مجله علمی بین المللی سلام
Salam International Academic Journal
Journal Homepage: https://journal.salam.edu.af
Volume 11, Issue 19, Spring, 2026

Analyzing the Impact of Key Dimensions of Cultural Diversity on Team Collaboration and Productivity in the Afghan Workplace

Qaribullah Hassanzoi[1], Dr.Ahsanullah Barakzai[2], Azatullah Zaheer[3]

DOI: 10.64104/V11.Issue19.No14.Spring.2026

Abstract

This study examines how four core diversity dimensions and two organizational inclusion conditions are associated with team collaboration and productivity in Afghan workplaces. Drawing on the categorization-elaboration model, inclusion theory, psychological safety, social exchange theory, and the input-mediator-outcome framework, the study distinguishes ethnic/cultural, language, regional, and professional/educational diversity from gender fairness and inclusive climate. A cross-sectional survey of 381 employees from public, private, national non-governmental, and international non-governmental organizations measured these constructs, team collaboration, team productivity, and leadership/organizational support. Reliability analysis, exploratory and confirmatory factor analysis, HC3-robust hierarchical regression, 5,000-resample bootstrap mediation, ten-fold cross-validation, a 321-case sensitivity analysis, and exploratory moderation tests were applied. The nine-factor measurement model showed acceptable approximate fit, although several constructs overlapped. Professional/educational diversity, gender fairness, and inclusive climate positively predicted collaboration. Regional diversity, professional/educational diversity, and team collaboration positively predicted productivity, with collaboration producing the largest unique productivity coefficient. Bootstrap results supported indirect effects through collaboration for professional/educational diversity, gender fairness, and inclusive

ISSUE: Spring, 2026 PAGE No: 39 (391 –430) ISSN: 3078-9575 (Print) ISSN: 3078-9583 (Online)

[1]. Master of Business Administration (MBA), Faculty of Economics, Kabul University, Kabul, Afghanistan. qaribullah.hassanzoi@gmail.com

[2]. Associate Professor, MBA Program, Faculty of Economics, Kabul University, Kabul, Afghanistan. A.Barakzay@Yahoo.com

[3]. Assistant Professor, BBA Department, Faculty of Economics, Salam University, Kabul, Afghanistan. azatullahzaheer28@gmail.com ORCID: https://orcid.org/0009-0007-1854-1947

climate. Ethnic/cultural diversity and language diversity were tested in every corresponding primary path model but did not retain significant unique collaboration, direct-productivity, or indirect effects after adjustment, despite positive bivariate correlations. Exploratory interaction models did not provide sufficiently robust evidence to reclassify gender fairness or inclusive climate as moderator-only variables: the gender-fairness interaction block was jointly significant in a separate model, but its only individual interaction, ethnic/cultural diversity × gender fairness, disappeared when both moderator blocks were estimated together; inclusive-climate interactions were not significant. The study therefore treats gender fairness and inclusive climate primarily as organizational inclusion conditions while reporting the moderation alternative transparently.

Keywords: *Cultural Diversity*, *Team Collaboration*, *Team Productivity*, *Inclusive Climate*, *Inclusive Leadership*, *Psychological Safety*, Work Performance.

1. Introduction

Cultural diversity has become an ordinary feature of organizational life, yet its consequences remain difficult to predict. Teams can differ in ethnicity, language, region, gender, education, professional training, values, and communication habits. These differences may enlarge the knowledge available to a team, but they may also complicate coordination, heighten status distinctions, and encourage subgroup formation. The empirical record therefore resists a simple conclusion that diversity is either beneficial or harmful. Reviews and meta-analyses show that cultural diversity can improve creativity and information resources while simultaneously increasing conflict and weakening social integration (Stahl et al., 2010; Stahl and Maznevski, 2021). The relevant question is not whether difference exists, but whether organizations create conditions under which difference can be translated into collective work.

This conditional view is especially important in Afghanistan. Afghan workplaces often bring together employees who use Dari, Pashto, English, and other languages; who have experience in different provinces and institutional systems; and who have been trained in different professional and educational traditions. Public institutions, private firms, national non-governmental organizations (NGOs), and international NGOs also operate under different rules, reporting expectations, and resource constraints. These contextual differences make coordination consequential. In a constrained economic and institutional environment, delays, duplicated effort, information silos, and avoidable conflict can directly reduce service quality and the efficient use of scarce resources (World Bank, 2025). These coordination challenges are intensified where organizations face difficulties in retaining skilled professionals and preserving institutional knowledge, a continuing concern in Afghanistan (Zaheer et al., 2025).

Research conducted in Afghanistan has begun to examine inclusive leadership, employee engagement, participation, and organizational performance. Inclusive leadership and psychological empowerment have been linked with engagement (Wahab and Bangash, 2021), while inclusive leadership has also been associated with innovation and creativity among NGO employees (Saatai et al., 2022). Employee involvement has shown positive relationships with NGO performance in Nangarhar (Hamkar et al., 2024), and recent work has documented continuing difficulties in applying consistent human-resource principles across Afghan workplaces (Omari and Barakzai, 2024). Related Afghan research further indicates that employee engagement and organizational culture are associated with employee job satisfaction and customer-oriented behavior, reinforcing the importance of inclusion-related workplace conditions (Haziq et al., 2026).” Earlier evidence from the education sector suggests that workforce diversity may matter for employee performance, but that study used a narrower setting and a less differentiated model (Qasim, 2017). Taken together, the national literature indicates that participation, inclusion, and management practice matter, but it does not yet explain how several forms of cultural diversity operate together through team collaboration.

International research also leaves a practical gap. Diversity studies frequently rely on broad demographic indices or compare national cultures without identifying the daily team process that carries effects to performance. Harrison and Klein (2007) distinguish diversity as separation, variety, and disparity, showing why different forms of difference should not be treated as interchangeable. Professional diversity may create useful variety, language difference may create both knowledge access and communication cost, and gender unfairness may reflect disparity in voice or information. When these distinct processes are collapsed into one score, an average relationship can conceal the mechanism that managers need to address.

The present study responds to these gaps by examining a multi-sector sample of 381 employees in Afghan workplaces. It separates four core diversity dimensions—ethnic/cultural, language, regional, and professional/educational diversity—from two organizational inclusion conditions—gender fairness and inclusive climate. Gender fairness and inclusive climate are therefore not treated as demographic diversity dimensions: they capture perceived equity of participation, information access, respect, and openness. Leadership/organizational support is retained as a control condition rather than a focal diversity hypothesis, and team collaboration is positioned as the central mechanism through which the focal antecedents may influence perceived productivity. Because theory also permits fairness and inclusion to operate as boundary conditions, the revised analysis explicitly tests whether gender fairness and inclusive climate moderate the relationships between each core diversity dimension and collaboration rather than assuming that role without evidence. This specification follows the

categorization-elaboration model: workforce differences create social-categorization risks and informational opportunities, while inclusion-related conditions may affect both the overall level of collaboration and the strength of diversity–collaboration relationships (Van Knippenberg et al., 2004).

The study makes four contributions. First, it provides evidence from an underrepresented, non-Western setting and demonstrates how single-country research can advance cross-cultural management when locally salient mechanisms are made explicit. Second, it separates workforce-composition dimensions from organizational inclusion conditions instead of combining them into one broad diversity score. Third, it tests collaboration as a statistical mediator while using robust inference, confirmatory measurement analysis, cross-validation, and sensitivity analysis rather than relying on a single favorable model. Fourth, it directly evaluates the reviewer-relevant alternative that gender fairness and inclusive climate may operate as moderators of core diversity effects. The guiding question is therefore not merely whether diversity is beneficial, but which diversity dimensions and inclusion conditions predict collaboration and productivity, whether collaboration carries these relationships, and whether fairness or inclusive climate changes the strength of the diversity–collaboration association.

2. Theoretical Background and Hypotheses

Diversity as a conditional organizational resource

Diversity is conceptually plural. Harrison and Klein (2007) describe separation as differences in positions or affiliations, variety as differences in knowledge or category membership, and disparity as unequal concentration of valued resources. This distinction helps explain why different dimensions should have different relationships with team functioning. Professional and educational differences can provide technical variety. Ethnic, language, and regional differences may supply contextual knowledge but can also become bases for social separation. Gender unfairness, unequal access to information, and status-based participation reflect disparity. A model that assumes one uniform diversity effect therefore risks combining unlike mechanisms.

The information/decision-making perspective provides the main positive explanation. Employees with different training, experience, languages, and regional knowledge may hold nonredundant information. Such variety can improve alternative generation, error detection, stakeholder understanding, and decision quality. However, information only becomes useful when members exchange, discuss, and integrate it. Meta-analytic evidence shows that information sharing is positively related to team performance and that the relationship is stronger when information is both pooled and elaborated (Mesmer-Magnus and DeChurch, 2009). Professional or educational variety should therefore be most valuable when work is interdependent and expertise can be understood by other members.

The social-identity and self-categorization traditions explain the competing risk. Employees classify themselves and others into meaningful groups, and these categories can shape trust, attribution, and communication even when job descriptions do not mention identity (Tajfel and Turner, 1986). Similarity may make early interaction more comfortable, while visible or meaningful differences can increase uncertainty and encourage reliance on familiar networks. When several characteristics align, potential faultlines may divide a team into relatively homogeneous subgroups (Lau and Murnighan, 1998). Language is particularly important because it is both an instrument of work and a marker of membership. Recent cross-cultural management research shows how workplace language can create experiences of otherness and unequal participation, even when a common working language formally exists (Wilmot et al., 2024).

The categorization-elaboration model integrates these perspectives. It proposes that diversity can activate social categorization while also increasing the pool of task-relevant information. Performance depends on whether teams elaborate distinctive knowledge and whether intergroup bias obstructs that process (van Knippenberg et al., 2004). Diversity beliefs, task relevance, leadership, and climate affect which pathway dominates. Experimental evidence shows that valuing diversity can improve information elaboration and performance in groups where demographic attributes might otherwise create faultlines (Homan et al., 2007). This model supports an emphasis on process rather than a simple direct composition-performance relationship.

Organizational inclusion conditions and leadership/support control

Representation is not equivalent to inclusion. Employees may be numerically present yet lack access to information, opportunity to contribute, or influence over decisions. Optimal distinctiveness and inclusion theory propose that employees need both belonging and recognition of their uniqueness. Inclusion occurs when people are treated as insiders while their distinctive perspectives remain valued (Brewer, 1991; Shore et al., 2011). Gender fairness in this study therefore concerns respectful treatment, access to work information, and opportunity to contribute regardless of gender; it is not a measure of the numerical gender composition of the team.

A climate for inclusion institutionalizes these expectations. Nishii (2013) argues that inclusive climates reduce bias, integrate differences, and involve employees in decision-making. Accordingly, inclusive climate is treated here as an organizational inclusion condition rather than a demographic diversity dimension. In such climates, employees have stronger reason to believe that contributions will be evaluated on work-related merit rather than group membership, which should promote open communication, constructive disagreement, and mutual support.

