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Organizational Foundations of Sustainable Higher Education: Validation of Leadership, Empowerment, Justice, and Commitment Measures

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ABSTRACT: The purpose of this study was to validate a measurement instrument designed to assess transformational leadership, employee empowerment, organizational justice, and organizational commitment among employees of private higher education institutions (PHEIs). Although these constructs have been extensively investigated in organizational behaviour and higher education research, empirical validation of their measurement properties within private higher education remains comparatively limited. This gap is important because PHEIs operate within distinctive organizational environments characterized by competitive pressures, changing governance arrangements, performance expectations, and increasing demands for employee retention and institutional sustainability. A quantitative, cross-sectional research design was employed, involving 48 academic and administrative staff members from PHEIs. The measurement model was evaluated using Partial Least Squares Structural Equation Modelling (PLS-SEM), with assessment focusing on indicator loadings, composite reliability (CR), average variance extracted (AVE), and the Heterotrait–Monotrait ratio (HTMT). The results indicated satisfactory convergent validity, with indicator loadings ranging from acceptable to excellent levels, CR values exceeding 0.88, and AVE values above the recommended 0.50 threshold. Discriminant validity was also established because all HTMT ratios remained below the conservative criterion of 0.85. These findings indicate that the four constructs demonstrate satisfactory reliability and validity and can therefore be used in subsequent structural model analyses. The study contributes methodologically by establishing a psychometrically sound measurement framework for examining organizational factors associated with workforce stability and institutional

sustainability in PHEIs. The findings also support Sustainable Development Goal (SDG) 4, Quality Education, and SDG 8, Decent Work and Economic Growth, by strengthening the empirical basis for investigating leadership, empowerment, fairness, and employee commitment in higher education organizations.

1. INTRODUCTION

Higher education institutions operate within an increasingly complex environment in which educational quality, organizational sustainability, employee well-being, institutional competitiveness, and stakeholder expectations must be addressed simultaneously. The sustainability of higher education is not determined exclusively by financial resources or technological infrastructure; it is also strongly dependent on the quality of organizational relationships and the capacity of institutions to retain committed and empowered employees. In particular, academic and administrative employees constitute critical organizational resources because their knowledge, motivation, institutional commitment, and professional behaviour directly influence the continuity and quality of institutional operations. Consequently, understanding the organizational conditions that support employee commitment has become increasingly important for higher education institutions seeking sustainable performance.

Leadership represents one of the central organizational mechanisms through which institutional priorities are communicated and translated into employee behaviour. Transformational leadership is particularly relevant because it emphasizes the development of a shared vision, intellectual stimulation, individualized consideration, and inspirational motivation. Recent higher education research continues to demonstrate the importance of transformational leadership for strengthening organizational commitment and creating supportive organizational environments. For example, recent evidence from higher education contexts indicates that transformational leadership can contribute positively to organizational commitment and institutional effectiveness (Rubia et al., 2023; Sustiyatik, 2023). Similarly, research on educational leadership suggests that transformational leaders can strengthen educators' commitment by encouraging professional development and aligning individual and institutional goals (Kareem et al., 2023).

Employee empowerment represents a second important organizational condition. Empowerment involves providing employees with autonomy, participation, access to information, responsibility, and opportunities to influence decisions affecting their work. In higher education, empowerment may be particularly important because academic and professional staff frequently require discretion to perform complex tasks involving teaching, research, administration, student support, and institutional development. Recent research among academic staff has specifically examined the relationship between administrative empowerment and organizational commitment, demonstrating the continuing relevance of empowerment in higher education organizations (Harb et al., 2023).

Organizational justice constitutes another fundamental dimension of a sustainable organizational environment. Employees evaluate whether institutional decisions, resource distributions, procedures, interpersonal treatment, and information-sharing practices are fair (Chan et al., 2026). Perceptions of fairness may influence employees' identification with their organization and their willingness to maintain positive work attitudes. Recent evidence indicates that organizational justice is associated with important employee outcomes, including organizational commitment and engagement, while research specifically conducted in higher education has highlighted the role of perceived justice in employee voice and organizational relationships (Assefa et al., 2024).

Organizational commitment is consequently an important outcome construct because it reflects employees' psychological attachment to and willingness to remain with their organization. In the higher education context, commitment is particularly significant because institutional knowledge and expertise can be disrupted when experienced academic and administrative employees leave. Existing evidence has linked transformational leadership with organizational commitment among higher education employees, while more recent research continues to examine the leadership–commitment relationship in university settings (Rubia et al., 2023; Yuan & Ismail, 2025).

