Trust → Team Cohesion → Team Effectiveness	-0.0267	0.9373***	1.1049**	1.0356	1.0089

Note: * p < .01; ** p < .10; *** P < .01; **** p < .05; ***** 95% bootstrap confidence interval

Source: Authors' research

5.1 Future agenda

The study was based on a relatively small sample of students from a single course within one faculty. To improve the generalizability of the results, future research should replicate this study with larger, more diverse samples that include students from different study programs, faculties, and universities. Additionally, examining these relationships across various educational levels—such as undergraduate and graduate groups of students—could provide insights into how maturity, prior experience, and academic demands shape team dynamics and performance.

Cultural factors also play a critical role in shaping teamwork behaviors. As norms surrounding trust, cohesion, and satisfaction can vary significantly across cultural contexts, future research should investigate these constructs in international and cross-cultural settings, extending existing literature on global team performance and satisfaction.

The present study collected data at a single point in time. To capture the development and causal relationships of team dynamics, future research would benefit from longitudinal designs. These would enable a more nuanced understanding of how trust, cohesion, and satisfaction evolve throughout a

project and how they affect team effectiveness over time.

While self-reported data provide valuable subjective insights, integrating multiple data sources—such as peer evaluations, teacher assessments, and objective performance metrics—could offer a more comprehensive, triangulated view of team effectiveness and its antecedents. The descriptive statistics indicated lower mean values on certain items related to team trust and satisfaction. Future research should explore which specific dimensions of trust or satisfaction are most challenging for student teams and investigate potential causes, thereby informing more targeted pedagogical interventions.

Given that 93% of teams in this study held their meetings online, future research could examine how virtual versus face-to-face interactions affect the development of trust, cohesion, satisfaction, and overall effectiveness in student teams. This would build on previous comparative studies and reflect evolving modes of academic collaboration.

Furthermore, the high adherence to team rules (91%) and the low incidence of reported conflict (11%) suggest potential areas for deeper investigation. Future work could examine how clearly defined team norms and effective conflict resolution strategies contribute to positive team dynamics and outcomes.

With the rapid proliferation of artificial intelligence (AI) tools in academic settings, future studies should also consider the influence of AI on team processes and effectiveness. Understanding how students use these tools collaboratively can provide critical insights into evolving team practices and technological integration.

Although this study focused on student teams, its findings resonate with research conducted in organizational contexts. Future research could further explore the applicability of these results to professional teams and consider refining the CATME instrument for broader use in industry and other non-academic environments. Ultimately, the insights gained from this study can support educators, researchers, and practitioners in fostering more effective teams. By addressing these suggested directions, future research can build upon the current study's foundation, contributing to a deeper understanding of teamwork development in both educational and professional settings.

5.2 Practical implications

The study found that team trust is positively associated with both team satisfaction and team cohesion, which in turn contribute to team effectiveness. To foster trust from the outset of group work, teachers should create an environment where students feel safe to be authentic and vulnerable without fear of negative repercussions. This psychological safety is crucial for fostering trust and facilitating meaningful collaboration. However, some students reported trust-related issues, indicating a need for targeted pedagogical strategies to address them.

The findings also confirmed that team satisfaction positively influences team effectiveness, acting as a mediator between trust and performance. Higher satisfaction enhances team members' confidence, effort, and engagement, ultimately improving both current and future outcomes. Since some students expressed dissatisfaction with their teamwork experience, teachers should monitor satisfaction levels through feedback, adjust project structures as needed, and introduce activities to enhance the team experience. To further improve performance, teachers should encourage students to see their group as a cohesive unit with shared goals. High cohesion is linked to greater problem awareness, openness to change, increased motivation, and improved morale. Teachers can promote cohesion through teambuilding exercises and by reinforcing the importance of each member's contribution to a group's success.

Understanding the dynamic interplay between trust, satisfaction, cohesion, and effectiveness enables educators to identify and address weaknesses in teamwork. Informed by these insights, teachers can refine project requirements, adjust group sizes, and enhance communication structures to improve overall effectiveness. Designing collaborative tasks that require interdependence can also make trust a functional necessity within teams. While the study did not establish causality, it suggests that clearly defined rules may enhance team effectiveness and cohesion. Teachers can support students in developing effective team norms and constructive conflict-resolution strategies, fostering more stable, productive team dynamics.

Lastly, the study offers practical guidance for evaluating students' satisfaction with team tasks and their assessments of peer collaboration. Such feedback is vital for improving team-based assignments,

which can significantly impact course grades. These insights can help educators refine instructional strategies, optimize future projects, and better prepare students for collaborative work in professional settings. Although the study did not directly compare online and face-to-face teamwork, educators should remain mindful of how virtual environments might affect trust, cohesion, and satisfaction. Integrating effective digital tools and applying best practices for remote collaboration are crucial for fostering successful team dynamics in online learning environments.

