

# The Relationship of Transformational Leadership towards Employees' Innovation with Mediating Effect of Employees' Empowerment in UAE Manufacturing Companies

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**Abstract** – This study aim is to investigate empirically relationship of transformational leadership on employees' innovation with the mediating effects of employees' empowerment in this relationship. In past decades, employees' innovation have become an progressively well-liked way of systematising and organising work. This style makes new tests for leaders, as they are anticipated to encourage individual employees and to improve their performance through innovation consecutively. Conceptual framework for this study, suggests an understanding idea championing and idea implementation which would influence innovative performance of individual employees. The conceptual framework includes employees' empowerment as mediating variable in the relationship of transformational leadership on employees' innovation. The study also validates the proposed conceptual framework using a confirmatory factor analysis technique, namely, structural equations modeling, with the data collected from 597 respondents from four e-government organizations in the UAE. The findings suggest that transformational leadership has significant positive impact on employees' innovation. Moreover, employees' empowerment have partial mediation effect in the relationship between transformational leadership and employees' innovation. This study contributes to the research that identifies employees' innovation influenced by transformational leadership that can affect employee success and performance, particularly in the context of UAE-based e-government organizations.

**Keywords:** *Transformational Leadership, Employees' Innovation, Empowerment, Confirmatory factor analysis and Structural Equation Modelling, TQM*

## 1. Introduction

In spite of the past research that transformational leadership is an important forecaster of employee's innovation, very rare research has been discovered broadly the impression of transformational leadership innovation [1, 2]. The considerable past few years' research has focused mainly on quantitative testing existing leadership theories and instruments [3, 4]. Yet, studying associations of transformational leadership and innovation has followed by inappropriate conclusions which strength be the result of slight research in discovering the construct of such style of leadership related to innovation that impact these relationships [5, 6]. According to [21] here is not one only way that leaders do to raise spirits of employee's innovation, it is a complex multi-factor phenomenon, which needs more examination, likewise [2] discussed more broad research is desired to improved understanding the scenario of transformational leadership towards innovation of employees. [7] also highlighted several studies need to explore how transformational leadership affects innovation in the organization. Therefore, this study seeks to explore leadership and its features required for encouraging employees' innovation. Mutually, the body of this study had revealed that the relationship of transformational leadership are participated and mediated through processes such as empowerment.

Researchers identified that innovation as a serious element if organization practitioners are to react efficiently to challenges faced in markets and remain in competition [8, 9]. Innovation contributes to the organization's financial performance [10], sales

growth and market value [11]; it enhances customer loyalty and satisfaction [44], and sustains a competitive advantage [24].

In organization, employee's ability, variety of skills and knowledge are considered as the main sources of innovation, which help to generate new and useful ideas [2, 63, 64]. As found in the literature that for organizational success and effectiveness, individual innovation contributes significantly to organizational performance and growth [15, 40, 65]. [9] discussed that employees are considered as the heart of revolution and change within the organization for the reason that of their acute role as the ambassadors of organization. Although frameworks in research and different findings diverge to some extent, numerous researchers have established that for organizational success and effectiveness, the vital role of employee's innovation are important [34].

Existing literature exposed the relationships of leadership and innovation have been considered in two overall research settings including experimental studies with student participants and field research with employees and supervisors respondents [2]. According to [34] using a sample of 364 university students in U.S. recognized only a slight effect of transformational leadership on personal innovation.

Furthermore, a researcher when using a theoretical model, has to consideration that employees are a vital variable within organization. Changes in leadership may also have a positive influence on employee's performance. In a study of [10] found a positive relationship between employees' innovation and how leaders manage existing changes. Having the suitable leadership skills is a necessity for employees to be efficient in their role within organization.

According to literature, various factors like individual and organizational that effect the impact of transformational leadership on employee's behavior [20]. Similarly, the transformational leadership and employee creativity relationship between them is mediated by both empowerment and creative role identity, it can moderate the effect of leadership on innovation of employees [37].

