



# Toward a Model of Explaining between Inspirational Motivation, Intellectual Stimulation on Employees' Innovative Behaviour with Job Engagement as a Mediating

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## ABSTRACT

Organizations heavily rely on the innovative behaviours of their employees and, therefore, need to remain competitive with respect to their rapidly transforming environments. Inspiring motivation and intellectual stimulation of employees with regard to behavioural transformations is the primary focus of transformational leadership. The purpose of this study is to examine the impact of dimensions of transformational leadership, inspirational motivation and intellectual stimulation, on employees' innovative behaviours, with mediating role of job engagement. Using a statistical technique, Partial Least Squares Structural Equation Modelling (PLS-SEM), information was gathered from 351 employees from three telecommunications companies in Jordan and a quantitative methodology was used in the analysis. The results found positive relationship between inspirational motivation, intellectual stimulation and employees' innovative behaviours, while transformational leadership dimensions influence on job engagement. In addition, it was found that job engagement partially mediated the relationships, meaning that employees, especially in relation to engagement, are more likely to act upon the innovative behaviours to demonstrate leadership on the work role. The predictor of these relationships was intellectual stimulation, demonstrating the importance of developing a culture that promotes problem-solving and innovative thinking. The present research adds to inspiring motivation and intellectual stimulation literature by demonstrating and clarifying ways to promote innovation behaviour through transformational leadership, and offers a useful instrument for organizations in their attempts to enhance and strengthen job engagement and innovation performance.

**Keywords:** Employees Innovative Behavior, Job Engagement, Inspirational Motivation, Intellectual Stimulation, Systematic Review

**JEL Classifications:** M54, O15, J24

## 1. INTRODUCTION

The service sector relies heavily on innovative behavior to provide better services a more robust competitive edge and steady growth in a market that is changing quickly. To stay competitive in the complicated and uncertain business world of today companies place a high value on employee innovative behavior (Mallik, 2023). According to a number of studies employee innovative behavior is essential for maintaining a competitive edge and helping businesses succeed over the long run (Nasifoglu Elidemir et al., 2020).

Transformational leadership has the potential to greatly increase employees innovative behavior claims (Nguyen, 2024). This leadership approach cultivates an atmosphere that encourages knowledge exchange empowerment and intrinsic motivation all of which are critical components of innovation (Usmanova et al., 2023). According to Raoush (2023) transformational leadership foster critical thinking question preconceived notions and investigate novel solutions by encouraging intellectual stimulation.

According to Edwards (2019), Koo and Lee (2021), transformational leadership is widely recognized as a potent leadership style that

successfully fosters innovation. This is due to the fact that transformational leadership fosters original thought develops personal skills and motivates workers to go above and beyond performance expectations all of which are essential components in fostering creative behavior in workers. People must put in a lot of work take calculated chances and negotiate ambiguous situations at every stage in order to behave in an innovative manner. Leaders must thus promote creative behavior (Qi et al., 2019).

Being able to lead and utilize the talents of highly skilled workers is crucial in a world where information is more readily available than ever. Thus more than other leadership philosophies transformational leadership fosters innovative behavior and has a positive impact on employee motivation in the service sector (Santoso et al., 2019). Aryee et al. (2012), conducted a study to examine the impact of transformational leadership on innovative behavior in organizations. The study found that factors like job engagement may be mediating or moderating.

As a result, the mediating role of job engagement is still mostly unknown and needs to be investigated in order to improve the relationship between inspirational motivation, intellectual stimulation, and employees' innovative behavior. By examining this mediating mechanism this study hopes to advance our theoretical comprehension of these dynamics.

## 2. LITERATURE REVIEW

### 2.1. Inspirational Motivation, Intellectual Stimulation and Employee Innovative Behavior

The idea that transformational leadership and employees' innovative behaviour are positively correlated is supported by a number of studies. Avolio and Bass (2002) contended that elements of transformational leadership including intellectual stimulation, self-assurance elevated goal awareness and inspirational motivation encourage and support employees intrinsic motivation as well as their creativity and innovation which closely align with the factors that predict employees' innovative behaviour (Bednall et al., 2018; Kim and Lee, 2011; Sethibe and Steyn, 2017). Many academics concur that transformational leadership is associated with the employees' innovative behaviour in contemporary organizations (Abbas et al., 2012; Bass and Avolio, 1990; Tahsildari et al., 2014). Transformational leaders create a work atmosphere that encourages creative thinking by stimulating the mind (Choi, 2019). As pointed out by (Iqbal et al., 2022; Torres et al., 2017), have noted that our knowledge of how leadership practices may affect employees' innovative behaviour is still in its infancy and that there is currently little and inconsistent evidence of this relationship. However, other scholars who examined the effect of transformational leadership on employees' innovative behaviour including Stanescu et al. (2021), came to the conclusion that workers would exhibit more innovative behavior if they believed their leaders were encouraging and had positive relationships with them.