6. Conclusion

We investigated the relationship between team trust and team effectiveness among students participating in a team project in the Organization and Management course as part of the undergraduate study program in Economics of Entrepreneurship. We observed this relationship by including two mediating variables: team satisfaction and team cohesion. Research of this type, using the CATME instrument to measure team effectiveness, had not previously been conducted on a sample of students, thus filling a gap in the literature. To a large extent, previous research on teamwork and team effectiveness has been oriented toward a business environment, which has changed in the last decade. The main reason for this is the understanding that teamwork is an important skill that must be perfected already during education.

Our research found that both team satisfaction and team cohesion mediate the relationship between team trust and team effectiveness. Additionally, the results revealed that team trust is positively related to team satisfaction, and team satisfaction is posi-

tively related to team effectiveness. Also, team trust is positively related to team cohesion, and team cohesion is positively related to team effectiveness. The research we conducted confirmed both research questions. These findings align with previous research in a business environment, but they contribute to the literature by examining teamwork and team effectiveness in student teams. Because teamwork is a crucial skill in a business environment, students need to develop these skills during their education. Learning to work in a team as a student can better prepare them to face the challenges of working in a team as a future employee.

This research can help scientists and managers discern which aspects most influence team effectiveness and task performance, and direct their attention to weaker aspects that need improvement. In addition, the results of this research can help teachers determine how satisfied students are with the team task, how students evaluate their team members' teamwork, and how they can improve the team task's success, which is an important part of the final grade in the course. Based on this kind of feedback, teachers can improve team tasks for students, adjust the activities students should complete within the team task framework, and consider ways to enhance team members' satisfaction and team cohesion.

Although this study had various limitations, such as a small sample size (one course at one faculty), self-reported information, and conducting research at a single point in time, it represents an initial attempt to study the impact of team trust on students' performance in team projects using the CATME instrument, with team satisfaction and team cohesion as mediating variables.

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Appendix

Survey items

Variable	Items
Team Effectiveness	Category 1: Contributing to the team's work
	<i>I did a fair share of the team's work.</i>
	<i>I fulfilled my responsibilities to the team.</i>
	<i>I came to team meetings prepared.</i>
	<i>I completed work in a timely manner.</i>
	<i>I did work that was complete and accurate.</i>
	<i>I made important contributions to the team's final product.</i>
	<i>I kept trying when faced with difficult situations.</i>
	<i>I offered to help teammates when it was appropriate.</i>
	Category 2: Interacting with teammates
	<i>I communicate effectively.</i>
	<i>I facilitated effective communication in the team.</i>
	<i>I exchanged information with teammates in a timely manner.</i>
	<i>I provided encouragement to other team members.</i>
	<i>I expressed enthusiasm about working as a team.</i>
	<i>I heard what teammates had to say about issues that affected the team.</i>
	<i>I got team input on important matters before going ahead.</i>
	<i>I accepted feedback about strengths and weaknesses from teammates.</i>
	<i>I used teammates' feedback to improve performance.</i>
	<i>I let other team members help when it was necessary.</i>
	Category 3: Keeping the team on track
	<i>I stayed aware of fellow team members' progress.</i>
	<i>I assessed whether the team was making progress as expected.</i>
	<i>I stayed aware of external factors that influenced team performance.</i>
	<i>I provided constructive feedback to others on the team.</i>
	<i>I motivated others on the team to do their best.</i>
	<i>I made sure that everyone on the team understood important information.</i>
	<i>I helped the team to plan and organize its work.</i>
	Category 4: Expecting quality
	<i>I expected the team to succeed.</i>
<i>I believed that the team could produce high-quality work.</i>	
<i>I cared about the team producing high-quality work.</i>	
<i>I believed that the team should achieve high standards.</i>	

Team Effectiveness	Category 5: Having relevant knowledge, skills, and abilities
	<i>I had the skills and expertise to do excellent work.</i>
	<i>I had the necessary skills and abilities to do a good job.</i>
	<i>I had sufficient knowledge of teammates' roles to step in if necessary.</i>
	<i>I knew how to do the job of other team members.</i>
Team Satisfaction	<i>I am very happy to work in this team.</i>
	<i>I am very satisfied with the decision adopted for this team.</i>
	<i>The way in which the team worked together was most adequate.</i>
	<i>My expectations regarding the positive consequences of team decisions are very positive.</i>
	<i>The development of teamwork was not adequate.</i>
Team Cohesion	<i>There is a great deal of trust among members of my work group.</i>
	<i>Members of my group work well together as a team.</i>
	<i>Members of my work group cooperate well with each other.</i>
	<i>Members of my work group know that they can rely on each other.</i>
	<i>Members of my work group stand up for each other.</i>
	<i>Members of my work group regard each other as friends.</i>
Team Trust	<i>Overall, people in my work group are very trustworthy.</i>
	<i>We are usually considerate of one another's feelings in this work group.</i>
	<i>People in my group are friendly.</i>
	<i>There is no "team spirit" in my group.</i>
	<i>There is a noticeable lack of confidence among those with whom I work.</i>
	<i>We have confidence in one another in this group.</i>

Source: Authors' research