This study considers how employee's empowerment supports organizational level innovation and to improve the relations between transformational leadership and employee's innovation. Employee's empowerment is influenced by the employee's creativity, in similar way the supportive employee's empowerment enhances employee's creativity and innovation [49, 67]. The impact of leadership on employee's creativity is durable when the environment for innovation is higher [11]. Employee's empowerment is a factor directly or indirectly related to creativity and innovation [31, 33]. Employees of an organization who encourage

initiative respond favorably and efficiently to leaders that boost innovation [21]. The key determination of this study is to discover how leadership styles, an employee's empowerment effect employee's creativity and innovation. The findings of the study contribute towards theory and practice by helpful way to get how employee's creativity and innovation can be improved in the organizations of Abu Dhabi.

Numerous researchers reflect that the consideration of leadership styles an important element in persuading functions within an organization [73]. Transformational leadership style can produce impact on employee's innovation within an organization.

Transformational leaderships has been a popular research topic for the last decades. Research on this topic has produced ample evidence that transformational leadership enhances performance of organization in UAE [48, 19]. Studies on transformational leadership have, however, focused on objective performance measures such as sales volume, profit margin, and stock product performance [8, 7], in addition to employees' satisfaction and commitment to their organizations [30, 6]. There is no study that addressed transformational leadership with regard to innovation in UAE.

## 2. Conceptual Framework

The suggested conceptual framework is founded on theoretical framework, it has been used for clarifying the consequences of leadership and its styles and employee empowerment. The novelty of this study based on the transformational leadership, has been incorporated in the theoretical framework for explaining employee's innovation, moreover the originality of this study focus on the mediating effect of employees' empowerment between transformational leadership and innovation of UAE smart government employees. The conceptual framework is presented in Figure 1.

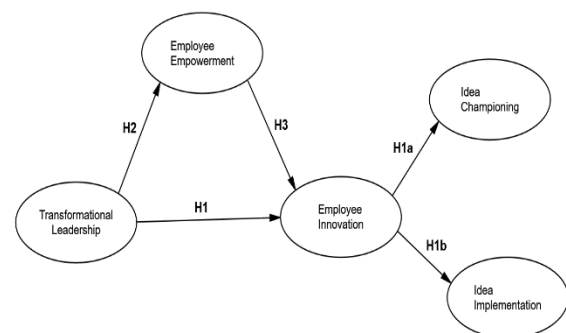


Figure 1: Conceptual Framework

## 2.1 Transformational leadership and Employees' Innovation

Transformational leadership is a salient feature of employees work environment, which a great impact on idea generation and problem solving skills of employees [51]. Theoretically, various perspectives have been developed for the identification of process where transformational leadership style helps to motivate the employee's innovation.

Transformational leadership is found to be directly influence the individual innovation [12]. But this transformational leadership indirectly influence the individuals' innovation in developing countries [70] while interacting the support of leaders. Leadership member exchange theory is empirically related to this particular phenomenon of innovation [3]. Transformation leadership is positively related with innovative behaviour of subordinates [27].

Similarly, transformational leadership positively influences the employee's innovative behaviour of supervisor and follower dyads of various service related organisations like travel agents, hotels, restaurant and banks [12]. Also, [75], in a survey evidence of various service groups and employees from different chines organisations identified that transformational leadership is positively related with group creativity while it is negatively associated with authoritarian leadership. [72], conducted the survey and in depth interviews in Hong Kong. The study identified that motivation and support from top managers, effective communication and interaction between employees and managers are significant motivators for employee's innovation. Empowering the Leader's behaviour, focusing on consultation, shared decision making and supporting the employee's autonomy are the significant factors that determine the employees innovation [62]. [53] identified that lack of innovation among employees in Romania is the result of leadership enforcing the routines and discipline. But it does not involve the employees in innovation related decision making.