According to Ouma et al. (2023), intellectual stimulation generates motivation to question preconceived notions and see issues from fresh angles which increases the likelihood of coming

up with innovative solutions to these problems. Inspirational motivation a component of transformational leadership is thought to be crucial in encouraging employees innovative behavior through a positive and compelling future vision. Thus those leaders inspirational motivation will boost their employees capacity to come up with new ideas and be more creative while also enabling them to perform their work at a level that surpasses expectations (Ismail et al., 2010). Additionally, employees also respond to the personalized attention by showing their leaders that they care about this by making creative contributions to their organizations (Al Muala et al., 2022; Eisenbeiss et al., 2008). Moreover, the idealized influence of transformational leaders inspires followers to emulate their actions in pursuit of innovative and creative concept (Çekmecelioglu and Özbağ, 2016). Furthermore, the ability of leaders to encourage their staff members intrinsic motivation to take the initiative and produce creative and innovative results was another factor contributing to the positive correlation between transformational leadership and innovative behavior (Schiuma et al., 2022). Therefore, it is hypothesized that,

- H<sub>1</sub>: Inspirational motivation has significant effect on employee innovative behavior
- H<sub>2</sub>: Intellectual stimulation has significant effect on employee innovative behavior.

### 2.2. Inspirational Motivation, Intellectual Stimulation and Job Engagement

Transformational leadership uses inspirational motivation to affect job engagement. An encouraging work environment that boosts dedication and engagement is facilitated by leaders who give each employee individualized attention and acknowledge their particular needs (Karakitapoğlu-Aygün et al., 2024). Inspirational motivation according to Awotunde and Aregbeshola (2025), is especially important since it gives workers a feeling of direction and significance in their work. Transformational leaders motivate staff members to make behavioral and emotional investments in their work by eloquently communicating how individual contributions affect organizational success (Chaudhary and Sisodia, 2022). A strong sense of commitment is fostered by this alignment between employee goals and organizational objectives which propels both individual and organizational success. When combined these leadership traits strengthen an engaged culture allowing staff members to flourish in their positions and make significant contributions to their companies.

Transformational leaders inspire dedication build trust and serve as role models all of which have a significant impact on workers job engagement. Such leaders inspire loyalty and dedication in their followers by putting the needs of the organization before their own (Ladkin and Patrick, 2022). Because they respect their transformational leaders and excellent behavior employees try to be like them (Bibi et al., 2024). This conduct creates a positive atmosphere where workers feel appreciated and are more inclined to take on difficult tasks. A fundamental component of transformational leadership intellectual stimulation encourages workers to approach tasks creatively and independently which further improves job engagement (Abu Huson et al., 2024;

Żywiołek et al., 2022). Employees are inspired to surpass expectations and accomplish common objectives by such leadership which not only encourages autonomy but also links their efforts to the larger organizational vision (Milhem et al., 2019).

Additionally, it can be argued that managers who encourage intellectual stimulation foster a positive work environment which helps employees become more engaged at work (Muala et al., 2024; Saad Alessa, 2021). According to Alajmi (2022), leaders inspire their followers to improve their problem-solving abilities by questioning preconceived notions and viewing situations from novel angles. Their actions achieve this. Bass (1995), discovered in his research that transformational leaders motivate their followers to focus on the organizations mission and goals rather than just meeting their own basic needs. According to Tierney (2024), employees are anticipated to contribute significantly to their respective companies and exhibit greater creativity as a result. Transformational leaders are more likely to boost their followers innate motivation which will raise their levels of dedication when their contributions to the workplace are not criticized (Pillai, 2022; Xenikou and Furnham, 2022). However, employees intrinsic motivation may decline if their accomplishments go unnoticed which could negatively impact their self-esteem. Strong commitment can result from supervisors who exhibit intellectually stimulating behavior because it can influence how engaged their staff members are in their work. This commitment is regarded as the second component of engagement since motivated employees are devoted to their jobs (Schaufeli, 2021). Hence, it is as followed that,

- $H_3$ : Inspirational motivation has significant effect on job engagement
- $H_4$ : Intellectual stimulation has significant effect on job engagement.

### 2.3. Job Engagement and Employee Innovative Behavior

According to Algarni and Alemeri (2023), Dei Mensah et al. (2025) job engagement specifically refers to how emotionally invested enthusiastic and dedicated employees are to their jobs the companys goals and their roles within it. When workers feel empowered equipped and supported by these resources they are more likely to be engaged. Job engagement and employee innovative behavior are related ideas (Hassan et al., 2024). According to Ma et al. (2024), engaged employees who feel a strong sense of connection to their jobs and companies are more likely to exhibit innovative behavior. Emotionally, invested workers are more likely to think creatively solve problems go above and beyond and seek out new ways to overcome challenges (Ahmad et al., 2024).

