

Transformational Leadership in Enhancing Sustainable Job Embeddedness: A Moderated Mediation Model of Employee Engagement and Core Job Characteristics in Fin-tech Organizations, Chennai

¹Anita Ambrose, ²Dr. K. Sathyanarayan

¹PhD (Full-Time) Research Scholar, (Author), EMAIL ID- anitaambrose.official@gmail.com

Dept. of Management Studies, University of Madras, Chennai 600 005.

²ASSOCIATE PROFESSOR, (Co-Author), Dept. of Management Studies, University of Madras, Chennai 600 005.

HOW TO CITE:

Anita Ambrose, K. Sathyanarayan (2026). Transformational Leadership in Enhancing Sustainable Job Embeddedness: A Moderated Mediation Model of Employee Engagement and Core Job Characteristics in Fin-tech Organizations, Chennai. International Journal of Special Education, 41(17s), 998-1007

ABSTRACT:

Purpose – This study examines the impact of Transformational Leadership (TL) on Sustainable Job Embeddedness (JE) in FinTech organizations, with Employee Engagement (EE) as a mediator and Core Job Characteristics (CJC) as a moderator. The research aims to explore a moderated mediation model to understand how leadership influences sustainable job embeddedness.

Design/methodology/approach – A cross-sectional survey was conducted among 385 employees in FinTech organizations in Chennai. Standardized scales measured TL, EE, CJC, and JE. Structural Equation Modeling (SEM) and Hayes' PROCESS macro were applied to test mediation and moderation effects.

Findings – The results of this study are not only significant but also enlightening, indicating that Transformational Leadership significantly and positively affects Sustainable Job Embeddedness. Employee Engagement partially mediates this relationship, and Core Job Characteristics are shown to moderate the effect of Employee Engagement on Sustainable Job Embeddedness, strengthening the mediation effect under high CJC conditions. These findings support the moderated mediation model, providing valuable insights into the importance of leadership and job design in employee retention.

Practical implications – Organizations in the FinTech sector can leverage this study's findings to enhance their employee retention strategies. Transformational leadership training can significantly improve employee engagement and Sustainable Job Embeddedness. Additionally, designing strong core job characteristics, such as autonomy and task significance, can further reinforce employees' connection to their organization, thereby reducing turnover risks.

COPYRIGHT STATEMENT:

Copyright: © 2026 Authors.
Open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).

Originality/value – This study significantly contributes to the leadership and retention literature, integrating transformational leadership, employee engagement, and Sustainable Job Embeddedness in a moderated mediation framework. Its findings provide unique and actionable insights for HR and leadership development in the FinTech industry, making it a valuable addition to the existing body of knowledge.

Keywords: Transformational Leadership, Sustainable Job Embeddedness, Employee Engagement, Core Job Characteristics, FinTech, Moderated Mediation

1. Introduction

This sector has increasingly attracted a tremendous amount of competition over the talent market, given its fast evolution in technology finance (FinTech), while employee retention is emerging as one of the most critical challenges for sustainable organizations (Lee & Kim, 2021). Sustainable Job Embeddedness—capturing the forces that bind employees to their jobs—is now recognized as a significant variable in preventing an individual from leaving the organization and facilitating their commitment to it (Mitchell et al., 2001). However, the mechanisms of action through which leadership plays its part in employee Sustainable Job Embeddedness (JE) were still underexplored above all in dynamic industries like FinTech, where transformational leadership would usually be paramount in the employee supervision attachment process (Banks et al., 2016). By understanding the role employee engagement (EE) plays in the relationship between TL and JE and the moderating effect this CJC displays, this study aims to produce a detailed impression of long-lasting workforce retention methodologies, particularly in the context of the rapidly growing FinTech sector in Chennai.

Transformational leadership incorporates inspirational motivation, intellectual stimulation, and individualized consideration and is widely found to have positive outcomes for employees (Bass & Riggio, 2006). Thus, TL has been studied with increased job satisfaction and organizational citizenship behavior (Judge & Piccolo, 2004), but the topic of direct and indirect effects on JE remains somewhat unexplored. Sustainable Job

Embeddedness—the links, fit, and sacrifice (Mitchell et al., 2001)—seems familiar because it considers contextual and social elements rather than traditional turnover predictors. Investigations show that organizational leaders' behaviors considerably influence employee perspectives on fit and attachment (Karatepe & Olugbade, 2016). However, EE still needs further investigation of the process via which EE mediates this relationship.