Psychological safety explains why inclusion affects behavior. Psychological safety is a shared belief that interpersonal risk-taking is acceptable: members can ask questions, report mistakes, request help, and offer incomplete ideas without humiliation or punishment (Edmondson, 1999). The interpersonal risk of speaking may be greater for employees who are less fluent in the dominant language, newer to the organization, lower in hierarchy, or outside influential networks. If these members remain silent, the team loses the knowledge that diversity was expected to provide. Inclusive leadership can reduce that risk by explicitly inviting contributions, remaining accessible, and responding constructively to questions and errors (Nembhard and Edmondson, 2006; Randel et al., 2018).

Leadership and organizational support can also be understood through social exchange theory. Leaders control access to information, role clarification, training, recognition, conflict resolution, and protection from unfair treatment. When employees perceive reliable support, they may reciprocate through cooperation, knowledge sharing, and effort beyond minimum contractual requirements (Cropanzano and Mitchell, 2005). In the present study, however, leadership/organizational support is not a focal diversity hypothesis; it is retained as a theory-informed control condition so that the associations of the six focal antecedents are estimated net of general supportive-management perceptions.

Collaboration as the mechanism linking diversity to productivity

Team collaboration is the observable work through which individual resources become coordinated output. It includes communication, timely information sharing, coordination, balanced contribution, mutual support, respectful conflict management, shared goals, and integration of different viewpoints. Teamwork-quality research shows that these processes are closely related to project success (Hoegl and Gemuenden, 2001). Broader team-effectiveness research similarly identifies mutual monitoring, backup behavior, communication, and shared orientation as core mechanisms (Salas et al., 2005).

The input-mediator-outcome-input framework positions team composition and organizational context as inputs, behavioral and emergent states as mediators, and performance as an outcome that later feeds back into the team (Ilgen et al., 2005). In the present model, the four core diversity dimensions and the two organizational inclusion conditions are the six focal antecedent inputs; team collaboration is the central behavioral mediator; and team productivity is the outcome. Leadership/organizational support and the designated demographic/work-context variables are adjustment covariates rather than focal diversity constructs. Productivity is measured broadly through timeliness, goal achievement, and quality, efficient use of resources, error reduction, and overall

contribution. This multidimensional approach is suitable for a sample spanning sectors where objective output records are not directly comparable (Griffin et al., 2007; Koopmans et al., 2014).

The mediation argument follows directly from the categorization-elaboration model. Distinctive knowledge cannot improve performance if it is not voiced, understood, coordinated, and incorporated. Professional/educational diversity can provide nonredundant expertise, while gender fairness and inclusive climate can remove participation barriers that otherwise prevent expertise from being used. These inclusion conditions can therefore have main associations with collaboration and indirect associations with productivity. At the same time, the same theory permits a moderation interpretation: where fairness or inclusion is high, the consequences of ethnic/cultural, language, regional, or professional/educational differences may be altered because members have more equal access to information and voice. The revised study therefore retains the pre-specified main-effect/mediation model but adds an explicit alternative moderation specification. This avoids labeling fairness and climate as demographic diversity dimensions while also avoiding a moderator-only conclusion that is unsupported unless interaction terms are empirically demonstrated.

Based on this reasoning, the primary model tests 14 specific hypothesis statements. H1a: ethnic/cultural diversity positively predicts team collaboration. H1b: language diversity positively predicts team collaboration. H1c: regional diversity positively predicts team collaboration. H1d: professional/educational diversity positively predicts team collaboration. H1e: gender fairness positively predicts team collaboration. H1f: inclusive climate positively predicts team collaboration. H2: team collaboration positively predicts team productivity. H3a: ethnic/cultural diversity has a positive direct association with team productivity after team collaboration is included. H3b: language diversity has a positive direct association with team productivity after team collaboration is included. H3c: regional diversity has a positive direct association with team productivity after team collaboration is included. H3d: professional/educational diversity has a positive direct association with team productivity after team collaboration is included. H3e: gender fairness has a positive direct association with team productivity after team collaboration is included. H3f: inclusive climate has a positive direct association with team productivity after team collaboration is included. H4: team collaboration statistically mediates the relationships of the six focal antecedents—ethnic/cultural diversity, language diversity, regional diversity, professional/educational diversity, gender fairness, and inclusive climate—with team productivity; the six indirect effects are evaluated separately. Leadership/organizational support and demographic covariates are controls. In addition, two exploratory moderation questions are examined rather than presented as confirmatory hypotheses: EM1 asks whether gender fairness changes any of the four core diversity → collaboration relationships; EM2 asks whether inclusive

climate changes any of those four relationships. This labeling makes the primary direct and indirect relationships explicit without retrospectively presenting newly introduced interaction tests as pre-specified hypotheses.

3. Afghan Workplace Context and Research Gap

Afghanistan offers a theoretically informative setting because diversity is embedded in both social identity and the practical requirements of work. Employees may communicate across several languages, serve communities in different provinces, and move between government, private, NGO, education, and development systems. Regional and language knowledge can improve stakeholder access and implementation, yet the same attributes may become informal boundaries if information circulates within familiar networks. Formal hierarchy may also interact with professional status, age, gender, and language fluency to shape whose contributions receive attention. This concern is consistent with recent Afghan research showing that traditional management practices can shape employee attitudes and perceived organizational outcomes (Zaheer & Sadiq, 2025).

Existing Afghan studies provide valuable but fragmented evidence. Qasim (2017) reported a relationship between workforce diversity and employee performance in the education sector. Wahab and Bangash (2021) linked inclusive leadership with engagement through psychological empowerment. Saatai et al. (2022) found that inclusive leadership supported innovative behavior and creativity in NGOs, and Hamkar et al. (2024) connected employee involvement with organizational performance. Related evidence from Afghan NGOs has also examined the role of human resource management practices in improving employee productivity (Zaheer & Sadiq, 2024). Omari and Barakzai (2024) identified human-resource challenges involving implementation consistency, capacity, and informal influences. These studies suggest that participation and leadership matter, but none tests a multi-dimensional diversity model in which collaboration links organizational conditions with productivity across several sectors.

The research gap is therefore specific rather than simply national. In the Afghan literature reviewed for this study, prior work has examined workforce diversity, inclusive leadership, engagement, involvement, or performance separately, but the reviewed studies did not identify a multi-sector model that simultaneously (a) disaggregates ethnic/cultural, language, regional, and professional/educational diversity; (b) separates those composition-related dimensions from gender fairness and inclusive climate as organizational inclusion conditions; (c) treats leadership/organizational support as a control rather than an additional diversity dimension; (d) tests team collaboration as an explanatory pathway to productivity; and (e) evaluates whether fairness and inclusive climate operate as boundary conditions

that alter diversity–collaboration relationships. The unresolved gap is therefore one of construct separation, mechanism, and conditionality: which kinds of difference matter, which inclusion conditions enable their use, whether collaboration statistically carries those relationships to productivity, and whether the strength of the diversity effect itself depends on fairness or inclusion.

Conceptual model and role specification

Conceptual Model

Based on the theoretical foundations and the 14 primary hypothesis statements, the conceptual model distinguishes core diversity dimensions, organizational inclusion conditions, a mediator, an outcome, and controls. Ethnic/cultural, language, regional, and professional/educational diversity are the four core diversity dimensions. Gender fairness and inclusive climate are organizational inclusion conditions rather than demographic diversity dimensions. In the primary model, all six focal antecedents have paths to team collaboration and all six have direct paths to team productivity, consistent with H1a-H1f and H3a-H3f; team collaboration predicts productivity under H2 and carries the six indirect effects evaluated separately under H4. The revised framework additionally shows, with dashed paths, the alternative moderation specification tested under EM1 and EM2: gender fairness and inclusive climate may change the strength of each core diversity → collaboration relationship. Leadership/organizational support and demographic covariates remain controls. Thus, the conceptual framework distinguishes variable roles while maintaining exact correspondence between the hypotheses and the relationships empirically estimated.

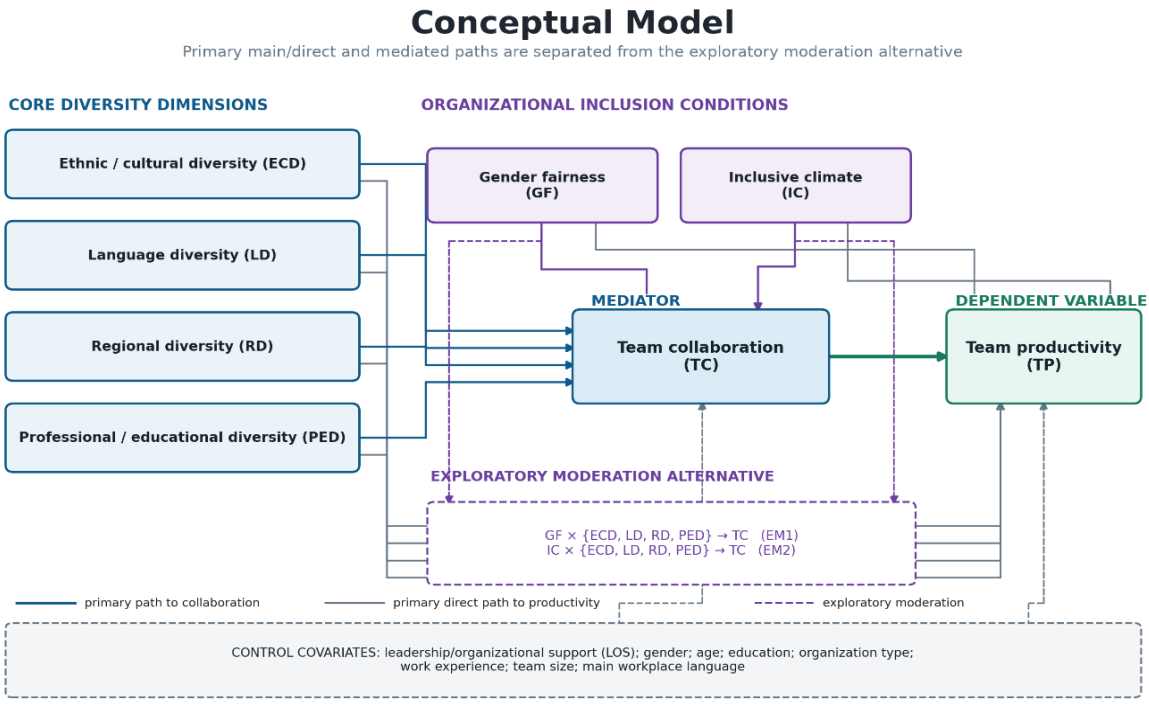

Figure 1. Conceptual Model

Note. The four core diversity dimensions—ethnic/cultural, language, regional, and professional/educational diversity—are distinguished from gender fairness and inclusive climate, which are organizational inclusion conditions. Solid paths represent all six focal antecedent-to-collaboration paths, all six focal direct paths to productivity, and the collaboration-to-productivity path. Dashed moderation paths represent the exploratory EM1 and EM2 alternatives, while dashed control paths represent leadership/organizational support and the seven demographic/work-context covariates. The diagram therefore corresponds to the primary hypotheses while displaying the reviewer-suggested moderation alternative separately.