Employee motivation dedication and a strong sense of ownership are the root causes of this engagement-driven innovation (Dei Mensah et al., 2025). This creates a positive feedback loop whereby engaged employees are more likely to generate and implement innovative ideas and job engagement acts as a catalyst for employee innovative behavior (Xu et al., 2022). Consequently, this strengthens the companys competitive advantage and innovation. The connection between these two ideas emphasizes

how crucial it is to support job engagement in order to promote workplace creativity (Koroglu and Ozmen, 2022; Salem et al., 2023).

Job engagement and innovativeness are positively correlated according to a study by Van Zyl et al. (2021). Moreover, a study by Xu et al. (2022), shows that innovativeness and job engagement are positively correlated. Furthermore prior research has demonstrated the positive correlation between innovative behavior and job engagement (Khan et al., 2022; Norouzinik et al., 2022; Salem et al., 2023). The positive correlation between employee innovative behavior and job engagement was also validated by Kwon and Kim (2020). Furthermore, Pukkeeree et al. (2020) research suggests that job engagement is a key factor in promoting innovative output. Recent research from Nazir and Islam (2020), lends more credence to this claiming that motivated workers are more likely to exhibit innovative behavior produce more original ideas and be receptive to fresh perspectives. Based on these insights, the following hypothesis can be formulated:

- $H_5$ : Job engagement has significant effect on employee innovative behavior.

### 2.4. The Mediating Role of Job Engagement

Jia et al. (2022); and Kroes (2015) emphasized the significance of innovation and transformational leadership stressing that encouraging innovative behavior necessitates paying close attention to employee engagement. Engaged workers are more likely to contribute successfully because they are motivated by passion dedication and commitment and exhibit emotional and cognitive alignment. These workers take initiative to promote innovation and actively produce ideas for the expansion of the company. According to Park et al. (2018), job engagement enhances creativity and the capacity to come up with and execute new ideas by eliciting positive emotions. Employees are encouraged to be more proactive and accountable by the energy generated by job engagement which drives organizations toward innovation. Job engagement enhances transformational leaderships ability to promote innovative behavior in the area of innovation (Harter and Adkins, 2015). Transformational leadership according to Tims et al. (2011), is crucial for raising employee performance and job engagement. Workers are inspired to demonstrate innovative behaviors by this leadership style which acts as a model for them (Aljawarneh et al., 2022; Baker and El-saidy, 2020). Moreover, Reuvers et al. (2008), observed that when workers are enthusiastic about their jobs they are much more likely to exhibit innovative behavior.

According to Özsungur (2019), there is a growing body of research in the modern literature that examines the mediating function of job engagement on employee innovative behavior in relation to a number of other variables. According to Asif et al. (2019) research there is a positive correlation between innovative employee behavior, job engagement, and ethical leadership. Job engagement mediates the relationship between leadership and job performance (Lai et al., 2020). The relationship between leadership and leadership and innovative work behaviour is mediated by job engagement according to (Li et al., 2019).

Recent empirical studies emphasize how job engagement acts as a mediator. For instance, Tsai et al. (2015) for example studied 320 employees in Taiwan's tourism and hospitality sectors and found that organizational support has a positive and significant impact on employee innovative behaviour through a number of mediators such as justice, motivation, knowledge sharing, and promotion. Similarly, a survey of 320 employees in small and medium-sized high-tech companies in Spain showed that employee innovative behaviour and leader-member exchange (LMX) were significantly positively correlated with job engagement serving as a mediating factor (Vila-Vázquez et al., 2020). Perceived authentic leadership has a positive and significant impact on employee innovative behaviour through the mediating role of job engagement according to another study done in India with 600 leaders and employees from start-up companies (Al-Shaikh et al., 2025; Sengupta et al., 2021). Based on these insights, the following hypotheses can be formulated:

- H<sub>6</sub>: Job engagement mediate the relationship between inspirational motivation and employee innovative behavior
- H<sub>7</sub>: Job engagement mediate the relationship between intellectual stimulation and employee innovative behavior.

## 2.5. Research Gaps

Numerous organizational and individual factors such as organizational commitment, innovation, climate, leader-member exchange, job satisfaction, and self-efficacy may act as mediators in the relationship between transformational leadership and employees innovative behavior according to the literature (Choi et al., 2021). Nevertheless, earlier research on transformational leadership has mostly focused on organizational goals rather than on subordinate results like creative behavior from staff members (Afsar and Umrani, 2020).