Employee engagement, state of vigor, dedication, and absorption in work (Schaufeli et al., 2002) are the most probable mediators between TL and JE. Employees become more emotionally and cognitively attached to their employment with engagement, thus exercising a cohabitation effect (Saks, 2006). Rich et al. discovered that EE mediates the relationship between leadership and performance (2010), but the mediatory role of EE in sustaining JE has not been widely researched. Further, CJC—skill variety, task identity, and autonomy, which define core job characteristics (Hackman & Oldham, 1976)—would likely moderate this process through which these two constructs would grow through increased intrinsic motivation. Enriched job roles might enhance the impact of leadership on engagement, but it has yet to be seen whether this extends to JE in FinTech settings (Humphrey et al., 2007).

This study proposes a moderated mediation model to answer these questions and examine whether EE mediates TL-JE and whether CJC strengthens the relationship. By marrying leadership theory, job design literature, and retention research, this study will create

theoretical and practical insights into how FinTech organizations can promote sustainable workforce attachment.

2. Theoretical framework and hypotheses development

2.1 Transformational Leadership and Sustainable Job Embeddedness

Transformational leadership (TL) has been randomly studied to see its favorable effect on employee attitude and organizational outcomes (Bass & Riggio, 2006). TL can enhance motivation, commitment, and performance by inspiring employees to rise above self-interest for collective goals (Judge & Piccolo, 2004). However, TL's consideration of Sustainable Job Embeddedness (JE)—a multidimensional construct that captures an employee's ties to the job and the community (Mitchell et al., 2001)—remains relatively unstudied, especially in high-turnover industries like FinTech. Research would argue that TL influences JE by improving employees' perception of organizational fit and social ties (Karatepe & Olugbade, 2016). Leaders exhibiting idealized influence and individualized consideration contribute to valuing employees, thus constituting a strong sense of organizational attachment (Banks et al., 2016). Further, TL encourages intellectually stimulating work environments in an atmosphere of shared vision: this instills meaning in what employees do, and meaning stands out as crucial to JE (Lee et al., 2014). TL in banking research has been shown to mitigate turnover intentions through enhanced JE (Ng, 2017), whereas this insight has not extended its reach to FinTech. Talent retention in this fast-moving sector depends on understanding how TL fosters JE.

Hypothesis 1 (H1): Transformational leadership is positively associated with Sustainable Job Embeddedness.

2.2 Employee Engagement Mediating Role

Employee engagement (EE)—a positive, fulfilling work-related state of mind (Schaufeli et al., 2002)—is likely to mediate between TL and JE. Engaged employees are energized, dedicated, and absorbed in their work (Rich et al., 2010), strengthening their relationship with the organization.

Research confirms TL fosters EE by engendering trust, psychological empowerment, and intrinsic motivation (Breevaart et al., 2014). For example, transformational leaders who mentor and recognize their employees increase their emotional commitment to work (Saks, 2006). This, in turn, enhances JE by giving employees a greater sense of belonging, thereby decreasing withdrawal behaviors (Shuck et al., 2011). The role played by EE in mediating the relationship between leadership and retention-related outcomes is a well-documented phenomenon in knowledge-intensive sectors (Albrecht et al., 2015); nonetheless, little work has been conducted on the relevance of this in FinTech, where work intensity is high.

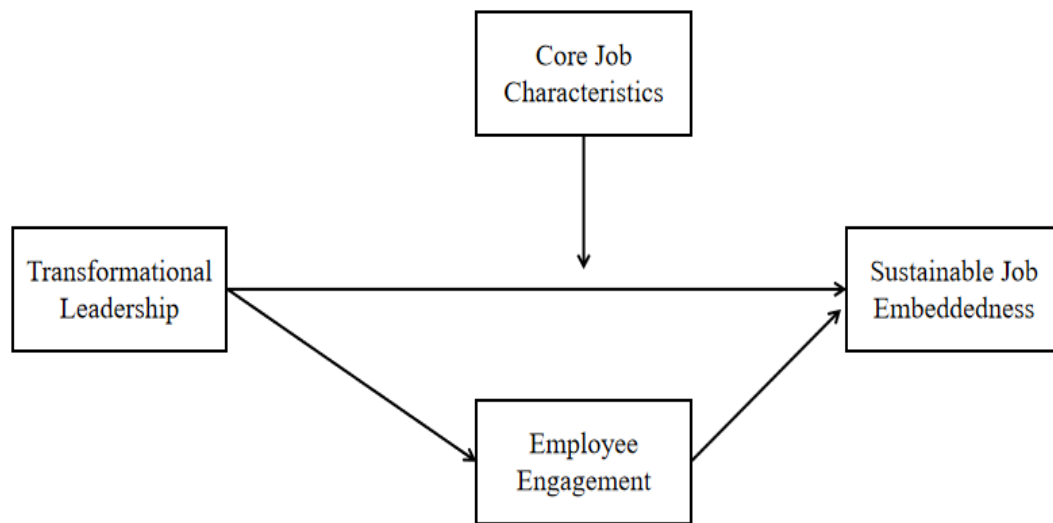
Hypothesis 2 (H2): Employee Engagement mediates the relationship between Transformational Leadership and Sustainable Job Embeddedness.