In addition to this, the literature suggested that transformational leadership is likely to relate with employee innovation. Innovation is the formulation of new ideas within an organisation that are followed by the implementation of those ideas in new products, procedures and services [18]. In this regard, a sufficient amount of resources and support required from right people of organisation to championing and implement the new ideas that them to new business development.

Furthermore, employees at this stage need guidance and support from immediate leaders to implement the new ideas successfully. The literature focused the relationship at the idea championing and implementation stage of innovation [5, 45, and 52]. In this way, the provision of resources, proper

monitoring of innovations process and its effectiveness. And providing a constructive feedback [36].

But literature related to UAE organisations lacks due to insufficient empirical evidence about transformational leadership which motivate and encourage the employee's innovation. Therefore, to address this particular gap the study formulated the following hypothesis.

**H1:** Transformational leadership style have a significant positive relationship with employees' innovation.

**H1a:** Employees' innovation have a significant positive relationship with idea championing.

**H1b:** Employees' innovation have a significant positive relationship with idea implementation.

## 2.2 Employees' Empowerment

Employee empowerment is supportive for change which promotes the consideration of finding new ways of working, provides the signals to employees. It encourage the employees to take new initiatives and supports the development of new suggestions and ideas [71]. This climate shapes the perceptions of employees about organisation expects related to behaviours and outcomes [60]. Empirical evidence supported this idea that that individual creative attempts are influenced by Characteristics and conditions of work environment. Literature highlighted the employee empowerment because of its potential role in defining the employees' innovation [37, 71].

Literature indicated that contextual factors such as employee empowerment might influence the relationship of transformational leadership with outcomes of certain behaviours [69, 35 and 61]. [35] suggested that transformational leadership effectiveness is a function of styles contextual factors in the organisation. Similarly, [61] posited the factors of employee empowerment needed to be taken into account for transformational leadership, since they influence the leadership effect. [69] surveyed the 283 supervisor and subordinates dyads with a wide range of organisations in USA.

This study would explores that how employee's empowerment supports the recognition of employee's problem and idea implementation might enhance the leadership influence on innovative behaviour of employees. Innovative employee's empowerment shapes the perception of employees about organisation values and expects the innovative behaviour [68].

The literature also suggested that employee's empowerment enhance the relationship of leadership with employees' innovation [50, 38] in a study of Taiwanese telecommunications and electronic

industry investigated that employee's empowerment is supportive to innovation which raised the impact of transformational leadership on innovation of an organisation. Later, [50] investigated that correlation of CEOs transformational leadership and organisational innovation is mediated by empowerment support innovation. Furthermore, support for innovation mediates the association between team innovation and leadership styles but it is moderated by excellence empowerment.

The above discussion leads to formulate the hypothesis to investigate the influence of employee's empowerment supportive of innovation on association between transformational leadership and innovation. These hypothesis provides a better understanding on how employees' perception empowerment enhance the impact of transformational leadership on employees' innovation in UAE.

**H2:** Transformational leadership have a significant positive relationship with employee's empowerment.

**H3:** Employee's empowerment have a significant relationship with employees' innovation.

**H4:** Mediating effect of employees' empowerment between transformational leadership and employees' innovation.

### 3 Method

#### 3.1 Sample

As was discussed, the aim of this study was to evaluate the proposed model determining employee's perspectives. Based on [46]; the effective sampling should be 384 employees. However, considering the previous study feedback rate is 25%, the final sampling is 1536 (stratified sampling). In total distributed 1536 questionnaires to each of the four major department employees in Abu Dhabi respectively. The objective as according to [23] was to get minimum sample size of 200 respondents, which is suitable for running structural equation modeling.

#### 3.2 Measures

The selection of items discussed in this section were used to measure the variables in this study. These are listed as: transformational leadership, employees' empowerment and employees' innovation. To select the accurate scale items to measure these variables, the following understandings were created. Initially, it was vital to involve scale items that stand for a leadership-to-employees' innovation context. For this purpose, the scale items selected for this study were chosen from the literature that are most expressive of leadership perception as end users of employees' innovation.