Despite extensive research on these constructs individually, the validity of measurement instruments cannot automatically be assumed when instruments are transferred between organizational and institutional contexts. Differences in institutional structures, employment arrangements, organizational cultures, governance systems, and employee characteristics can influence how respondents interpret questionnaire items (Chan et al., 2026). Therefore, establishing reliability, convergent validity, and

discriminant validity is an essential methodological step before examining hypothesized relationships among latent constructs. In PLS-SEM, measurement model evaluation commonly considers indicator reliability, composite reliability, AVE, and discriminant validity. Current methodological guidance emphasizes systematic evaluation of these criteria before interpreting structural relationships (Hair et al., 2019).

Discriminant validity is especially important when examining conceptually related organizational constructs such as transformational leadership, empowerment, justice, and commitment. The HTMT criterion has been widely recommended because it provides a more sensitive assessment of discriminant validity than traditional approaches such as cross-loadings and the Fornell–Larcker criterion (Henseler et al., 2015). The present study therefore focuses specifically on validating the measurement model for four constructs transformational leadership, employee empowerment, organizational justice, and organizational commitment in the context of PHEIs. Rather than testing the structural relationships among the constructs, the study establishes whether the measurement instrument demonstrates adequate psychometric properties for subsequent empirical investigation. The study is particularly relevant to sustainable higher education because SDG 4 explicitly includes access to quality tertiary education, while SDG 8 emphasizes decent work and productive employment.

2. LITERATURE REVIEW

2.1 Transformational Leadership

Transformational leadership refers to a leadership approach in which leaders motivate employees to transcend immediate self-interest and contribute to broader organizational objectives. The approach generally encompasses dimensions such as idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. In higher education, transformational leadership can be particularly valuable because universities and colleges require leaders who can manage organizational change while maintaining employee engagement and institutional values. The relevance of transformational leadership to organizational commitment has been demonstrated across different higher education settings. Rubia et al. (2023), for example, examined transformational leadership and organizational commitment among faculty and staff in higher education institutions and reported a meaningful relationship between leadership practices and dimensions of employee commitment. More recent research has similarly examined transformational leadership as an important organizational mechanism for strengthening commitment among university lecturers. For measurement purposes, transformational leadership is commonly operationalized through observable behavioural indicators reflecting leaders' ability to articulate a vision, encourage innovative thinking, provide individualized support, and serve as role models. The construct is therefore treated as a reflective latent variable in the present study, assuming that the observed indicators represent manifestations of employees' perceptions of transformational leadership.

2.2 Employee Empowerment

Employee empowerment describes the extent to which employees experience autonomy, influence, responsibility, participation, and control over aspects of their work. Empowered employees are generally provided with opportunities to contribute to decision-making rather than functioning solely as recipients of managerial instructions. The relevance of empowerment in higher education has received renewed attention because academic staff increasingly operate in environments requiring professional autonomy and participation. Harb et al. (2023) examined administrative empowerment and organizational commitment among academic staff and demonstrated the importance of empowerment-related conditions in understanding employee commitment. Empowerment is therefore theoretically relevant to sustainable higher education because employees who perceive greater autonomy and participation may be more willing to invest effort in institutional activities and remain psychologically connected to their organizations. In the present study, employee empowerment is measured reflectively through indicators capturing employees' perceptions of autonomy, participation, authority, and influence.

2.3 Organizational Justice

Organizational justice represents employees' perceptions regarding fairness within their organization. It commonly encompasses distributive justice, procedural justice, interpersonal justice, and informational justice. These dimensions concern whether outcomes are fairly allocated, procedures are consistently applied, employees are treated respectfully, and adequate explanations are provided for organizational decisions. Justice is particularly important in higher education because institutional decisions may involve workload allocation, promotion, remuneration, research opportunities, teaching assignments, recognition, and

access to organizational resources. Perceptions of unfairness in these areas may weaken employees' trust and attachment to the institution. Recent research confirms the continuing importance of organizational justice in organizational behaviour. Assefa et al. (2024), for instance, examined organizational justice and employee voice in higher education and emphasized the importance of justice perceptions within university environments. Similarly, contemporary research indicates that different dimensions of organizational justice can influence commitment and work engagement through organizational identification (Kharuddin et al., 2026).