4. Method

Research design and participants

The study used a post-positivist, quantitative, explanatory, cross-sectional survey design. The explanatory purpose refers to estimating unique associations and model-consistent indirect paths; the design does not establish temporal causality. The target population consisted of employees who worked in teams in Afghan public institutions, private organizations, national NGOs, international NGOs, and related formal workplaces. A complete national sampling frame was unavailable, so the achieved sample is a broad multi-sector analytical sample rather than a probability estimate of all Afghan employees.

The final dataset contained 381 respondents. Men represented 81.1% of the sample and women 18.9%. Most participants were between 25 and 34 years old (60.1%), held a bachelor's degree (58.3%), and had at least four years of work experience (76.1%). Public/government organizations accounted for 52.2% of participants, private organizations 32.8%, national NGOs 8.7%, international NGOs 5.5%, and other organizations 0.8%. Dari was the main workplace language for 45.1%, Pashto for 41.5%, English for 13.1%, and another language for 0.3%. Team sizes varied from two to more than fifteen employees. These characteristics provide sectoral and linguistic variation but also indicate a male-dominated, public-sector-heavy sample.

Instrument and construct scoring

The questionnaire contained eight demographic questions and 47 positively worded substantive items rated from 1 (strongly disagree) to 5 (strongly agree). The items measured nine constructs: ethnic/cultural diversity (four items), language diversity (four), regional diversity (four), professional/educational diversity (four), gender fairness (four), inclusive climate (four), team

collaboration (ten), team productivity (eight), and leadership/organizational support (five). Construct scores were calculated as the arithmetic mean of assigned items, preserving the original one-to-five metric. No reverse scoring was required. For analysis, the first four constructs were treated as core diversity dimensions; gender fairness and inclusive climate were treated as focal organizational inclusion conditions; leadership/organizational support was treated as a control condition.

The instrument was not adopted verbatim from a single previously validated questionnaire. It is best classified as a researcher-developed, literature-adapted instrument: construct domains and item content were synthesized from established work on diversity, inclusion, teamwork quality, psychological safety, and work performance, while wording was tailored to Afghan workplace conditions. Team-collaboration items reflected communication, coordination, mutual support, conflict handling, shared goals, and integration of viewpoints, consistent with teamwork-quality research (Hoegl and Gemuenden, 2001). Productivity items covered timeliness, goal achievement, quality, resource efficiency, error reduction, and contribution, consistent with multidimensional models of work performance (Griffin et al., 2007; Koopmans et al., 2014). The diversity-related scales therefore measure respondents' perceptions of the presence and constructive management of differences rather than objective demographic heterogeneity indices. Because the instrument is adapted and context-specific rather than an unchanged published scale, the reliability and factor analyses in this study are especially important, and independent validation remains necessary.

Data quality and ethical procedure

The uploaded workbook contained 381 rows, eight demographic fields, and 47 Likert items. All substantive responses fell within permitted categories, and no Likert cell was missing. Quality review documented duplicate patterns, low within-person variance, long strings of identical answers, and multivariate unusualness. Sixty respondents met at least one conservative review criterion. These cases were retained in the primary analysis because repeated agreement may represent a genuine positive workplace experience, especially in a questionnaire containing only positively worded items. A separate 321-case sensitivity analysis tested whether the main conclusions depended on the flagged cases. Because all focal variables were reported by the same respondent in the same questionnaire, common-method variance was treated as a design limitation rather than ignored. Procedural protections included anonymity, voluntary participation, an academic rather than evaluative framing, and separation of construct domains within the questionnaire; statistically, the first unrotated factor, the differentiated factor model, and the selective multivariable coefficient pattern were used only as diagnostic evidence, not as proof that common-method bias was absent.

Participation was voluntary. The questionnaire introduction explained the academic purpose, requested no names, and stated that responses would be reported only in grouped form. The study was conducted as an MBA thesis. No separate institutional ethics approval number was issued. This status is reported transparently because journal requirements for retrospective documentation or waiver may differ.

Analytical strategy

Analysis proceeded in six stages. First, frequencies, percentages, means, standard deviations, confidence intervals, skewness, kurtosis, and correlation coefficients described the sample and constructs. Second, internal consistency was evaluated with Cronbach's alpha, McDonald's omega, and corrected item-total correlations. Third, measurement structure was evaluated using the Kaiser-Meyer-Olkin statistic, Bartlett's test, principal-axis exploratory factor analysis (EFA), parallel analysis, and a theory-specified nine-factor confirmatory factor analysis (CFA). EFA and CFA were conducted on the same N = 381 sample; the sample was not split. EFA was therefore treated as a diagnostic examination of dimensionality and CFA as a theory-guided internal structure check, not as independent cross-validation. This same-sample sequence can capitalize on sample-specific patterns, so the CFA was interpreted cautiously and independent replication is required. CFA fit was summarized with chi-square, CFI, TLI, RMSEA, and SRMR, with conventional thresholds used as broad guides rather than mechanical pass/fail rules (Hu and Bentler, 1999; Kline, 2023). Composite reliability, AVE, HTMT, and the Fornell-Larcker criterion were used to identify convergent and discriminant-validity concerns (Fornell and Larcker, 1981; Henseler et al., 2015).

Fourth, hierarchical multiple regression estimated team collaboration and productivity. Seven demographic/work-context covariates—gender, age, education, organization type, work experience, team size, and main workplace language—were retained because each can plausibly influence exposure to heterogeneous teams, communication opportunities, role experience, or perceived team outcomes. This adjustment logic is consistent with the input-mediator-outcome view that individual, team, and contextual characteristics can enter the team-effectiveness system as inputs (Ilgen et al., 2005), while the categorization-elaboration perspective also anticipates that context can shape diversity processes (Van Knippenberg et al., 2004). Leadership/organizational support was retained as an additional theory-informed control condition so that focal coefficients were not simply proxies for generally supportive management. The controls were specified from the research design rather than selected by stepwise significance and were interpreted only as adjustment variables, not as substantive hypotheses. The model summaries first show the demographic baseline and then the full model containing the six focal

antecedents plus the leadership/support control. Productivity was subsequently estimated with team collaboration added. Residual heteroskedasticity and non-normality were detected, so inferential decisions use HC3 heteroskedasticity-consistent standard errors (Long and Ervin, 2000). Variance inflation factors, Cook's distance, robust M-estimation, and ten-fold cross-validation were used as supplementary diagnostics. Durbin-Watson values are reported only as a conventional check for obvious residual sequencing; with cross-sectional respondents, they are not used to establish independence of observations, which depends primarily on the sampling/design structure rather than time-series autocorrelation.

Fifth, mediation was estimated with 5,000 nonparametric bootstrap resamples. Each focal indirect effect was the product of one of the six antecedent-to-collaboration paths and the collaboration-to-productivity path while demographic covariates, leadership/organizational support, and the other focal antecedents remained controlled. An indirect effect was considered supported when its 95% bootstrap confidence interval excluded zero (MacKinnon et al., 2004; Preacher and Hayes, 2008). Because the data are cross-sectional, these estimates are described as statistical indirect effects consistent with mediation, not proof of a temporal causal sequence. Sixth, the moderator alternative proposed for gender fairness and inclusive climate was tested explicitly. ECD, LD, RD, PED, GF, and IC composite scores were standardized before forming interaction products. Two HC3-robust collaboration models first entered the four ECD/LD/RD/PED × GF interactions and the four ECD/LD/RD/PED × IC interactions separately, with all constituent main effects, leadership/organizational support, and the seven demographic/work-context controls retained. A combined model then entered all eight interaction terms simultaneously. Joint robust Wald tests and the change in R-squared were used to evaluate each interaction block. Because these interaction analyses were added during revision rather than pre-registered before data analysis, they are reported as exploratory moderation tests (EM1-EM2), not as confirmatory hypotheses.

Table I. Respondent profile (N = 381)

Characteristic	Distribution
Gender	Male 309 (81.1%); Female 72 (18.9%)
Age	Under 25: 39 (10.2%); 25–34: 229 (60.1%); 35–44: 98 (25.7%); 45+: 15 (3.9%)
Education	High school 34 (8.9%); Bachelor's 222 (58.3%); Master's 115

Characteristic	Distribution
	(30.2%); Doctorate 10 (2.6%)
Organization	Public 199 (52.2%); Private 125 (32.8%); NNGO 33 (8.7%); INGO 21 (5.5%); Other 3 (0.8%)
Experience	<1 year 10 (2.6%); 1–3 years 81 (21.3%); 4–6 years 165 (43.3%); 7+ years 125 (32.8%)
Team size	2–5: 105 (27.6%); 6–10: 114 (29.9%); 11–15: 99 (26.0%); >15: 63 (16.5%)
Main workplace language	Dari 172 (45.1%); Pashto 158 (41.5%); English 50 (13.1%); Other 1 (0.3%)

5. Results

Data integrity, distributional properties, and descriptive patterns

The analytical file contained 381 complete respondents and no missing Likert-scale cells. Sixty cases met at least one conservative response-quality review criterion, including very low within-person variability, long identical response strings, duplicate response patterns, or multivariate unusualness. These observations were retained in the primary analysis because a repetitive positive response pattern is not, by itself, evidence of invalid participation. A second analysis excluding all flagged cases produced a 321-case sensitivity sample.

Perceptions were favorable across all constructs. Means ranged from 4.084 for gender fairness to 4.444 for professional/educational diversity. Every construct mean was significantly above the neutral midpoint of 3 (all $p < .001$), with large standardized mean differences (Cohen $d = 1.40$-2.97). The distributions were negatively skewed (skewness = -1.83 to -0.95), indicating concentration in the agree and strongly agree categories. Excess kurtosis ranged from 0.62 to 4.43. These ceiling patterns, together with significant residual Jarque-Bera tests and heteroskedasticity tests in both regression models, supported the use of HC3 robust standard errors and nonparametric bootstrap confidence intervals rather than deletion or transformation of valid responses.

Table II. Data integrity and regression-assumption diagnostics

Domain	Indicator	Result	Interpretation
Data completeness	Valid analytical cases	381	Primary sample
Data completeness	Missing Likert cells	0	No imputation required
Response-quality review	Cases meeting any review flag	60	Retained in primary analysis
Response-quality review	Sensitivity-analysis cases	321	All flagged cases excluded
Composite distributions	Skewness range	-1.83 to -0.95	Negative skew/ceiling pattern
Composite distributions	Excess kurtosis range	0.62 to 4.43	Non-normality varies by construct
Common-method diagnostic	Harman first-factor variance	39.2%	Limited diagnostic; does not rule out common-method bias
Collaboration residuals	Durbin-Watson / maximum VIF	1.971 / 3.134	Residual sequence only; not an independence test
Collaboration residuals	Breusch-Pagan / White / Jarque-Bera	$p < .001$ / $p = .004$ / $p < .001$	Heteroskedasticity and non-normality
Collaboration influence	Cook's distance > 4/n	32 cases	Sensitivity analysis warranted
Productivity residuals	Durbin-Watson / maximum VIF	2.049 / 3.482	Residual sequence only; not an independence test

Domain	Indicator	Result	Interpretation
Productivity residuals	Breusch-Pagan / White / Jarque-Bera	$p < .001$ / $p < .001$ / $p < .001$	Heteroskedasticity and non-normality
Productivity influence	Cook's distance > 4/n	29 cases	Sensitivity analysis warranted

Note. The Cook's-distance rule of 4/n is a sensitive screening threshold and identifies potentially influential observations, not automatically invalid responses. HC3 inference and sensitivity analyses were used because heteroskedasticity and residual non-normality were detected.