Job engagement is greatly influenced by transformational leadership and the most important element in encouraging employee dedication is inspirational motivation (Abdul-Azeez et al., 2024). Because leaders who inspire challenge and support their staff foster a work environment that encourages commitment and enthusiasm studies consistently show that transformational leadership has a positive impact on job engagement (Chaudhary and Sisodia, 2022; Diko and Saxena, 2023). Strong engagement makes workers more committed to their jobs and more inclined to go above and beyond the call of duty (Chin et al., 2019). Additionally, there is a strong correlation between job engagement and employee innovative behavior because engaged workers are more likely to think creatively look for solutions and contribute to the success of the organization (Hassan et al., 2024). When employees have a strong emotional connection to their work they are more likely to take charge solve issues early and offer creative solutions that improve operational efficiency (Ahmad et al., 2024).

Research on the relationship between transformational leadership and employee innovative behavior is scarce as was previously mentioned. However given that transformational leadership generally has a positive impact on employee innovative behavior it is reasonable to assume that the two have a positive relationship (Khalifa Alhitmi et al., 2023; Stanescu et al., 2021), but a mediation effect can still sustain a relationship. The study by

scenario presents such a Stanescu et al. (2021), in which a double mediation effect is the only way to explain the connection between employee innovative behavior and transformational leadership. This study includes a mediation variable as suggested by Santoso et al. due to the possible complexity of the relationship between transformational leadership and employee innovative behavior. As well as, Santoso et al. (2019); and Aryee et al. (2012), employing employee innovative behavior and transformational leadership as mediators through job engagement.

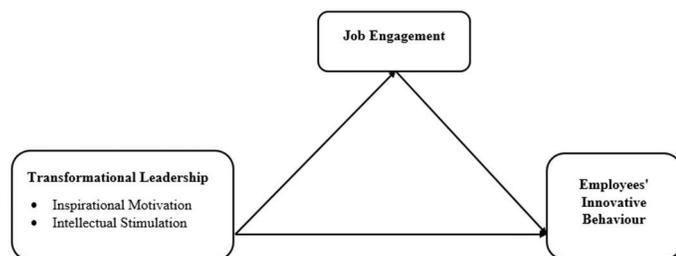
As previously stated, researchers in this field conducted a large number of studies (Dwicheyani and Gorda, 2023; Ghaith and Mutia, 2019; Karimi et al., 2023; Nguyen, 2024; Saeed AlShamsi et al., 2023).

According to Nguyen (2024) research findings transformational leadership has the capacity to greatly increase employees' innovative behavior. Similar results were obtained by Usmanova et al. (2023) shows that a leadership style can create an atmosphere that encourages knowledge sharing empowerment and intrinsic motivation all of which are critical factors in innovation. Similarly, the findings of Raoush (2023) study show that transformational leadership foster critical thinking questioning preconceived notions and investigating novel solutions by encouraging intellectual stimulation.

The significance of employee innovation was highlighted by Saeed AlShamsi et al. (2023) findings. According to their findings employees who demonstrate more innovative behavior also show higher levels of engagement they propose that greater innovation results from workers focusing more intently on their work which may then raise process engagement. Another study by Ghaith (2023), demonstrates that job engagement allows employees to put in endless hours for their company which in turn solves a number of organizational challenges.

Previous studies have provided evidence that job engagement is a critical factor in improving their efficacy particularly their capacity to carry out tasks efficiently accomplish objectives and contribute to the success of the organization as a whole (Al-Hamdan and Bani Issa, 2022). Furthermore, numerous earlier studies have shown that leadership improves workers capacity to learn and apply information (Afsar and Umrani 2020) as well as their employee innovative behaviour (Dimas, Rebelo, Lourenço, & Pessoa, 2021) and engagement (Al-Shaikh et al., 2025; Wang et al., 2023; Bakker and Xu, 2023).

Furthermore, in order to assess transformational leadership approaches empirical research has been conducted (Chiu et al., 2022; Douglas et al., 2022; Qawaqneh et al., 2023; Seijts et al., 2023; Wang et al., 2019). The mediating role of job engagement remains largely unexplored. The mediating role of job engagement between transformational leadership and employee innovation behavior was not investigated in the earlier research. In order to close, this gap the current study examines how job engagement influences the relationship between transformational leadership and employee innovation behavior. Additionally, by creating and testing a theoretical framework as illustrated in Figure 1 this

**Figure 1:** Theoretical framework

study adds new information to the body of knowledge already available in HRM.