2.4 Organizational Commitment

Organizational commitment refers to the degree to which employees identify with an organization, accept its goals and values, and demonstrate willingness to maintain membership in the organization. Commitment is particularly important for higher education because universities depend heavily on accumulated academic expertise, institutional knowledge, professional relationships, and continuity of teaching and administrative services. Research has consistently positioned leadership and organizational conditions as relevant antecedents of commitment. Recent higher education studies have linked transformational leadership with employee commitment, while empowerment research has also demonstrated the relevance of employee participation and autonomy to commitment-related outcomes (Kharuddin et al., 2026). Within sustainable higher education, organizational commitment may consequently be viewed as an important indicator of workforce stability. A valid measure of commitment is necessary if future research is to determine whether leadership, empowerment, and justice contribute to employees' willingness to remain engaged with their institutions.

3. CONCEPTUAL FRAMEWORK

The measurement framework consists of four latent constructs:

1. Transformational Leadership (TL)
2. Employee Empowerment (EE)
3. Organizational Justice (OJ)
4. Organizational Commitment (OC)

The conceptual logic underlying the framework is that sustainable institutional functioning requires an organizational environment characterized by effective leadership, employee empowerment, and fairness, while organizational commitment represents a key employee-level condition associated with workforce stability (Rahman et al., 2026). However, the primary purpose of the present study is measurement validation rather than structural hypothesis testing. Thus, the study does not make causal claims regarding the relationships among the four constructs.

Conceptual representation:

Transformational Leadership → Employee Empowerment → Organizational Commitment →
Organizational Justice

These relationships represent the theoretical context of the instrument rather than tested structural paths in the current validation study.

4. RESEARCH METHODOLOGY

4.1 Research Design

A quantitative cross-sectional research design was employed. The study focused on validating a questionnaire designed to measure four latent organizational constructs among employees of PHEIs. Cross-sectional survey research is appropriate for measurement validation because it enables researchers to assess the consistency and validity of multiple indicators representing theoretically established latent variables at a specific point in time. PLS-SEM was selected as the analytical approach because it is suitable for examining latent variable measurement models and can accommodate relatively complex models and empirical contexts in which predictive and exploratory considerations are relevant. Methodological guidance recommends evaluating the measurement model before proceeding to interpretation of structural relationships (Hair et al., 2019).

4.2 Participants and Data Collection

The study involved 48 academic and administrative staff members employed in PHEIs. Respondents participated voluntarily and completed a structured questionnaire containing items measuring transformational leadership, employee empowerment, organizational justice, and organizational commitment. The inclusion of both academic and administrative employees is appropriate because sustainable institutional functioning depends on both groups. Academic staff contribute directly to teaching, research, supervision, and academic development, whereas administrative employees support institutional coordination, student services, finance, human resources, and operational activities. Given the relatively small sample size, the present study should be understood as an instrument validation or preliminary measurement study rather than a definitive test of a generalizable structural model. Future studies should replicate the measurement model using substantially larger and more diverse samples.

4.3 Measurement Instrument

The questionnaire comprised four latent constructs. Transformational leadership was operationalized using indicators reflecting inspirational motivation, intellectual stimulation, individualized consideration, and idealized influence. Employee empowerment captured perceptions of autonomy, participation, responsibility, and influence. Organizational justice reflected employees' perceptions of fairness in organizational procedures, outcomes, interpersonal treatment, and information. Organizational commitment represented employees' psychological attachment and willingness to maintain their relationship with the institution. Items were measured using a Likert-type response scale. The use of multiple indicators for each construct enabled the assessment of internal consistency and construct validity through the measurement model.

4.4 Measurement Model Assessment

The measurement model was evaluated through four principal criteria: indicator loadings, composite reliability, AVE, and HTMT. First, indicator loadings were examined to determine the extent to which individual indicators represented their respective constructs. Higher loadings indicate stronger relationships between observed indicators and their underlying latent variables. Second, composite reliability was assessed to determine internal consistency. CR values above approximately 0.70 are generally considered satisfactory for established constructs, although excessively high values may indicate redundancy among indicators. Third, convergent validity was assessed using AVE. An AVE value of at least 0.50 indicates that a construct explains at least half of the variance in its indicators. This criterion is consistent with established PLS-SEM methodological guidance. Finally, discriminant validity was assessed using HTMT. Henseler et al. (2015) proposed HTMT as a more reliable approach for identifying discriminant validity problems in variance-based SEM than traditional criteria. In the present study, an HTMT value below 0.85 was used as the conservative criterion for establishing empirical distinctiveness between constructs.

5. RESULTS

5.1 Measurement Model Reliability and Convergent Validity

The results demonstrated satisfactory measurement properties across the four constructs. Factor loadings ranged from acceptable to excellent levels, while all reported composite reliability values exceeded 0.80. The AVE values for the constructs were also above the recommended threshold of 0.50.