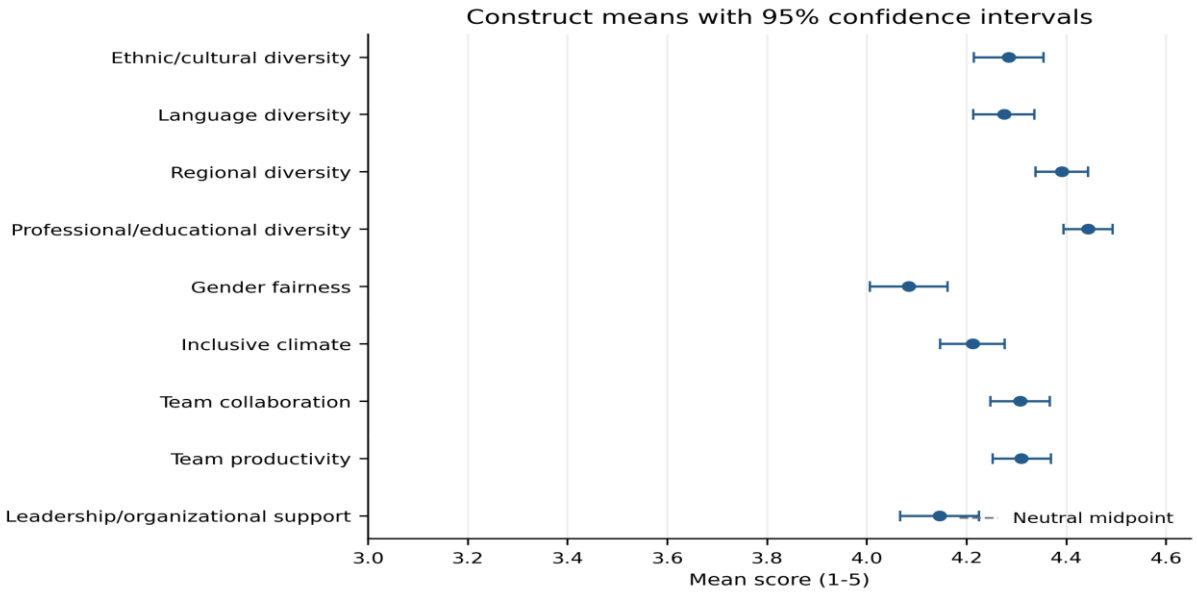

Figure 2. Construct means and 95% confidence intervals.

Reliability, factor structure, and construct validity

Internal consistency ranged from marginal to excellent. Team collaboration (alpha = .913), leadership/organizational support (alpha = .889), and team productivity (alpha = .888) showed strong reliability. Ethnic/cultural diversity, gender fairness, and inclusive climate also exceeded .77. Language diversity and professional/educational diversity were acceptable for exploratory use, whereas regional diversity was marginal (alpha = .648) and its findings require additional caution. Omega estimates closely matched alpha, indicating that the reliability conclusions were not dependent on one coefficient.

The correlation matrix was highly factorable (KMO = .960; Bartlett chi-square (1081) = 10,106.40, $p < .001$). Parallel analysis retained two broad factors, whereas the theory-specified nine-factor CFA showed acceptable approximate fit: chi-square (998) = 1,916.39, CFI = .903, TLI = .895, RMSEA = .049, and SRMR = .046. Both EFA and CFA used the same 381 respondents, so the CFA should be read as a

theory-guided internal check rather than an independent validation sample. The nine-factor solution was retained for construct-level analysis because it corresponds to the pre-specified domains, but the two-factor parallel-analysis result and elevated HTMT ratios indicate substantial overlap and require cautious interpretation.

Table III. Construct descriptive, reliability, and convergent validity

Construct	Items	M	SD	Skew	alpha	omega	CR	AVE
Ethnic/cultural diversity	4	4.285	0.689	-1.83	.801	.802	.801	.501
Language diversity	4	4.275	0.605	-1.22	.704	.706	.713	.384
Regional diversity	4	4.391	0.526	-1.23	.648	.651	.670	.339
Professional/educational diversity	4	4.444	0.486	-1.51	.709	.717	.719	.395
Gender fairness	4	4.084	0.776	-0.95	.810	.814	.818	.530
Inclusive climate	4	4.212	0.643	-1.38	.774	.777	.778	.468
Team collaboration	10	4.308	0.591	-1.68	.913	.913	.913	.513
Team productivity	8	4.310	0.578	-1.59	.888	.890	.891	.507
Leadership/organizational support	5	4.146	0.786	-1.31	.889	.890	.891	.620

Note. alpha = Cronbach's alpha; omega = McDonald's omega; CR = composite reliability; AVE = average variance extracted. CFA fit: chi-square (998) = 1,916.39, CFI = .903, TLI = .895, RMSEA = .049, SRMR = .046.

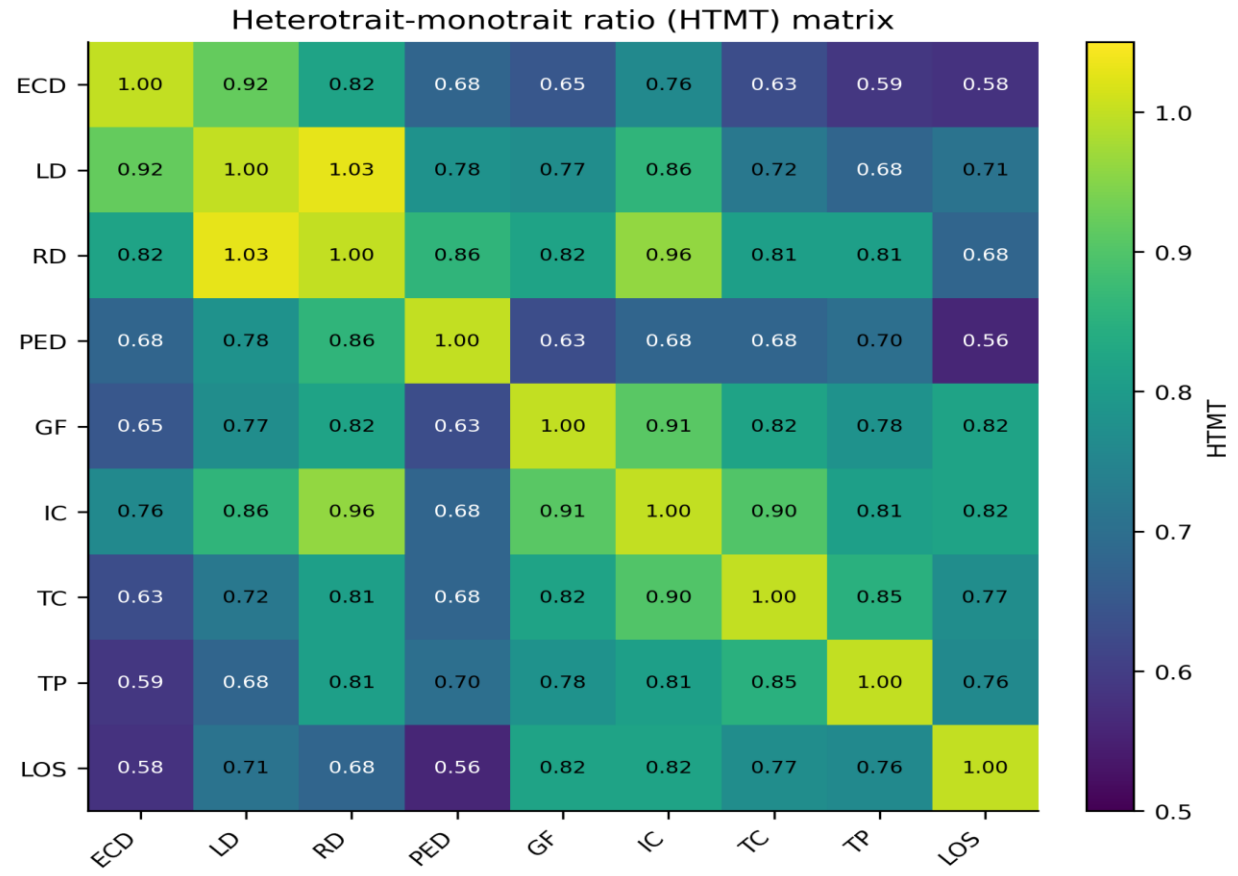

Figure 3. Heterotrait-monotrait ratio matrix for discriminant-validity assessment.

Bivariate relationships

All construct correlations were positive and statistically significant at $p < .001$. Team collaboration was most strongly related to team productivity ($r = .76$), inclusive climate ($r = .75$), gender fairness ($r = .70$), and leadership/organizational support ($r = .69$). Productivity was also strongly associated with leadership support ($r = .68$), inclusive climate ($r = .67$), and gender fairness ($r = .66$). The size of these correlations is consistent with the theoretical model, while also confirming that multivariable estimates are needed to separate unique from shared associations.

Table IV. Pearson correlations among study constructs

	ECD	LD	RD	PED	GF	IC	TC	TP	LOS
ECD	1.00	.70	.59	.51	.53	.60	.53	.49	.49
LD	.70	1.00	.69	.55	.59	.64	.58	.54	.55
RD	.59	.69	1.00	.58	.60	.68	.62	.62	.51
PED	.51	.55	.58	1.00	.48	.50	.55	.55	.44

	ECD	LD	RD	PED	GF	IC	TC	TP	LOS
GF	.53	.59	.60	.48	1.00	.72	.70	.66	.70
IC	.60	.64	.68	.50	.72	1.00	.75	.67	.67
TC	.53	.58	.62	.55	.70	.75	1.00	.76	.69
TP	.49	.54	.62	.55	.66	.67	.76	1.00	.68
LOS	.49	.55	.51	.44	.70	.67	.69	.68	1.00

Note. N = 381. All displayed correlations are statistically significant at p < .001. ECD = ethnic/cultural diversity; LD = language diversity; RD = regional diversity; PED = professional/educational diversity; GF = gender fairness; IC = inclusive climate; TC = team collaboration; TP = team productivity; LOS = leadership/organizational support.

Hierarchical regression and model diagnostics

The demographic baseline explained 12.9% of collaboration variance. The full collaboration model, which added the six focal antecedents while retaining leadership/organizational support as a control condition, yielded R-squared = .678 and adjusted R-squared = .664. For productivity, the demographic baseline explained 11.2% of variance; the full antecedent model reached R-squared = .614, and adding team collaboration increased explained variance by 4.9 percentage points to R-squared = .663 and adjusted R-squared = .647. Because leadership/organizational support is a control rather than a focal hypothesis, the block increase from the demographic baseline should not be interpreted as variance attributable solely to the six focal antecedents.