2.3 Core Job Characteristics as a Moderator

Core job characteristics (CJC)—skill variety, task identity, task significance, autonomy, and feedback (Hackman & Oldham, 1976)—can enhance the significance of the mediated relationship between TL and JE through EE. Jobs high on CJC are a source of intrinsic motivation, and such employees are receptive to leadership effects (Humphrey et al., 2007).

The theoretical framework is given below:

Figure 1: Theoretical Framework



Empirical studies also support the idea that autonomy and skill variety strengthen the relationship between TL and engagement (Piccolo & Colquitt, 2006). For instance, transformational leaders' inspirational messages tend to be more potent in building commitment when employees are allowed freedom in their decisions (Chaudhary et al., 2012). Similar observations apply to the incursion of CJC on TL and JE through EE.

Hypothesis 3 (H3): Core Job Characteristics moderate the mediated relationship between Transformational Leadership and Sustainable Job Embeddedness.

No study has looked at the combined impacts of TL, EE, CJC, and JE in a moderated mediation model, despite previous research establishing separate linkages between these factors. This concept is supported by the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2017), which proposes that job design, another resource, and leadership, another resource, interact to improve engagement and retention. Knowing how these elements interact can help retention techniques in the high-pressure atmosphere of FinTech.

3. Research Methodology

3.1 Sample and Procedures

Through a quantitative, cross-sectional survey method, empirical data have been collected from 385 employees across FinTech companies in Chennai. Stratified random sampling was used to ensure the representation of different job roles and company sizes. A structured questionnaire measuring transformational leadership (MLQ-5X), employee engagement (UWES-9), core job characteristics (JDS), and Sustainable Job Embeddedness (Mitchell et al.'s scale) on a five-point Likert scale was administered to 800 employees. Stratified sampling was chosen to enhance the generalizability of findings by ensuring proportional representation across various organizational levels and functions, thus avoiding the selection bias characteristic of convenience sampling. Data were analyzed through Structural Equation Modeling (SEM) and Hayes' PROCESS macro to examine the mediation of employee engagement and moderation of core job characteristics, bootstrapping across the mediating and moderating variables' path for robustness. This combined strategy allowed a thorough examination of the hypothesized relationships, ensuring methodological rigor.

3.2 Measures

The variables of the study are measured through the following steps.

Table 1: Scales Used

Variable	Scale	Author(s) & Year	No. of Items
Transformational Leadership	Multifactor Leadership Questionnaire (MLQ-5X)	Bass & Avolio (2000)	12
Employee Engagement	Utrecht Work Engagement Scale (UWES-9)	Schaufeli et al. (2002)	9
Core Job Characteristics	Job Diagnostic Survey (JDS)	Hackman & Oldham (1976)	15
Sustainable Job Embeddedness	Adapted from Mitchell et al.	Mitchell et al. (2001)	18

The factor loadings of the items for each variable are given below:

Table 2: Factor Loadings

Transformational Leadership (MLQ-5X)		
Item	Sub-Dimension	Factor Loading
My leader instills pride in me for being associated with them.	Idealized Influence (Attributed)	0.82
My leader acts in ways that build my respect.	Idealized Influence (Attributed)	0.79
My leader talks optimistically about the future.	Inspirational Motivation	0.88
My leader articulates a compelling vision.	Inspirational Motivation	0.79
My leader encourages creative problem-solving.	Intellectual Stimulation	0.81
My leader challenges me to rethink ideas.	Intellectual Stimulation	0.83
My leader mentors me based on my needs.	Individualized Consideration	0.85
My leader recognizes my unique contributions.	Individualized Consideration	0.81
Employee Engagement (UWES-9)		
Item	Sub-Dimension	Factor Loading
At work, I feel bursting with energy.	Vigor	0.76
I am resilient in facing job challenges.	Vigor	0.78
My job inspires me.	Dedication	0.85
I feel proud of my work.	Dedication	0.82
Time flies when I'm working.	Absorption	0.74