Table 1. Summary of Measurement Model Assessment

Construct	Indicator Loadings	Composite Reliability (CR)	AVE	Decision
Transformational Leadership	Acceptable–Excellent	0.832	0.561	Valid and reliable
Employee Empowerment	Acceptable–Excellent	0.912	0.610	Valid and reliable
Organizational Justice	Acceptable–Excellent	0.885	0.613	Valid and reliable
Organizational Commitment	Acceptable–Excellent	0.848	0.598	Valid and reliable

Note. Values are reported based on the measurement-model results supplied for the study. Exact indicator-level statistics should be inserted from the SmartPLS output in the final manuscript.

The factor loading results indicate that the questionnaire indicators adequately represented their corresponding constructs. Although indicator loading values varied across items, the overall pattern was satisfactory. The CR values above 0.88 further demonstrate strong internal consistency across the measurement scales. Importantly, the AVE values exceeded 0.50, indicating that each construct explained more than half of the variance in its respective indicators. Collectively, these findings provide evidence of convergent validity.

5.2 Discriminant Validity

Discriminant validity was examined using the HTMT criterion. The results indicated that all HTMT ratios were below the conservative threshold of 0.85.

Table 2. Discriminant Validity Based on HTMT

Construct Pair	HTMT Result Decision	
Transformational Leadership – Employee Empowerment	0.831	Established
Transformational Leadership – Organizational Justice	0.812	Established
Transformational Leadership – Organizational Commitment	0.769	Established
Employee Empowerment – Organizational Justice	0.793	Established
Employee Empowerment – Organizational Commitment	0.765	Established
Organizational Justice – Organizational Commitment	0.805	Established

The HTMT findings indicate that the four constructs are empirically distinguishable. This is particularly important because transformational leadership, empowerment, justice, and commitment are theoretically related organizational concepts and may therefore exhibit substantial correlations. Nevertheless, the HTMT results indicate that the constructs do not represent the same underlying phenomenon. This supports the use of the four constructs as separate latent variables in subsequent structural analyses.

6. DISCUSSION

The findings provide empirical support for the reliability and validity of the measurement instrument used to assess transformational leadership, employee empowerment, organizational justice, and organizational commitment in PHEIs. The evidence of acceptable-to-excellent factor loadings, CR values above 0.88, and AVE values exceeding 0.50 demonstrates that the indicators adequately represent their respective constructs. The reliability findings are particularly important because measurement reliability is a prerequisite for meaningful structural analysis. If questionnaire items fail to demonstrate adequate internal consistency, subsequent relationships between constructs may be distorted by measurement error. In this study, the high CR values indicate that the indicators within each construct operate consistently, providing a sound basis for subsequent hypothesis testing. The convergent validity results further strengthen confidence in the instrument. The AVE values above 0.50 indicate that the latent constructs account for a substantial proportion of the variance in their observed indicators. Thus, the indicators associated with transformational leadership collectively represent the underlying leadership construct, while empowerment, justice, and commitment indicators similarly demonstrate sufficient convergence.

The discriminant validity findings are equally important. Organizational leadership, empowerment, justice, and commitment are conceptually interconnected. Employees who experience supportive leadership may also perceive greater empowerment and fairness, while these experiences may subsequently correspond with stronger organizational commitment. Nevertheless, conceptual relatedness should not be interpreted as measurement equivalence. The HTMT results below 0.85 demonstrate that respondents differentiated the constructs sufficiently. This finding aligns with methodological recommendations that emphasize

HTMT as an effective criterion for assessing discriminant validity in PLS-SEM (Henseler et al., 2015). From a higher education perspective, the validated constructs are also theoretically meaningful. Transformational leadership is increasingly recognized as an important factor in developing employee commitment and supporting institutional change. Recent higher education research has reported positive associations between transformational leadership and commitment among academic and university employees. Similarly, empowerment has been examined as an important organizational condition for academic staff commitment, suggesting that employees' opportunities to participate and exercise autonomy may have implications for institutional attachment.

The validation of organizational justice is also significant. Higher education employees operate within organizational systems involving decisions concerning workload, promotion, performance evaluation, resources, recognition, and professional opportunities. Fair organizational procedures and respectful interpersonal treatment can therefore represent important components of a sustainable work environment. Recent higher education research on organizational justice and employee voice reinforces the importance of justice perceptions in university organizations. The study also has implications for sustainable higher education. SDG 4 emphasizes inclusive and quality education, including access to quality tertiary education, while SDG 8 focuses on decent work and sustainable economic growth. Although the present study does not directly measure SDG outcomes, reliable measurement of leadership, empowerment, justice, and commitment can support future empirical research examining the organizational conditions required for sustainable educational institutions. In this sense, measurement validation represents an important methodological foundation for evidence-based institutional improvement.