Table V. Hierarchical regression model summaries and predictive validation

Model	R-squared	Adjusted R-squared	Delta R-squared	F	p	10-fold CV R-squared
Collab.: demographic baseline	.129	.108	-	6.12	< .001	-
Collab.: full model (6 focal + LOS control)	.678	.664	.549	47.91	< .001	.592

Model	R-squared	Adjusted R-squared	Delta R-squared	F	p	10-fold CV R-squared
Productivity: demographic baseline	.112	.091	-	5.21	< .001	-
Productivity: full model (6 focal + LOS control)	.614	.597	.502	36.15	< .001	-
Productivity: + team collaboration	.663	.647	.049	41.94	< .001	.536

Note. The cross-validated R-squared values refer to the final collaboration and productivity models. Delta R-squared is the increase relative to the preceding model block.

In the collaboration model, three focal antecedents retained positive unique coefficients under HC3 inference: professional/educational diversity (beta = .140, p = .010), gender fairness (beta = .191, p = .006), and inclusive climate (beta = .335, p < .001). Ethnic/cultural, language, and regional diversity were not significant after the other variables were held constant. Leadership/organizational support also showed a positive coefficient (beta = .239, p < .001), but it is interpreted as a significant control covariate rather than evidence for an additional focal hypothesis.

In the final productivity model, team collaboration was the strongest unique predictor (beta = .390, p < .001). Regional diversity (beta = .146, p = .038) and professional/educational diversity (beta = .125, p = .043) retained significant direct focal associations with productivity. Ethnic/cultural diversity, language diversity, gender fairness, and inclusive climate did not retain significant direct coefficients after collaboration and the controls were included. Leadership/organizational support also remained significant (beta = .232, p = .007), but, as in the collaboration model, it is a control covariate rather than a focal hypothesis.

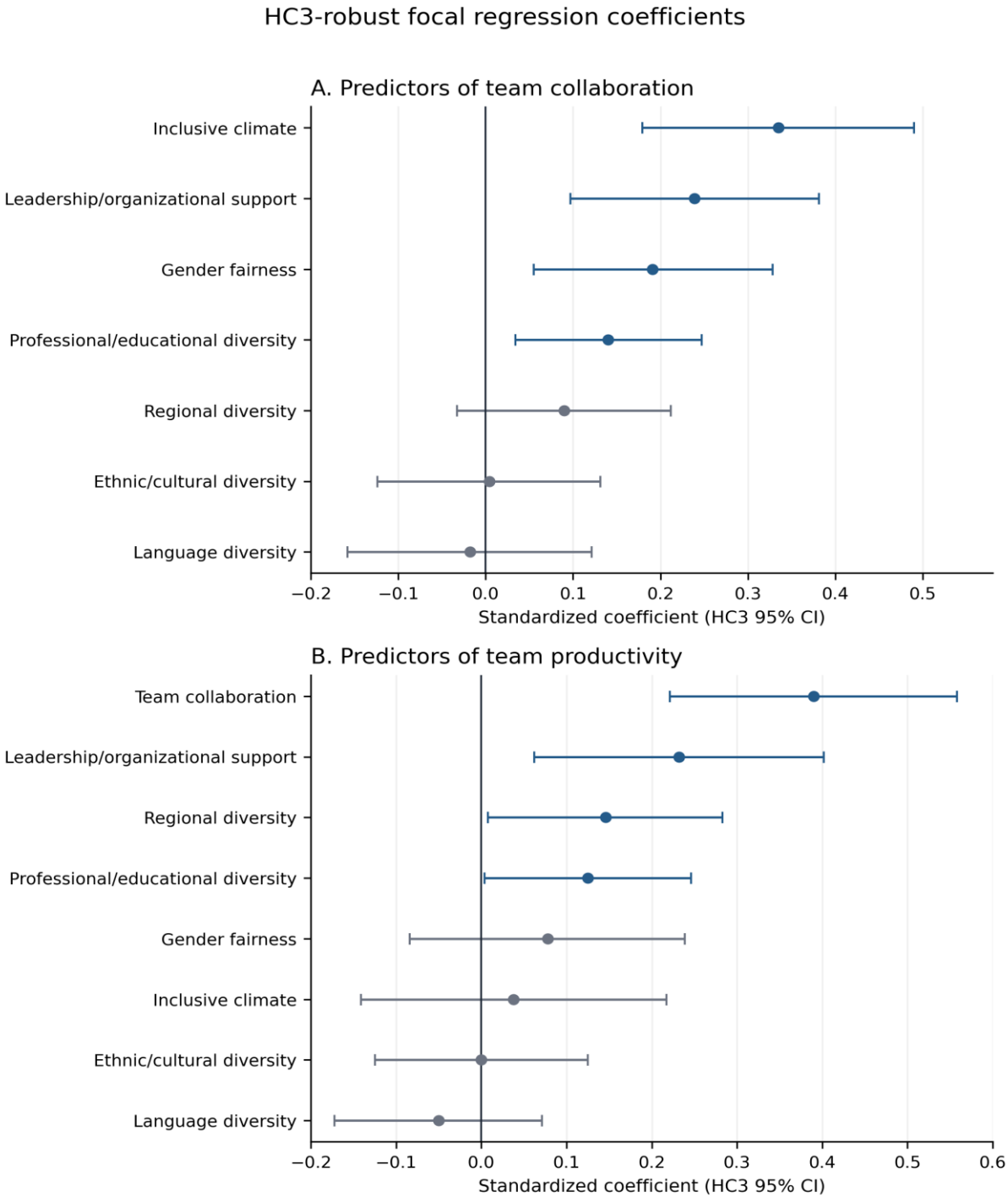

Figure 4. HC3-robust standardized coefficients for team collaboration and team productivity.

Table VI. Full HC3-robust standardized regression coefficients for focal variables and the leadership/support control

Outcome	Predictor	beta	Robust SE	p	95% CI	Decision
Collaboration	ECD	.004	.065	.952	[-.124, .131]	Not significant
Collaboration	LD	-.018	.071	.796	[-.158, .121]	Not significant
Collaboration	RD	.090	.063	.152	[-.033, .212]	Not significant
Collaboration	PED	.140	.054	.010	[.034, .247]	Significant
Collaboration	GF	.191	.070	.006	[.055, .328]	Significant
Collaboration	IC	.335	.079	< .001	[.179, .490]	Significant
Collaboration	LOS	.239	.073	< .001	[.097, .381]	Control (sig.)
Productivity	ECD	-.000	.064	1.000	[-.125, .125]	Not significant
Productivity	LD	-.050	.062	.418	[-.172, .071]	Not significant
Productivity	RD	.146	.070	.038	[.008, .283]	Significant
Productivity	PED	.125	.062	.043	[.004, .246]	Significant
Productivity	GF	.078	.082	.345	[-.084, .239]	Not significant

Outcome	Predictor	beta	Robust SE	p	95% CI	Decision
Productivity	IC	.038	.091	.676	[-.141, .217]	Not significant
Productivity	LOS	.232	.087	.007	[.062, .402]	Control (sig.)
Productivity	TC	.390	.086	< .001	[.221, .558]	Significant

Note. Controls included gender, age, education, organization type, work experience, team size, and workplace language. Collaboration final model: R-squared = .678, adjusted R-squared = .664. Productivity final model: R-squared = .663, adjusted R-squared = .647.

Exploratory moderation of diversity–collaboration relationships

The reviewer-suggested moderator interpretation was tested directly rather than decided conceptually. When gender fairness was examined as the only moderator block, the four interaction terms increased collaboration-model R-squared by .012 and were jointly significant under the HC3 robust Wald test, $\chi^2(4) = 13.53$, $p = .009$. Within that block, only ethnic/cultural diversity × gender fairness was individually significant ($b = -.110$, robust SE = .051, $p = .031$); the language, regional, and professional/educational interactions were not significant. Inclusive climate did not produce a significant interaction block ($\Delta R^2 = .007$; robust Wald $\chi^2(4) = 6.41$, $p = .171$), and none of its four individual interactions was significant. Importantly, when all eight gender-fairness and inclusive-climate interactions were entered together, the total interaction block was not significant at .05 ($\Delta R^2 = .015$; robust Wald $\chi^2(8) = 14.06$, $p = .080$), and the ethnic/cultural diversity × gender fairness coefficient was no longer significant ($b = -.165$, $p = .129$). Because the apparent gender-fairness moderation is therefore sensitive to specification and the inclusion constructs are strongly overlapping, the evidence does not justify replacing their primary organizational-condition role with a moderator-only role. The moderation alternative is retained as an exploratory result and should be replicated with objective team-composition measures and a pre-specified design.

Table VII. Exploratory HC3-robust moderation tests predicting team collaboration

Moderator	Interaction	b	Robust SE	p	Decision
Gender fairness	ECD × GF	−.110	.051	.031	Exploratory interaction; not robust in combined model
Gender fairness	LD × GF	−.004	.078	.963	Not supported
Gender fairness	RD × GF	.011	.062	.863	Not supported
Gender fairness	PED × GF	.051	.041	.214	Not supported
Inclusive climate	ECD × IC	−.048	.045	.296	Not supported
Inclusive climate	LD × IC	−.043	.074	.563	Not supported
Inclusive climate	RD × IC	.019	.057	.736	Not supported
Inclusive climate	PED × IC	.052	.036	.157	Not supported

Note. Composite predictors and moderators were standardized before interaction products were created. Separate moderator models retained all constituent main effects, leadership/organizational support, and the seven demographic/work-context controls. Gender-fairness block: $\Delta R^2 = .012$, robust Wald $\chi^2(4) = 13.53$, $p = .009$. Inclusive-climate block: $\Delta R^2 = .007$, robust Wald $\chi^2(4) = 6.41$, $p = .171$. Combined eight-interaction model: $\Delta R^2 = .015$, robust Wald $\chi^2(8) = 14.06$, $p = .080$; ECD × GF became non-significant ($p = .129$). Thus, moderator-only reclassification was not supported robustly.

Bootstrap indirect effects and integrated structural pattern

The collaboration-to-productivity relationship remained positive in the mediation system (unstandardized b = .381). In the final standardized productivity regression, the corresponding

standardized coefficient was beta = .390, p < .001 (Table VI and Figure 6). The two values are reported on different scales and should not be treated as conflicting estimates. Five-thousand-resample bootstrap confidence intervals supported focal indirect effects through collaboration for professional/educational diversity (indirect = .065, 95% CI [.017, .125]), gender fairness (.056, [.015, .102]), and inclusive climate (.117, [.051, .195]). The focal indirect effects for ethnic/cultural diversity, language diversity, and regional diversity included zero. Leadership/organizational support remained controlled throughout the mediation models but is not counted as an H4 indirect effect.