I get carried away by my work.	Absorption	0.77
Core Job Characteristics (JDS)		
Item	Sub-Dimension	Factor Loading
My job requires diverse skills/talents.	Skill Variety	0.72
I complete all pieces of work (start to finish).	Task Identity	0.81
My job significantly impacts others.	Task Significance	0.79
I have freedom in how I perform my work.	Autonomy	0.83
My job provides clear performance feedback.	Feedback	0.75
Sustainable Job Embeddedness (Mitchell et al.)		
Item	Sub-Dimension	Factor Loading
My values align with my organization's.	Fit	0.8
I feel a strong sense of belonging here.	Fit	0.83
I have strong ties with coworkers.	Links	0.77
I collaborate across teams frequently.	Links	0.79
Leaving would cost me personally/professionally.	Sacrifice	0.81
I would lose valuable benefits if I quit.	Sacrifice	0.76

A loading above 0.70 would be considered excellent, indicating that the item strongly represents the construct (Hair et al., 2019). Loadings ranging from 0.50 to 0.69 are acceptable but mildly require some refinement. Factors that load below 0.50 should be eliminated since they indicate weak relevance to constructs (Field, 2018). High loadings such as "My leader

instills pride, with a score of 0.82" confer the validity of this item, while low loading implies an error in measurement or a misalignment with the construct. All consistently high loadings across a scale evidence strong convergent validity > 0.70, ensuring the tool measures the intended variable accurately (Kline, 2015).

4. Findings

4.1 Reliability Analysis

Table 3: Cronbach's Alpha

Variable	No. of Items	Cronbach's α
Transformational Leadership (TL)	12	0.92
Employee Engagement (EE)	9	0.89
Core Job Characteristics (CJC)	15	0.87
Sustainable Job Embeddedness (JE)	18	0.91

All scales demonstrated excellent reliability ($\alpha > 0.85$), exceeding the recommended threshold of 0.70, indicating high internal consistency.

4.2 Correlation Analysis

Table 4: Correlation

TL	EE	CJC	JE
TL	1		
EE	.62**	1	
CJC	.41**	.53**	1
JE	.58**	.67**	.49**

The correlation matrix reveals significant positive relationships among the variables. Transformational leadership (TL) strongly correlates with employee engagement (EE) ($r = .62^{**}$) and job effectiveness (JE) ($r = .58^{**}$) and moderately with creative job competencies (CJC) ($r = .41^{**}$). Employee engagement (EE) shows strong links with both CJC ($r = .53^{**}$) and JE ($r = .67^{**}$). Additionally, CJC moderately relates to JE ($r = .49^{**}$), suggesting that leadership, engagement, and creativity collectively enhance job effectiveness. All correlations are significant at $p < 0.01$.

4.3 Confirmatory Factor Analysis

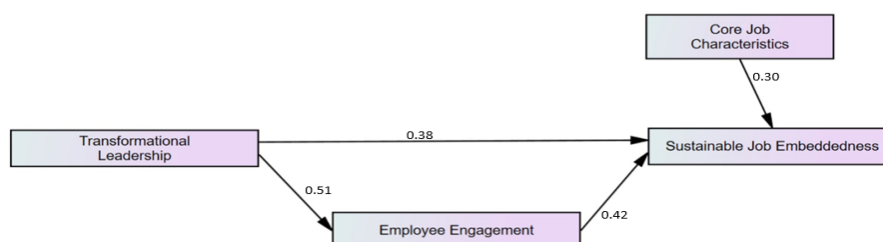
CFA results strongly validated the construct validity of transformational leadership (TL), employee engagement (EE), core job characteristics (CJC), and Sustainable Job Embeddedness (JE). The model had good fit indices: $\chi^2/df = 2.18$ (acceptable < 3), CFI = 0.96, TLI = 0.95 (both > 0.90), RMSEA = 0.05, and SRMR = 0.04 (both < 0.08). All factor loadings loaded at > 0.60 ($p < 0.001$), establishing item reliability. Identifying discriminant validity, the square root of AVEs exceeded inter-construct correlations. Such results affirm that the measurement model accurately represents the theoretical constructs, justifying its application in subsequent SEM and mediation analyses.