Transformational leadership as the independent variable in this study, is well known for its ability to foster employees' innovative behavior. Dulebohn et al. (2012), Leader-Member Exchange (LMX) makes it easier for leaders to share knowledge with members of the organization on a regular and significant basis which gives employees more chances to take on difficult assignments. Leaders that use this strategy typically give their subordinates more decision-making authority and reduce micromanagement. As a result workers self-efficacy and perception of task performance outcomes are improved. Mokhber et al. (2018), also emphasized the connection between transformational leadership and a number of essential components such as clear communication a common goal and an atmosphere that encourages creativity. Employees are much more likely to engage in employees' innovative behavior when transformational leadership have a strong influence and communicate clearly. Furthermore LMX favorably influences employees views of results and self-determination according to Liden et al. (2000). As a result encouraging employees to act creatively requires transformational leadership. There are also noteworthy links between the suggested theory and the literature currently available on transformational leadership and the innovative behaviour of positive employees (Adenan, 2023; Haider, 2024; Hee, 2021).

### 3. RESEARCH METHOD

This study adopted a quantitative research methodology, which is suitable for examining measurable relationships between transformational leadership, work engagement, and employee innovative behaviour. Data were collected using a structured self-administered questionnaire developed from validated instruments: transformational leadership (inspirational motivation 5 items, and intellectual stimulation 5 items (Khan et al., 2022), Job engagement 10 items (Umer, 2017), and employee innovative behaviour 6 items (Amankwaa, Gyensare, & Susomrith, 2019). All questionnaire items were measured using a 5-point Likert scale, enabling respondents to express their level of agreement consistently.

The population comprised employees working in lower and middle-level roles across three major Jordanian telecommunications companies: Zain Jordan, Orange Jordan, and Umniah, totaling 3889 employees as reported in the 2024 TRC annual report. A stratified random sampling technique was applied to ensure proportional representation from each company, followed by

simple random selection of individual respondents. Based on (Sekaran & Bougie, 2016), a sample size of 351 employees was determined as adequate for this population. The collected responses were analysed using Partial Least Squares (PLS) structural equation modelling to examine the relationships among the study variables.

## 4. RESULTS AND FINDINGS

This section describes the results obtained from the evaluation of the measurement and structural models. The analysis assessed the proposed hypotheses concerning inspirational motivation, intellectual stimulation, job engagement, and employee innovative behavior (AlRaggad et al., 2025).

### 4.1. Measurement Model Evaluation

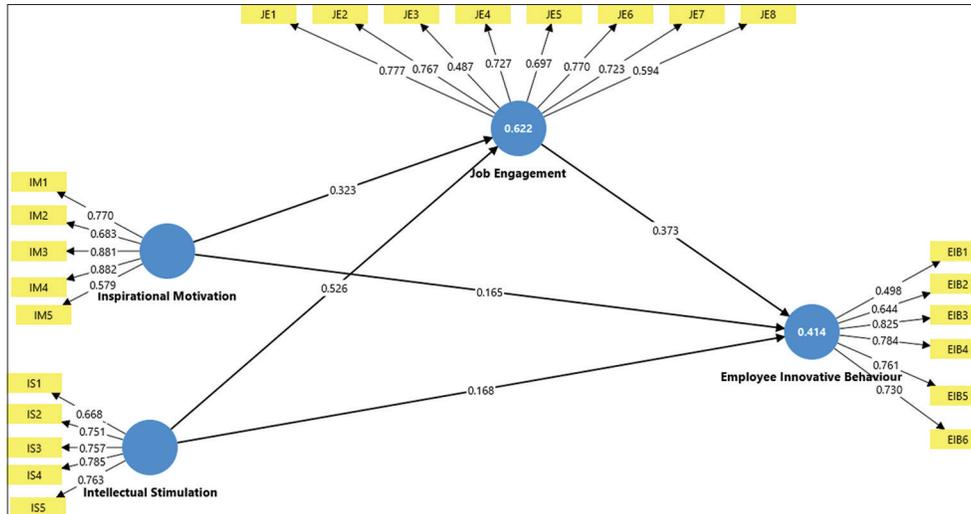
This measurement construct evaluation involves the correct assessment of each construct's reliability and the validity of the measurement scale contained within each of the models. This assessment involves checking all the indicator loadings along with the measurement of all the constructs through the use of Cronbach's alpha, composite reliability, and average variance extracted (AVE). The analysis showed that some of the items were below the accepted factor loadings, which is the indicator of 0.60, and these items were dropped from the scale to improve the model on fit and validity. Therefore, the items of IM5, JE3, JE8, and EIB1 were dropped from the model, and it is a valid consideration that these dropped items reflect poor association between measurement and all the constructs (Hammadi et al., 2024).

As shown in Table 1 and Figure 1 evidence of construct reliability and validity after removing these items, all exhibiting loadings less than 0.60, the threshold for inclusion. After this modification, all Cronbach's alpha scores for the constructs were 0.801, 0.802, 0.803, 0.857, 0.857, and 0.802/0.803, which are higher than 0.70, the required minimum, demonstrating adequate internal consistency reliability. The composite reliability results (Rho c), which are also viewed as thresholds for consistency, were all above 0.86, which is indicative of internal consistency for the variables (Hair Jr et al., 2021).