The pattern distinguishes supported and unsupported focal pathways. Gender fairness and inclusive climate had supported indirect effects but non-significant direct productivity coefficients, indicating that their observed productivity associations were principally carried through collaboration in this model. Professional/educational diversity showed both a significant direct productivity coefficient and a supported indirect effect, consistent with partial statistical mediation. Regional diversity showed a significant direct productivity coefficient without a supported indirect effect, while ethnic/cultural and language diversity had neither significant unique direct productivity coefficients nor supported indirect effects.

Table VIII. Bootstrap indirect effects through team collaboration

Predictor	Indirect effect	95% bootstrap CI	Decision
Ethnic/cultural diversity	.001	[-.037, .045]	Not supported
Language diversity	-.007	[-.056, .044]	Not supported
Regional diversity	.038	[-.012, .092]	Not supported
Professional/educational diversity	.065	[.017, .125]	Supported
Gender fairness	.056	[.015, .102]	Supported
Inclusive climate	.117	[.051, .195]	Supported

Note. Based on 5,000 nonparametric bootstrap resamples. An indirect effect is supported when the 95% confidence interval excludes zero. These bootstrap indirect-effect estimates are reported on the mediation-effect scale and are not the standardized beta coefficients shown for the direct regression paths in Table VI and Figure 6.

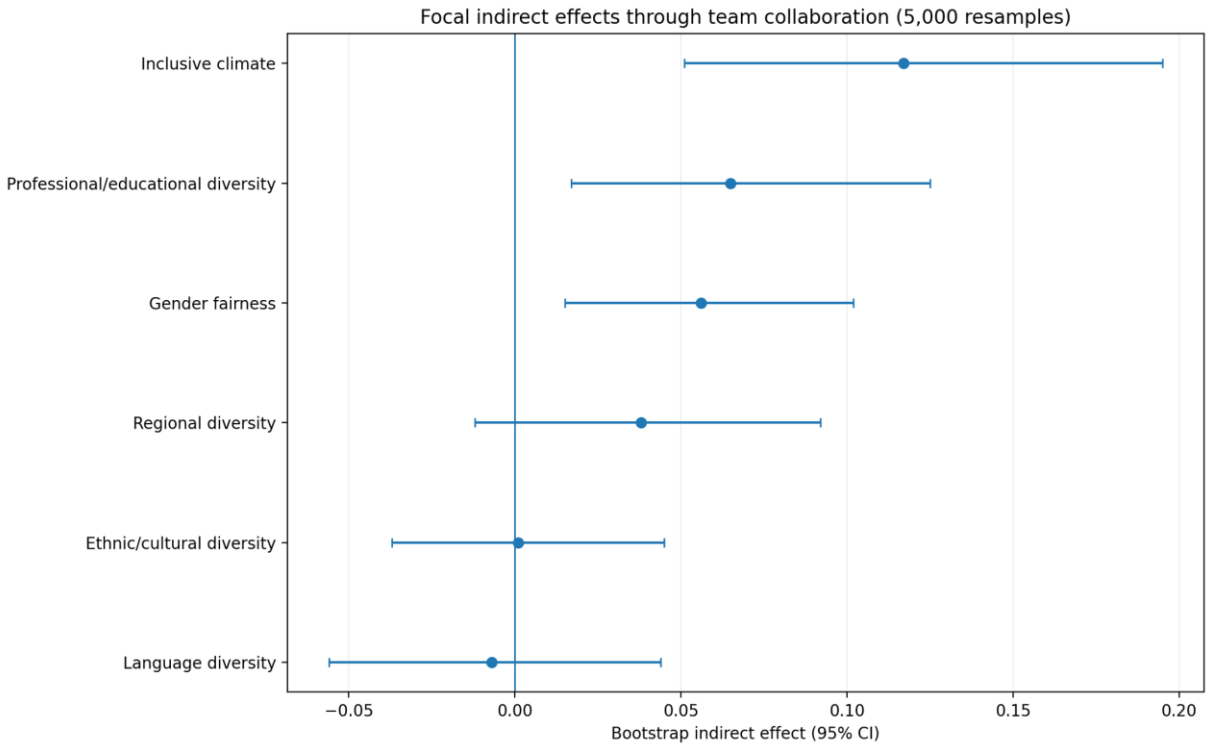

Figure 5. Bootstrap indirect effects through team collaboration.

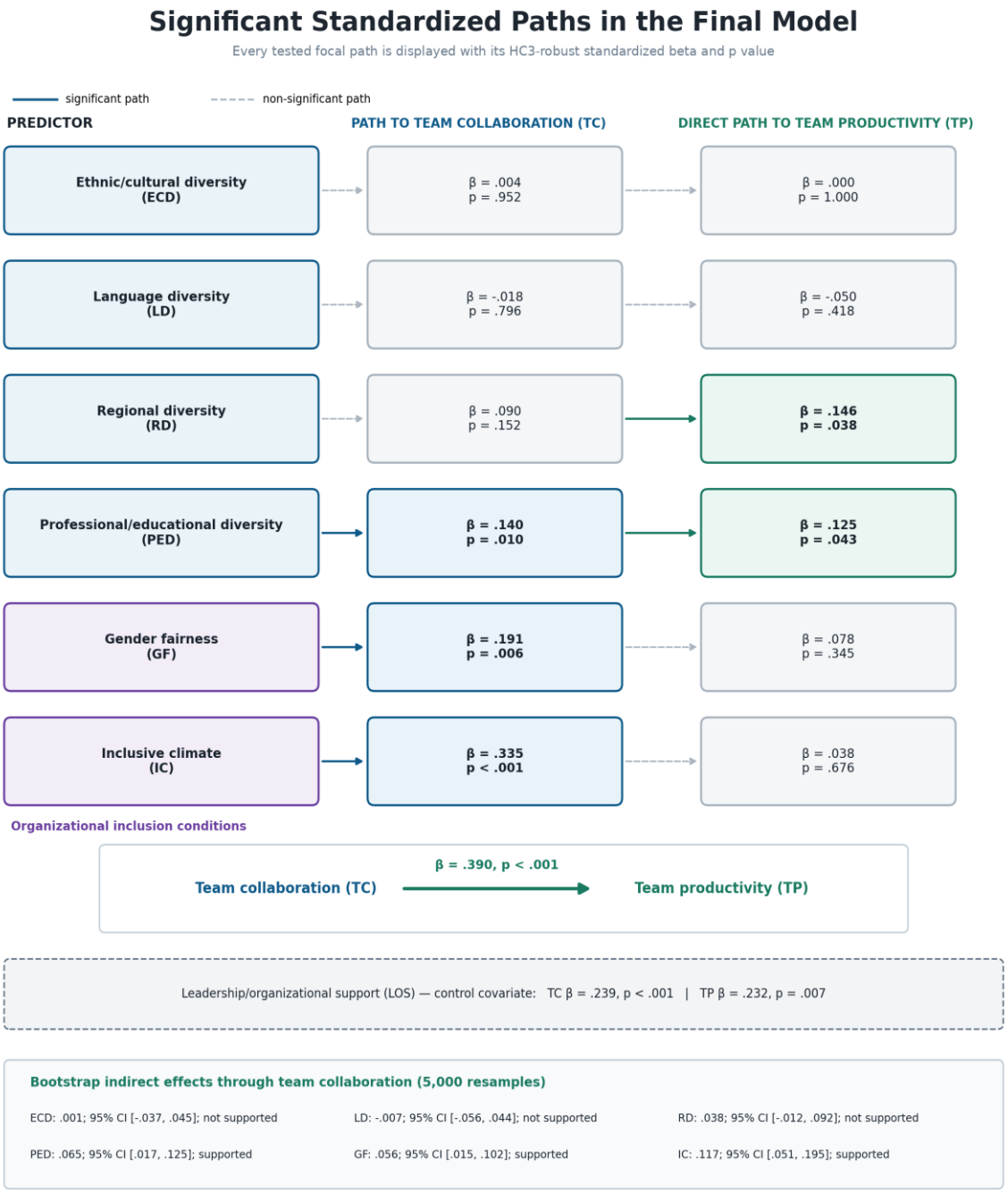

Figure 6. Significant Standardized Paths in the Final Model. Every tested focal antecedent-to-collaboration and focal direct-to-productivity path is displayed with its HC3-robust standardized beta and p value, including the non-significant ethnic/cultural and language-diversity effects. The collaboration-to-productivity path and both significant leadership/organizational-support control paths are also labeled. Bootstrap indirect effects are reported separately within the figure and agree with Table VIII; the exploratory moderation results remain outside the primary specification and are summarized in Table VII.

Sensitivity analysis and hypothesis evaluation

The 321-case sensitivity analysis excluded all respondents meeting one or more conservative response-quality criteria. The principal pattern remained stable. Professional/educational diversity, gender fairness, and inclusive climate continued to predict collaboration among the six focal antecedents; ethnic/cultural, language, and regional diversity remained non-significant in the collaboration model. Regional diversity, professional/educational diversity, and collaboration continued to predict productivity; ethnic/cultural diversity, language diversity, gender fairness, and inclusive climate remained non-significant as direct productivity predictors. The leadership/support control remained significant in both outcomes. Robust M-estimation and rank-based correlations preserved the same substantive ordering. These checks indicate that the focal conclusions were not created by a small set of low-variance or influential observations.

Table IX. Full-sample and 321-case sensitivity coefficients

Outcome	Predictor	Full sample beta (p)	Sensitivity beta (p)
Collaboration	ECD	.004 (.952)	.021 (.780)
Collaboration	LD	-.018 (.796)	.047 (.496)
Collaboration	RD	.090 (.152)	.057 (.355)
Collaboration	PED	.140 (.010)	.154 (< .001)
Collaboration	GF	.191 (.006)	.172 (.004)
Collaboration	IC	.335 (< .001)	.276 (< .001)
Collaboration	LOS	.239 (< .001)	.279 (< .001)
Productivity	ECD	-.000 (1.000)	.066 (.203)
Productivity	LD	-.050 (.418)	-.036 (.490)
Productivity	RD	.146 (.038)	.153 (.003)
Productivity	PED	.125 (.043)	.123 (.009)
Productivity	GF	.078 (.345)	.019 (.723)
Productivity	IC	.038 (.676)	-.059 (.302)
Productivity	LOS	.232 (.007)	.309 (< .001)
Productivity	TC	.390 (< .001)	.422 (< .001)

Note. The sensitivity sample excluded all 60 cases meeting at least one conservative response-quality criterion. ECD = ethnic/cultural diversity; LD = language diversity; RD = regional diversity; PED = professional/educational diversity; GF = gender fairness; IC = inclusive climate; LOS = leadership/organizational support; TC = team collaboration.