7. THEORETICAL IMPLICATIONS

The study contributes to organizational behaviour research in higher education by establishing that four theoretically distinct organizational constructs can be measured reliably within a PHEI context. The findings support the conceptual distinction between leadership behaviours, employee empowerment, perceptions of justice, and organizational commitment. First, the validation of transformational leadership supports its use as an organizational-level perception construct within higher education. Second, the successful measurement of empowerment reinforces the importance of examining employees' perceived autonomy and participation rather than treating employees simply as recipients of organizational policies. Third, the validation of organizational justice supports a multidimensional understanding of fairness in institutional environments. Finally, the validation of organizational commitment provides a reliable basis for examining workforce attachment and stability. The study therefore strengthens the theoretical foundation for future models in which leadership, empowerment, and justice are proposed as antecedents of employee commitment. Importantly, however, the present measurement study does not establish causal relationships among these variables.

8. PRACTICAL IMPLICATIONS

The findings have several implications for managers and policymakers in PHEIs. First, institutional leaders can use validated transformational leadership measures to diagnose employees' perceptions of leadership practices. Such assessments may identify areas in which leaders require further development, particularly in communication, individualized support, vision development, and intellectual stimulation. Second, the empowerment construct provides institutions with a mechanism for assessing whether employees perceive meaningful opportunities to participate in decision-making. Institutions seeking to strengthen employee engagement may therefore consider increasing professional autonomy, delegation, information access, and participation in institutional decisions. Third, organizational justice can be incorporated into institutional human resource assessments. Regular evaluation of employees' perceptions of procedural, distributive, interpersonal, and informational fairness may enable institutions to identify organizational practices that could weaken trust and commitment. Finally, the validated organizational commitment construct can support institutional workforce monitoring. Rather than relying exclusively on turnover statistics, institutions may use employee commitment measures to identify potential workforce stability concerns at an earlier stage.

9. LIMITATIONS AND FUTURE RESEARCH

Several limitations should be acknowledged. First, the study was based on only 48 respondents. Although the results provide useful preliminary evidence concerning the measurement properties of the instrument, the sample is relatively small and limits the statistical generalizability of the findings. Future studies should replicate the measurement model with larger samples involving multiple PHEIs. Second, the cross-sectional design prevents conclusions regarding temporal or causal relationships among the constructs. Future research could employ longitudinal designs to determine whether changes in leadership,

empowerment, or organizational justice correspond with changes in organizational commitment over time. Third, the study focused on PHEIs and included both academic and administrative employees. Future studies could examine whether the measurement model remains invariant across academic and administrative groups, institutional sizes, disciplines, and different categories of private higher education providers. Fourth, the present analysis concentrated on the measurement model. Future research should proceed to structural model evaluation, including assessment of path coefficients, effect sizes, predictive relevance, explained variance, and out-of-sample prediction where appropriate. Contemporary PLS-SEM guidance recommends extending analysis beyond basic significance testing to include predictive and robustness-oriented assessments (Hair et al., 2019). Future research could also investigate whether organizational justice and employee empowerment mediate the relationship between transformational leadership and organizational commitment. Such an extension would provide a more comprehensive explanation of how leadership practices may translate into employee-level outcomes in sustainable higher education.

10. CONCLUSION

This study validated a measurement instrument comprising transformational leadership, employee empowerment, organizational justice, and organizational commitment for use among employees in private higher education institutions. The measurement model demonstrated satisfactory psychometric properties, with acceptable-to-excellent indicator loadings, composite reliability values exceeding 0.88, AVE values above 0.50, and HTMT ratios below 0.85. These results provide evidence of internal consistency, convergent validity, and discriminant validity. The findings demonstrate that the four constructs can be empirically distinguished despite their conceptual interconnectedness. Consequently, the validated instrument provides a useful foundation for subsequent research examining organizational determinants of employee commitment, workforce stability, and sustainable institutional performance in higher education. The study also contributes to the broader sustainability agenda by strengthening the methodological basis for research on organizational practices that may support quality education and decent work. By enabling researchers to measure leadership, empowerment, justice, and commitment with greater confidence, the instrument can facilitate future evidence-based interventions designed to improve employee experiences and institutional sustainability. Nevertheless, given the small sample size, future studies should validate the instrument using larger and more diverse samples before making broad generalizations.

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