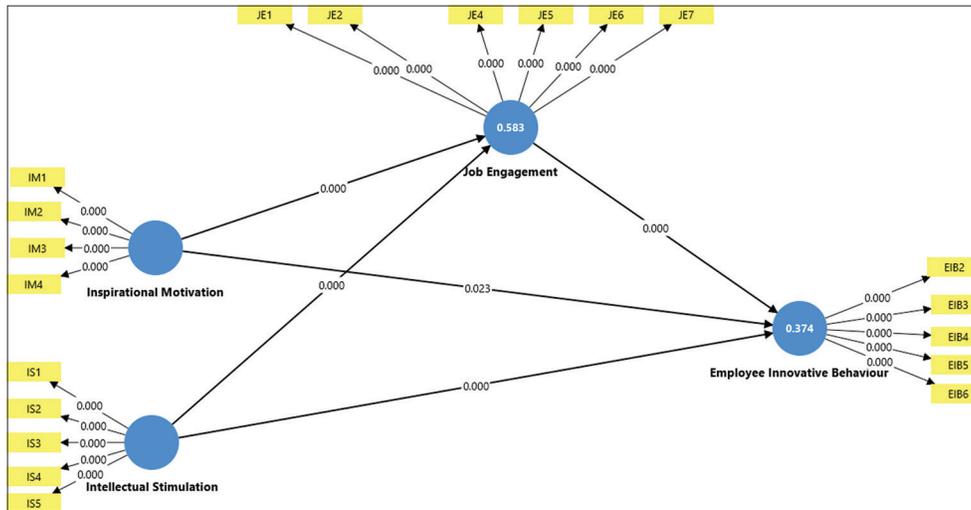
The average variance extracted value for each construct was higher than the threshold level of 0.50, indicating that the constructs had explained more than half of the variance of the indicators and thus confirming the presence of convergent validity. Table 1 and Figure 1 provide evidence of a strong and well-specified measurement model. The measurement scales for Employee Innovative Behaviour, Inspirational Motivation, Intellectual Stimulation, and Job Engagement are reliable and valid, as strong values for Cronbach's alpha, composite reliability, and AVE were obtained. These values provide confidence that the structural model analysis is anchored in accurate and valid measurements, and that the hypothesis testing will be meaningful and reliable (Hair, 2014).

The Fornell-Larcker criterion was used to assess discriminant validity and is shown in Table 2. This criterion states that the square root of the AVE for each construct (the diagonal values) should be greater than the correlations between that construct and

**Figure 2: Evaluation of measurement model**



**Figure 3: Evaluation of structural model**



**Table 1: Construct reliability and validity**

Construct	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Employee Innovative Behaviour	0.822	0.855	0.872	0.579
Inspirational Motivation	0.852	0.856	0.902	0.699
Intellectual Stimulation	0.801	0.807	0.862	0.556
Job Engagement	0.857	0.863	0.893	0.581

**Table 2: Discriminant validity Fornell-Larcker criterion**

Construct	Employee innovative behaviour	Inspirational motivation	Intellectual stimulation	Job engagement
Employee Innovative Behaviour	0.761			
Inspirational Motivation	0.481	0.836		
Intellectual Stimulation	0.547	0.605	0.746	
Job Engagement	0.570	0.628	0.726	0.762

**Table 3: Goodness of fit**

Model fit indices	Saturated model	Estimated model
SRMR	0.097	0.097
d_uls	1.988	1.988
d_g	1.356	1.356
Chi-square	1874.421	1874.421
NFI	0.622	0.622

all other constructs in the model. The table demonstrates that this is true for each construct (Fornell and Larcker, 1981).

For example, consider the correlations for employee innovative behavior with inspirational motivation, intellectual stimulation, and job engagement, which are, respectively, 0.481, 0.547, and 0.570. With an average variance extracted equal to 0.761, the

**Table 4: Evaluation of structural model (Hypothesis testing)**

Hypothesis	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ((O/STDEV))	P values
H <sub>1</sub> Inspirational Motivation -> Employee Innovative Behaviour	0.145	0.145	0.064	2.269	0.023
H <sub>2</sub> Intellectual Stimulation -> Employee Innovative Behaviour	0.236	0.236	0.057	4.126	0.000
H <sub>3</sub> Inspirational Motivation -> Job Engagement	0.297	0.296	0.037	7.971	0.000
H <sub>4</sub> Intellectual Stimulation -> Job Engagement	0.546	0.548	0.035	15.737	0.000
H <sub>5</sub> Job Engagement -> Employee Innovative Behaviour	0.307	0.308	0.065	4.705	0.000
H <sub>6</sub> Inspirational Motivation -> Job Engagement -> Employee Innovative Behaviour	0.091	0.092	0.025	3.626	0.000
H <sub>7</sub> Intellectual Stimulation -> Job Engagement -> Employee Innovative Behaviour	0.168	0.169	0.035	4.813	0.000