Hypothesis decisions were made at the individual-path level to match the primary conceptual model. H1a (ethnic/cultural diversity → collaboration), H1b (language diversity → collaboration), and H1c (regional diversity → collaboration) were not supported; H1d (professional/educational diversity → collaboration), H1e (gender fairness → collaboration), and H1f (inclusive climate → collaboration) were supported. H2 (team collaboration → team productivity) was supported. For the direct productivity paths, H3a (ethnic/cultural diversity), H3b (language diversity), H3e (gender fairness), and H3f (inclusive climate) were not supported, whereas H3c (regional diversity) and H3d (professional/educational diversity) were supported. H4 was partially supported when its six specified indirect relationships were evaluated separately: professional/educational diversity, gender fairness, and inclusive climate had bootstrap confidence intervals excluding zero, whereas the indirect effects for ethnic/cultural diversity, language diversity, and regional diversity included zero. Leadership/organizational support was statistically significant in several models but is not counted as a hypothesis because it is a control condition. The exploratory moderation questions produced a more cautious conclusion: EM1 received limited, specification-sensitive evidence because the gender-fairness interaction block was jointly significant only when tested separately and its sole individual interaction (ECD × GF) became non-significant when both moderator blocks were estimated together; EM2 was not supported because the inclusive-climate interaction block and all four IC interactions were non-significant. Accordingly, the data do not support treating either gender fairness or inclusive climate exclusively as a moderator in the final primary model.

6. Discussion

The findings show that the organizational value of cultural diversity in Afghan workplaces depends on the conditions under which employees interact. Positive zero-order correlations were widespread, but the robust multivariable models produced a more selective pattern. The results also support an important conceptual distinction: ethnic/cultural, language, regional, and professional/educational diversity describe forms of workforce difference, whereas gender fairness and inclusive climate describe whether the organization manages such difference through equitable participation and inclusion. Treating all six as if they were equivalent demographic dimensions would blur this distinction.

The central role of collaboration supports the categorization-elaboration model. Diversity provides informational opportunities, but those opportunities become productive only when members communicate, coordinate, support one another, and integrate different viewpoints. The 4.9 percentage-point increase in productivity variance after collaboration entered the model is meaningful because it was estimated after demographics and seven correlated workplace conditions had already been included. This result is consistent with meta-analytic evidence linking information sharing to team performance (Mesmer-Magnus and DeChurch, 2009) and with the argument that diverse knowledge must be elaborated rather than merely present (Van Knippenberg et al., 2004).

Professional and educational diversity showed the most consistent dimension-specific contribution. It predicted collaboration, retained a direct productivity coefficient, and had a supported indirect effect through collaboration. This pattern is compatible with information/decision-making theory. Employees trained in different disciplines and possessing different experience can widen the range of solutions available to a team. The direct coefficient may reflect technical capability and better task allocation, while the indirect coefficient indicates that expertise becomes more useful when members explain and coordinate it. For managers, the implication is not simply to recruit varied qualifications; teams also need routines that translate specialized knowledge into shared action.

Gender fairness and inclusive climate had strong collaboration relationships but no significant direct productivity coefficients. Their supported indirect effects through collaboration are consistent with their classification as organizational inclusion conditions: they appear to matter because they shape who can speak, share information, and participate in coordinated work rather than because they represent demographic heterogeneity themselves. This does not establish causal mediation, but it provides a clearer organizational interpretation than labeling fairness or climate as demographic diversity.

Inclusive climate produced the largest focal coefficient in the collaboration model and the largest supported focal indirect effect. Its non-significant direct productivity coefficient should not be interpreted as evidence that inclusion is unimportant. Rather, the result is consistent with a process explanation in which climate influences productivity through interaction quality. The reviewer-suggested moderator interpretation was also tested as an exploratory alternative rather than being substituted for the primary antecedent model after observing the data. As reported in Table VII, inclusive-climate moderation was not significant, while the limited gender-fairness interaction evidence was specification-sensitive and was therefore not retained in the final primary path model.

The alternative moderator specification adds an important qualification. Gender fairness showed a jointly significant four-interaction block only when it was tested separately, and that result was driven

by a negative ethnic/cultural diversity × gender-fairness interaction. The interaction did not remain significant when inclusive-climate interactions were entered simultaneously, while the inclusive-climate interaction block was not significant at all. These results do not support a simple claim that higher fairness or inclusion uniformly strengthens the benefits of diversity. Instead, the stronger and more stable evidence in this dataset concerns their main associations with collaboration. Given the strong overlap between gender fairness and inclusive climate, ceiling-skewed responses, and cross-sectional self-report measurement, the isolated interaction should be treated as exploratory rather than as a basis for redefining the conceptual model. Future studies should pre-specify moderation hypotheses and pair climate measures with objective team-composition indices.

Leadership and organizational support were retained as a control condition rather than a focal hypothesis. Even after the focal antecedents and demographic covariates were included, this control showed positive associations with both collaboration and productivity. The result is substantively informative but should be interpreted cautiously: it indicates that supportive-management perceptions explain additional variance, not that leadership support is another cultural-diversity dimension. This separation improves the conceptual clarity of the model.

Regional diversity predicted productivity directly but did not significantly predict collaboration. One interpretation is that regional knowledge may improve stakeholder understanding, service design, or implementation without being fully captured by general collaboration items. Employees familiar with different provinces may recognize local constraints, communication norms, or client needs that improve task execution. This inference should remain cautious because the regional-diversity scale had marginal reliability. Future research should distinguish objective regional composition, regional knowledge utilization, and possible subgroup boundaries.

The non-significant unique coefficients for ethnic/cultural and language diversity also require careful interpretation. They do not demonstrate that ethnicity or language is irrelevant. Both constructs correlated positively with collaboration and productivity, but they overlapped strongly with regional diversity, inclusive climate, and other favorable workplace perceptions. In a multivariable model, a non-significant coefficient means that the construct did not explain additional variance after shared associations were removed. Language may also have opposing effects: multilingual capacity can improve stakeholder access, while dominance of one language can produce hesitation or otherness (Wilmot et al., 2024). Such offsetting mechanisms can yield a weak average coefficient.

Theoretical contributions

The study contributes to cross-cultural management in four ways. First, it provides multi-sector evidence from Afghanistan, a setting rarely represented in mainstream diversity and team research. The value of this evidence is not that Afghanistan is culturally uniform, but that locally salient differences in language, region, professional background, and participation conditions can be examined within a common organizational framework.

Second, the findings reinforce a dimension-specific and role-specific understanding of diversity. The study separates core diversity dimensions from organizational inclusion conditions and from leadership/organizational support as a control. It also evaluates the plausible moderator interpretation of gender fairness and inclusive climate rather than assuming that fairness/climate are themselves demographic diversity. The moderation evidence was not sufficiently robust to justify a moderator-only specification, which is theoretically informative: in these data, fairness and inclusion behaved more consistently as general collaboration-enabling conditions than as stable modifiers of specific diversity effects. This prevents demographic composition, fairness, climate, and supportive management from being treated as interchangeable constructs.

Third, the study extends the categorization-elaboration logic by operationalizing collaboration as the behavioral arena in which distinctive knowledge becomes usable. The supported indirect effects for professional/educational diversity, gender fairness, and inclusive climate indicate that different kinds of antecedents can converge on the same team process even though their conceptual meanings differ.

Fourth, the study integrates measurement caution into substantive interpretation. The acceptable CFA fit supports use of the nine pre-specified constructs for theory-guided analysis, but high HTMT ratios, a two-factor parallel-analysis result, and the use of the same sample for EFA and CFA show that the measurement model is not an independently validated structure. The construct-specific conclusions should therefore be treated as provisional until replicated.

Managerial and policy implications

Afghan organizations should focus less on diversity as a head-count statement and more on the procedures that determine whether different employees can contribute. Four priorities follow from the results.

First, managers should formalize knowledge integration. Mixed-profession teams should use brief role explanations, structured problem reviews, and decision records that identify which expertise

informed the final choice. Rotating meeting facilitation and requiring each relevant function to contribute can prevent technical knowledge from remaining concentrated in one professional group.

Second, organizations should make participation and information access auditable. Gender fairness and inclusive climate matter when they affect who receives instructions, training, travel opportunities, acting assignments, and access to decision-makers. Managers can review meeting participation, distribution lists, task allocation, and development opportunities for recurring patterns. The purpose is not to expose individual respondents but to identify structural barriers.

Third, language-sensitive communication should be treated as an operational capability. Plain language, clarification without embarrassment, concise written summaries, and translation of critical instructions can reduce unequal participation. The goal is not to eliminate multilingualism or require assimilation. It is to ensure that language differences do not determine access to information or perceived competence.

Fourth, supervisor development should connect inclusion with performance. Training should cover invitation of dissenting views, response to mistakes, cultural and language conflict, recognition of expertise, and fair allocation of opportunities. Supervisors should be evaluated not only on whether teams are diverse, but on whether employees report that communication, participation, and support are reliable.

Limitations and future research

Several limitations constrain interpretation. The cross-sectional design cannot establish temporal order. Productive teams may perceive their leaders and climate more positively, creating reciprocal relationships. Longitudinal studies should measure diversity conditions, collaboration, and objective outcomes at multiple time points.

All focal variables were self-reported by the same respondents in the same questionnaire, creating potential common-method bias and social-desirability effects. Harman's first factor accounted for 39.2% of variance, the CFA did not collapse cleanly to a single construct, and the multivariable coefficients were differentiated rather than uniformly positive; however, none of these diagnostics can rule out common-method variance. The strongest remedy in future research is design-based: collect predictors, collaboration, and productivity from different sources or time points; use supervisor or administrative productivity indicators where comparable; and include marker or latent-method approaches when feasible (Podsakoff et al., 2003).

The sample was not a national probability sample and was disproportionately male and public-sector. Results should not be treated as prevalence estimates for all Afghan employees. Larger studies should use stratified sampling across provinces, sectors, occupations, and gender groups where access and safety permit.

The measures captured perceptions of the presence and constructive management of diversity, not objective team composition. Future studies should collect complete team rosters, calculate demographic and faultline indices, obtain several responses per team, and test within-team agreement before aggregating climate and collaboration. Such designs would allow multilevel analysis of whether objective composition interacts with inclusion and leadership.

Measurement overlap is another limitation. Language diversity, regional diversity, inclusive climate, and gender fairness were not perfectly discriminant, and regional-diversity reliability was marginal. EFA and CFA also used the same 381 cases, so the confirmatory model was not independently cross-validated. The moderation analysis reinforces this caution: gender fairness and inclusive climate are strongly related organizational perceptions, and the only individual interaction detected in a separate gender-fairness model did not survive the combined moderator specification. Future work should refine item wording, obtain an independent validation sample, distinguish objective composition from fairness and climate perceptions, and prospectively test moderation with pre-specified interaction hypotheses and sufficient power.

Finally, the mediation analysis is statistical rather than causal. Experimental or longitudinal interventions could test whether inclusive-meeting routines, language-support practices, or supervisor training produce subsequent changes in collaboration and performance. Qualitative interviews could also explain why regional knowledge shows a direct productivity relationship and why language diversity does not retain a unique coefficient after overlapping conditions are controlled.