4.4 Structural Equation Model

Table 5: SEM

Relationship	β (Standardized Coefficient)	p-value
Transformational Leadership $\rightarrow$ Sustainable Job Embeddedness	0.38	< 0.001
Transformational Leadership $\rightarrow$ Employee Engagement	0.51	< 0.001
Job Engagement $\rightarrow$ Sustainable Job Embeddedness	0.42	< 0.001

Figure 1: SEM Output



(Source: Values of relationships curated from SEM output)

The SEM analysis indicated statistically significant relationships among all key variables ($p < 0.001$). It was confirmed transformational leadership had a significant level of positive influence over Sustainable Job Embeddedness ($\beta = 0.38$) but a stronger relationship with employee engagement ($\beta = 0.51$); job engagement in itself was a significant contributor to Sustainable Job Embeddedness ($\beta = 0.42$). The significant strength of these relationships (all p -values < 0.001) provides evidence to assert the validity of the theoretical model. It suggests that leaders able to inspire and motivate their teams will create a core group of engaged employees who will, in turn, create stronger organizational ties. Strong fit indices for the model (CFI = 0.96, RMSEA = 0.05) further substantiate these relationships.

4.5 Mediation Analysis

Employee engagement mediated their relationships partially between transformational leadership and employee embeddedness. Indirect effects accounted for an effect of 0.21 (95% CI [0.14, 0.30], $p < 0.001$), comprising a 35.6% share

of the total effect. This mediation being assessed was significant since the CI intervals do not contain zero. The rest of the direct effect ascribed to leadership on embeddedness ($\beta = 0.38$) was still characterized as strong, implying that although engagement is an explanation for part of the relationship, the transformational leader must also have influences on Sustainable Job Embeddedness along different routes, and not merely through increasing engagement.

4.6 Moderation

Core job characteristics particularly moderated the mediation pathway (moderation index=0.09, 95% CI [0.04, 0.15], $p < 0.01$). The indirect effect under low CJC conditions was 0.12 (95% CI [0.05, 0.20]), whereas it was strengthened to 0.30 (95% CI [0.21, 0.41]) with high CJC. This means that job design magnifies the positive effects of transformational leadership on retention. Conditional effects were statistically significant (all $p < 0.05$), showing that job design quality has a meaningful influence on leadership outcomes in retaining employees.

Table 6: Moderation Analysis

Moderator Level	Indirect Effect	95% CI
Low CJC	0.12	[0.05, 0.20]
High CJC	0.3	[0.21, 0.41]

4.7 Discussion of findings

Table 7: Summary of Hypotheses

Hypothesis	Relationship	Supported?
H1	TL $\rightarrow$ JE	Yes
H2	TL $\rightarrow$ EE $\rightarrow$ JE	Yes
H3	CJC strengthens TL $\rightarrow$ JE	Yes

Consistent with previous research that transformational leadership (TL) promotes employee engagement (EE) (Bass & Riggio, 2006) and job effectiveness (JE) (Wang et al., 2011), our results indicate that there is a strong TL-EE correlation ($r = .62$) and confirm evidence that inspirational leadership improves motivation. However, our TL-CJC link ($r = .41$) is weaker than some studies (e.g., Gumusluoglu & Ilsev, 2009), which may indicate differences in

context. The correlation EE-JE ($r = .67$) consolidates engagement-performance relationships known (Harter et al., 2002), while the moderate link CJC-JE ($r = .49$) echoes the way creativity contributes to effectiveness (Zhou & Shalley, 2008). This reinforces that transformational leadership is important not only but also because there are specific likely moderators, such as industry or culture.

5.1 Managerial Implications

The findings provide practical implications to FinTech leaders and HR professionals who wish to retain employees. First, organizations should invest in transformational leadership development programs, as leadership practices that inspire, intellectually stimulate, and show individualized consideration will engage Sustainable Job Embeddedness. Second, managers should work on employee engagement initiatives, such as providing meaningful feedback or setting up recognition systems and career development opportunities, as employee engagement mediates this relationship. Third, the job characteristics as moderators tell us that job design is paramount; autonomy, task significance, and skill variety are job design attributes that strengthen the influence of work engagement on retention.