average variance extracted is less correlated than each of the listed variables, which is a characteristic exhibited by all the constructs in the model. The results of the Fornell-Larcker criterion corroborate the discriminant validity of the constructs, which suggest that the constructs are not the same and measure some other underlying reality. The clarity in the difference between the constructs is essential in determining the integrity of the findings of the structural model, since it eliminates the possibility that the relationships among the constructs are a result of the constructs being different manifestations of the same idea (Hair Jr et al., 2021; Hammadi et al., 2024).

Table 3 illustrated various indicators employed in evaluating the model's goodness of fit. Of these indicators, the Standardized Root Mean Square Residual (SRMR) explained the extent to which the actual correlations differed, on average, from those predicted by the model. Although the value of 0.097 SRMR indicates a reasonable fit, it still tends exceeds the value of  $\leq 0.080$ . Normed fit index (NFI) serves to ascertain fit value of 0.622 and it indicates a moderate fit of the model to the data. The value of the Chi-square is presented, but it is known to have a sensitivity to sample size (Afthanorhan et al., 2021; Obeidat et al., 2021).

Even though some metrics of the model's goodness-of-fit have don't predict as to the exact and most conservative goodness-of-fit recommendations, some value in the criteria's results as representative of a plausible model may exist. Discrepancy distances (less frequent) data in the reports on dULS and dG. The principles of good fit have to be balanced with the good articulation of the model development, sound theory, and analysis of data, hypothesis testing results. The validation of the measurement model resulted in very strong evidence of the model performing in reliability and its overall validity. Hence, the overall model presented in the study is considered accepted (Fornell and Larcker, 1981).

The relationships between the theoretical constructs were examined in the evaluation of the structural model in Table 4 and Figure 3 Findings show that all hypotheses were confirmed. The t-values of all the causal relationships were found to be significant,  $P < 0.05$ , supporting the claim that inspirational motivation and intellectual stimulation have directly and indirectly affected employee innovative behaviour. Additionally, the level of employee engagement worked to mediate the aforementioned relationships (Fornell and Larcker, 1981).

More precisely, the findings show that Inspirational Motivation ( $\beta = 0.145$ ,  $P = 0.023$ ) and Intellectual Stimulation ( $\beta = 0.236$ ,  $P = 0.000$ ) have significant and positive direct effects on Employee Innovative Behaviour. The effects of both leadership styles on Job Engagement were also significantly positive (Inspirational Motivation:  $\beta = 0.297$ ,  $P = 0.000$ ; Intellectual Stimulation:  $\beta = 0.546$ ,  $P = 0.000$ ). In addition, there was a significant positive relationship between Job Engagement and Employee Innovative Behaviour ( $\beta = 0.307$ ,  $P = 0.000$ ). Furthermore, Job Engagement was also a significant pathway that supported the mediating effects of both Inspirational Motivation ( $\beta = 0.091$ ,  $P = 0.000$ ) and Intellectual Stimulation ( $\beta = 0.168$ ,  $P = 0.000$ ) on Employee Innovative Behaviour (Afsar et al., 2014; Stanescu et al., 2021).

## 5. CONCLUSION

This study aimed to explore Inspirational Motivation, Intellectual Stimulation, Job Engagement, and Employee Innovative Behaviour, especially the Job Engagement's mediating effect. The structural model results presented confirm all the hypothesized relationships of the model, thus contributing to the understanding of how components of transformational leadership enhance innovation in the workplace. The results also demonstrate the positive, significant direct and indirect relationships of Inspirational Motivation and Intellectual Stimulation and Employee Innovative Behaviour through Job Engagement's full mediation (Hosna et al., 2021; Stanescu et al., 2021).

The effect of Inspirational Motivation (H<sub>1</sub>:  $\beta = 0.145$ ,  $P = 0.023$ ) and Intellectual Stimulation (H<sub>2</sub>:  $\beta = 0.236$ ,  $P = 0.000$ ) on individual innovative actions confirms previous studies on transformational leadership, such as the ones that state that leaders who motivate and challenge employees intellectually build a climate of innovation. While both effects are positive, the path coefficient to Intellectual Stimulation is the largest. This implies that the direct effects of cognitive stimulation on leaders challenging people to think differently about the assumptions and redefine the problems drive innovative actions to a higher extent than the motivational effects. This emphasizes the importance of motivational innovations where employees are not only willing to work on a problem, but also think of the innovative solutions to work (Haseeb et al., 2021; Raoush, 2023).