7. Conclusion

Cultural diversity in Afghan workplaces is neither an automatic advantage nor an unavoidable problem. Its value depends on whether organizations make different knowledge usable and different employees able to participate. In the 381-response sample, professional/educational diversity, gender fairness, and inclusive climate predicted team collaboration among the six focal antecedents, while regional diversity and professional/educational diversity retained direct productivity relationships. Ethnic/cultural diversity and language diversity were included in all corresponding primary models but did not retain significant unique collaboration, direct-productivity, or indirect paths after the overlapping predictors and controls were considered; their positive bivariate correlations should

therefore not be confused with independent path effects. Team collaboration was the strongest unique productivity predictor and statistically carried the productivity relationships of professional/educational diversity, gender fairness, and inclusive climate. Leadership/organizational support also explained additional variance, but it was treated as a control condition rather than as a cultural-diversity dimension or focal hypothesis. The revised analysis also tested the reviewer-relevant proposition that gender fairness and inclusive climate might be better treated as moderators. Inclusive-climate moderation was not supported, and the limited gender-fairness interaction evidence was not stable when both moderator blocks were estimated together. The most defensible interpretation is therefore that gender fairness and inclusive climate are organizational inclusion conditions with strong main/process associations, while their moderating role remains an open question for prospective multilevel research using objective diversity measures. The findings shift attention from representation alone to communication, fairness, inclusion, support, and coordination as the mechanisms through which workforce difference can become reliable performance.

Statements and Declarations

Ethical considerations

The study was conducted as an MBA thesis under the academic procedures of [institution name withheld for review]. No separate institutional ethics approval number was issued. Participation was voluntary, no names were collected, and results were reported in grouped form.

Consent to participate

The questionnaire introduction informed respondents of the academic purpose, voluntary participation, confidentiality, and their freedom to decline. Submission of the completed questionnaire indicated consent to participate.

Consent for publication

Not applicable; no identifiable personal information is reported.

Declaration of conflicting interest

The author declares no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The research received no external grant or commercial funding.

Data availability

The de-identified analytical data and reproduction syntax may be made available for scholarly verification subject to confidentiality, institutional requirements, and a reasonable request to the corresponding author.

Generative AI disclosure

Generative AI tools were used to support language editing, manuscript organization, and formatting. The author remains responsible for the study design, data, analyses, interpretation, reference verification, and final text. This statement should be adapted to the exact disclosure policy of the selected journal at submission.

References

1. Brewer, M. B. (1991). The social self: On being the same and different at the same time. *Personality and Social Psychology Bulletin, 17*(5), 475–482. https://doi.org/10.1177/0146167291175001
2. Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management, 31*(6), 874–900. https://doi.org/10.1177/0149206305279602
3. Edmondson, A. C. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly, 44*(2), 350–383. https://doi.org/10.2307/2666999
4. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50. https://doi.org/10.1177/002224378101800104
5. Griffin, M. A., Neal, A., & Parker, S. K. (2007). A new model of work role performance: Positive behavior in uncertain and interdependent contexts. *Academy of Management Journal, 50*(2), 327–347. https://doi.org/10.5465/amj.2007.24634438
6. Hamkar, I., Arifi, S. Y., & Israr, T. (2024). The impact of employee involvement on organizational performance in NGOs in Nangarhar, Afghanistan. *Kardan Journal of Economics and Management Sciences, 7*(2), 40–51. https://doi.org/10.31841/KJEMS.2024.162
7. Harrison, D. A., & Klein, K. J. (2007). What's the difference? Diversity constructs as separation, variety, or disparity in organizations. *Academy of Management Review, 32*(4), 1199–1228. https://doi.org/10.5465/amr.2007.26586096
8. Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science, 43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

9. Hoegl, M., & Gemünden, H. G. (2001). Teamwork quality and the success of innovative projects: A theoretical concept and empirical evidence. *Organization Science, 12*(4), 435–449. https://doi.org/10.1287/orsc.12.4.435.10635
10. Homan, A. C., van Knippenberg, D., Van Kleef, G. A., & De Dreu, C. K. W. (2007). Bridging faultlines by valuing diversity: Diversity beliefs, information elaboration, and performance in diverse work groups. *Journal of Applied Psychology, 92*(5), 1189–1199. https://doi.org/10.1037/0021-9010.92.5.1189
11. Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1–55. https://doi.org/10.1080/10705519909540118
12. Ilgen, D. R., Hollenbeck, J. R., Johnson, M., & Jundt, D. (2005). Teams in organizations: From input-process-output models to IMOI models. *Annual Review of Psychology, 56*, 517–543. https://doi.org/10.1146/annurev.psych.56.091103.070250
13. Zaheer, A., & Sadiq, A. (2025). The influence of traditional management practices on employee satisfaction, turnover intention, and perceived organizational profitability. *Khurasan University Business Administration Journal, 2*(1).
14. Jehn, K. A., Northcraft, G. B., & Neale, M. A. (1999). Why differences make a difference: A field study of diversity, conflict, and performance in workgroups. *Administrative Science Quarterly, 44*(4), 741–763. https://doi.org/10.2307/2667054
15. Joshi, A., & Roh, H. (2009). The role of context in work team diversity research: A meta-analytic review. *Academy of Management Journal, 52*(3), 599–627. https://doi.org/10.5465/amj.2009.41331491
16. Kline, R. B. (2023). *Principles and practice of structural equation modeling* (5th ed.). Guilford Press.
17. Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., de Vet, H. C. W., & van der Beek, A. J. (2014). Construct validity of the Individual Work Performance Questionnaire. *Journal of Occupational and Environmental Medicine, 56*(3), 331–337. https://doi.org/10.1097/JOM.0000000000000113
18. Lau, D. C., & Murnighan, J. K. (1998). Demographic diversity and faultlines: The compositional dynamics of organizational groups. *Academy of Management Review, 23*(2), 325–340. https://doi.org/10.5465/amr.1998.533229
19. Long, J. S., & Ervin, L. H. (2000). Using heteroscedasticity consistent standard errors in the linear regression model. *The American Statistician, 54*(3), 217–224. https://doi.org/10.1080/00031305.2000.10474549

20. Zaheer, A., & Surobi, A. (2025). Factors Contributing to Brain Drain and Strategies for Retaining Skilled Professionals in Afghanistan: A Multisectoral Approach. *Salam International Academic Journal, 10*(17), 873-897. https://doi.org/10.64104/v10.Issue17.n49.2025
21. MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research, 39*(1), 99–128. https://doi.org/10.1207/S15327906MBR3901_4
22. Mesmer-Magnus, J. R., & DeChurch, L. A. (2009). Information sharing and team performance: A meta-analysis. *Journal of Applied Psychology, 94*(2), 535–546. https://doi.org/10.1037/a0013773
23. Nembhard, I. M., & Edmondson, A. C. (2006). Making it safe: The effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. *Journal of Organizational Behavior, 27*(7), 941–966. https://doi.org/10.1002/job.413
24. Nishii, L. H. (2013). The benefits of climate for inclusion for gender-diverse groups. *Academy of Management Journal, 56*(6), 1754–1774. https://doi.org/10.5465/amj.2009.0823
25. Zaheer, A., & Sadiq, A. (2024). The impact of IT integration in human resource management on employee productivity: A study of Afghanistan's NGOs. *Salam International Academic Journal, 9*(16), 7–24. https://doi.org/10.64104/v9.SecondRound.Issue.6.n6.2024
26. Omari, N., & Barakzai, A. (2024). An examination of challenges in implementing human resource management principles in Afghanistan's workplace. *Journal of Social Sciences – Kabul University, 7*(2), 159–177. https://doi.org/10.62810/jss.v7i2.34
27. Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903. https://doi.org/10.1037/0021-9010.88.5.879
28. Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*(3), 879–891. https://doi.org/10.3758/BRM.40.3.879
29. Qasim, M. (2017). Effect of workforce diversity on employee's job performance: The empirical assessment of education sector, Jalalabad, Afghanistan. *International Journal of Economics & Management Sciences, 6*(5), Article 452, 1–4. https://doi.org/10.4172/2162-6359.1000452
30. Randel, A. E., Galvin, B. M., Shore, L. M., Ehrhart, K. H., Chung, B. G., Dean, M. A., & Kedharnath, U. (2018). Inclusive leadership: Realizing positive outcomes through belongingness and being valued for uniqueness. *Human Resource Management Review, 28*(2), 190–203. https://doi.org/10.1016/j.hrmr.2017.07.002

31. Saatai, M. H., Zadran, H. G., & Nayel, A. N. (2022). Impact of inclusive leadership on employee innovative work behavior and creativity with the mediating role of intrinsic motivation. *Kardan Journal of Economics and Management Sciences, 5*(4), 76–91. https://doi.org/10.31841/KJEMS.2022.131
32. Salas, E., Sims, D. E., & Burke, C. S. (2005). Is there a "Big Five" in teamwork? *Small Group Research, 36*(5), 555–599. https://doi.org/10.1177/1046496405277134
33. Shore, L. M., Randel, A. E., Chung, B. G., Dean, M. A., Ehrhart, K. H., & Singh, G. (2011). Inclusion and diversity in work groups: A review and model for future research. *Journal of Management, 37*(4), 1262–1289. https://doi.org/10.1177/0149206310385943
34. Stahl, G. K., Maznevski, M. L., Voigt, A., & Jonsen, K. (2010). Unraveling the effects of cultural diversity in teams: A meta-analysis of research on multicultural work groups. Journal of International Business Studies, 41, 690–709.
35. Stahl, G. K., & Maznevski, M. L. (2021). Unraveling the effects of cultural diversity in teams: A retrospective of research on multicultural work groups and an agenda for future research. *Journal of International Business Studies, 52*(1), 4–22. https://doi.org/10.1057/s41267-020-00389-9
36. Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (2nd ed., pp. 7–24). Nelson-Hall.
37. van Knippenberg, D., De Dreu, C. K. W., & Homan, A. C. (2004). Work group diversity and group performance: An integrative model and research agenda. *Journal of Applied Psychology, 89*(6), 1008–1022. https://doi.org/10.1037/0021-9010.89.6.1008
38. Wahab, W., & Bangash, K. K. (2021). Inclusive leadership with relation to employee engagement: Mediating role of psychological empowerment. *Kardan Journal of Economics and Management Sciences, 4*(4), 1–21. https://api.kardan.edu.af/storage/files/KJEMS-%204.4-2021-0106012022014414.pdf
39. Wilmot, N. V., Vigier, M., & Humonen, K. (2024). Language as a source of otherness. *International Journal of Cross Cultural Management, 24*(1), 59–80. https://doi.org/10.1177/14705958231216936
40. World Bank. (2025). *Afghanistan development update: April 2025*. World Bank.
41. Zaheer, A., & Barakzai, A. (2026). Effect of transformational and transactional leadership and emotional intelligence on employee productivity: The mediating role of employee motivation. *Journal of Social Sciences and Humanities, 3*(2), 358–383. https://doi.org/10.62810/jssh.v3i2.269
42. rahman Haziq, Q. U., Ghafourzay, H., & Zaheer. (2026) A. Job Satisfaction and Customer-Oriented Behavior: The Roles of Employee Engagement and Organizational Culture in Afghanistan Oil and Gas Corporation (AOGC). 10.64505/tijss/v02issue01/0010