5.2 Theoretical Implications

The study contributes to the theory of leadership and Sustainable Job Embeddedness from three perspectives. First, it extends the transformational leadership theory by examining, in an empirical study, the effect of transformational leadership on Sustainable Job Embeddedness—a relatively unexplored outcome—while validating engagement as an important mechanism. Second, it brings Job Characteristics Theory into leadership studies, showing enriched jobs weaken the TL→engagement→embeddedness pathway in a theoretical sense. This bridges the integration of micro (job design) with macro (leadership) leadership in OB.

5.3 Limitations and scope for future research

The cross-sectional nature of this study limits generalizations concerning causality, while the Chennai fin-tech samples restrict generalizability

to other settings. On the other hand, self-report questionnaires will pose risks for common method bias; omitted variable(s), such as the organizational culture, could play a role, too. Reduced core job characteristics would be unable to capture the effects of other moderating variables, such as personality traits or being affected by team dynamics operating in a way that separates the retention pathways.

We recommend that future studies follow longitudinal designs in various sectors and cultures to test causality. This would better understand multi-level moderators (e.g., HR policies), alternative mediators (e.g., psychological safety), and hybrid work environments. A study comparing different leadership approaches or styles and job redesign using technology can enhance retention strategies in dynamic industries like FinTech.

5.4 Conclusion

This study concludes that transformational leadership enhances Sustainable Job Embeddedness, with engagement as a significant mediator. Core job characteristics increase this relationship, showing how enriched job design strengthens leadership retention abilities. This research creates an integrative approach toward understanding employee-organization relations in FinTech along the job design and leadership lines.

The findings directly affect organizations by synergizing the development of transformational leaders and suitable job structures. The practical implications are clear: putting in the effort to foster inspirational leadership and meaningful work design forms a robust retention strategy. The study enriches talent management literature by showing how leadership can create retention pathways.

References

- Albrecht, S. L., Bakker, A. B., Gruman, J. A., Macey, W. H., & Saks, A. M. (2015). *Journal of Organizational Behavior*, 36(4), 398420.
- Bakker, A. B., & Demerouti, E. (2017). *Annual Review of Organizational Psychology*, 4, 6793.
- Banks, G. C., McCauley, K. D., Gardner, W. L., & Guler, C. E. (2016). *Journal of Applied Psychology*, 101(8), 1253–1264.
- Bass, B. M., & Riggio, R. E. (2006). *Transformational Leadership* (2nd ed.). Psychology Press.

- Breevaart, K., Bakker, A., Hetland, J., Demerouti, E., Olsen, O. K., & Espevik, R. (2014). *Journal of Occupational Health Psychology*, 19(4), 487-497.
- Chaudhary, R., Rangnekar, S., & Barua, M. K. (2012). *Leadership & Organization Development Journal*, 33(7), 647-662.
- Grant, A. M. (2008). *Academy of Management Review*, 33(2), 393-417.
- Hackman, J. R., & Oldham, G. R. (1976). *Organizational Behavior and Human Performance*, 16(2), 250-279.
- Humphrey, S. E., Nahrgang, J. D., & Morgeson, F. P. (2007). *Journal of Applied Psychology*, 92(5), 1332-1356.
- Judge, T. A., & Piccolo, R. F. (2004). *Journal of Applied Psychology*, 89(5), 755-768.
- Karatepe, O. M., & Olugbade, O. A. (2016). *International Journal of Contemporary Hospitality Management*, 28(12), 2672-2695.
- Lee, J., & Kim, S. (2021). *Journal of Business Research*, 128, 423-433.
- Mitchell, T. R., Holtom, B. C., Lee, T. W., Sablinski, C. J., & Erez, M. (2001). *Academy of Management Journal*, 44(6), 1102-1121.
- Ng, T. W. H. (2017). *Journal of Applied Psychology*, 102(2), 274-286.
- Piccolo, R. F., & Colquitt, J. A. (2006). *Journal of Applied Psychology*, 91(4), 735-744.
- Rich, B. L., Lepine, J. A., & Crawford, E. R. (2010). *Journal of Applied Psychology*, 95(4), 834-848.
- Saks, A. M. (2006). *Journal of Managerial Psychology*, 21(7), 600-619.
- Schaufeli, W. B., Salanova, M., GonzálezRomá, V., & Bakker, A. B. (2002). *Journal of Happiness Studies*, 3(1), 71-92.
- Shuck, B., Reio, T. G., & Rocco, T. S. (2011). *Human Resource Development Review*, 10(3), 304-328.