Importantly, this research validates Job Engagement's complete mediation in relation to the two components of leadership and

innovative behavior ( $H_6: \beta = 0.091, P = 0.000; H_7: \beta = 0.168, P = 0.000$ ). Hence, having an inspirational and intellectually-driven leadership style gives rise to and positively affects innovation, particularly in contexts where employees are thoroughly engaged with their work at the physical, cognitive, and emotional levels. Job Engagement is the psychological channel through which the leader's externally provided stimulus is converted into the requisite internal motivation and energy for the engagement in innovation, which is, by its nature, an arduous and high-risk endeavor. This is consistent with the Job Demands-Resources (JD-R) framework, wherein the behavior of transformational leadership is conceptualized as a job resource that enhances engagement, thereby leading to innovation (Bakker et al., 2023; Lee and Jo, 2023).

The Intellectual Stimulation offered by the leaders predicts Job Engagement  $H_4: (\beta = 0.546, P = 0.000)$  significantly more than the Inspirational Motivation  $H_3: (\beta = 0.297, P = 0.000)$ . This is particularly critical because, with respect to the outcome of engagement, giving more autonomy, more challenging tasks, and more critical thinking is superior to just giving an inspiring vision. Employees disengage when they are not thinking but do otherwise when they perceive their thinking and engagement are being upheld. This, in turn, energizes innovation  $H_5: (\beta = 0.307, P = 0.000)$ . This scenario activates the paradox idea that the work environment must be innovative to foster engagement and innovation, especially simultaneously (Ayandibu, 2024; Boussaidi and Korbi, 2025).

### 5.1. Theoretical Contributions

This study aims to advance the intersections in leadership, work engagement, and innovative behavior. Most importantly, this research sheds light on the construct of Job Engagement, which partially explains the connection between two of the components of the transformational leadership style, namely Inspirational Motivation and Intellectual Stimulation, and Employee Innovative Behavior. While some research has looked at these variables in isolation, this study brings them into a single, cohesive, and comprehensive structural model, thereby confirming that the relationship between these leadership behaviors and innovation is, at least in part, positively mediated through the employees' engagement level (Stanescu et al., 2021).

Furthermore, this study broadens the base of research on transformational leadership by elucidating the separate and distinct contributions of Inspirational Motivation and Intellectual Stimulation on Job Engagement and, in turn, on innovative behavior. The findings provide evidence that Intellectual Stimulation contributes positively to Job Engagement to a greater extent ( $\beta = 0.546$ ) than Inspirational Motivation ( $\beta = 0.297$ ), demonstrating that this leadership behavior of challenging employees and stimulating them to think critically is a strong predictor of engagement, which is then converted into positive innovative behavior outcomes. This line of differentiation and the outcomes that stem from it become important in developing theoretical frameworks on leadership effectiveness within the rapidly changing organizational environments (Deng et al., 2023).

### 5.2. Practical Contributions

This study can help organizational leaders and human resources increase employee innovation. Since the hypotheses were greatly supported, it can be stated that organizations need to develop leadership attributes on Inspirational Motivation and Intellectual Stimulation. More specifically, there should be focus on training managers to be able to construct and convey a vision (Inspirational Motivation). More so, they should learn to become advocates for challenges to the present circumstances and foster a belief in employees to promote creative and independent problem solving (Intellectual Stimulation) (Bai et al., 2025; Nasir et al., 2022).

Also, the (Job Engagement) mediator was confirmed, implying that organizations may focus on creating and refining a visceral engagement strategy for employees. organizations would be better off applying the rational engagement strategies that provide employees with the needed job resources, positive job conditions, and recognition of their work. Through combining the available leadership attributes (Inspirational Motivation and Intellectual Stimulation) and the psychological state (Job Engagement), organizations would be maximally more certain in their employees exhibiting innovative behaviors (Singh et al., 2023; Wang et al., 2025).

### 5.3. Limitations and Future Studies

This study has several limitations which future research will need to address. While it has made significant contributions to the field, the cross-sectional nature of the research poses challenges to drawing definitive causations between the constructs. While structural equation modeling has advanced the field by capturing proposed relationships, future research will need to take longitudinal perspectives and incorporate experimental designs to address questions of temporal precedence and causal flow.

The study also relied on self-reported measures which opens the research to questions of common method bias. While efforts were made to mitigate the impact of common method bias, future research in the field would be improved by the collection of multi-source data which could include supervisor ratings of leadership and peers or direct reports assessments of the innovative behaviors. Lastly, this study was conducted in a specific organizational or cultural context. Future research needs to address this model in other organizational settings to improve the generalizability of the findings. Investigating other potential moderators, including organizational culture and job complexity, would also be an important area of research.

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