Another reason, in this study included such scale items that can measure and determine definitions and dimensions extent to which they represented the content of each variables used in this research. In the same way the recommendation of [56] that "The scholar maybe would like to include scale items with diverse effect of meaning because the original list will be polished to create the final measure" (pg. 68). Finally, all items selection have been adapted from past studies with reliable and valid measures of variables.

Using 7-point Likert scales to operationalised constructs, vary between 1= strongly disagree to 7 = strongly agree. According to few researchers, the Likert-scales were selected because they take less time, and were easy to answer [1]. The scales items to measure the considering variables used in this study have been established from an assessment of the related literature. A total of 32 scale items were used to measure the variables in the model. A summary of the number and sources of the items as showed in Table 1, used to test variables.

**Table 1:** Total of Scale Items with Sources Used in this Study

Constructs	Number of Items	Sources
Transformational	13	Jung, Chow & Wu (2003); Gumusluoglu & Ilsev (2009)
Employees' Empowerment	8	Pieterse et al. (2010); Choi et al. (2016)
Employees' Innovation	11	
Idea Championing	5	Lukes & Stephan (2017); De Clercq et al. (2018)
Idea Implementation	6	Khalili (2016); Unsworth (2000)

#### 3.3 Normality Statistics of Preliminary Measures

In this study, skewness and kurtosis have been used for ascertaining the normality of the data. The skewness and kurtosis in this study have been worked out for each construct, which were presented and summarized results in Table 2. The generated results show that the skewness and kurtosis were inside the acceptable range of the  $\pm 3$ , as suggested by [59].

**Table 2: Normality Statistics**

Constructs	Range	Mean	Std. Dev.	Skewness	Kurtosis
Transformational	1-7	5.86	0.41	-0.112	-0.491
Employees' Empowerment	1-7	5.61	0.46	0.158	-0.274
Idea Championing	1-7	5.68	0.54	0.341	-0.097
Idea Implementation	1-7	5.71	0.56	0.044	-0.101

**3.4 Sample Characteristics**

This section gave the demographic characteristics including personal information of the respondents to the survey questionnaire from E-Government employees of Abu Dhabi.

A total of 597 usable responses were collected, the demographic characteristics included personal information of the respondents were presented in Table 3. There were 389 male respondents, representing 65.16% of the sample population; female respondents comprised 34.84% (N: 208) of the sample. The highest age group of the respondents was 31-35 years with the ratio of 35%, while 67.34% were married and the monthly income was AED. 5000 or above, representing 40.70% of the sample. With respect to education, respondents were mostly educated, as 48.07% had completed master.

**Table 3: Personal Profile of Respondents**

Variables		Number	Percentage
Gender	Male	389	65.16%
	Female	208	34.84%
Age	Less than 20	-	-
	21-25	48	8.04%
	26-30	119	19.93%
	31-35	209	35.00%
	36-40	191	31.99%
	41-45	14	2.36%
	46-50	10	1.68%
	Above 51	6	1.00%
	Single	144	24.12%
	Married	402	67.34%

Marital Status	Widow	11	1.84%
	Separated	17	2.85%
	Divorced	23	3.85%
Management Level Employee	Supervisor	203	34.00%
	Above	288	48.24%
Non-management Level Employee	Staff	79	13.23%
	Below	27	4.53%
Education	High school or less	93	15.58%
	Bachelor degree	167	27.97%
	Master	287	48.07%
	Doctorate	38	6.37%
	Others	12	2.01%
Religion	Muslim	578	96.82%
	Hindu	4	0.67%
	Christian	12	2.01%
	Buddhist	1	0.16%
	Others	2	0.34%
Your Organization	Abu Dhabi Airports Company (ADAC)	189	31.65%
	Abu Dhabi Accountability Authority (ADAA)	111	18.60%
	Abu Dhabi Chamber of Commerce and Industry (ADCCI)	146	24.45%
	Abu Dhabi Customs Administration (ADCA)	151	25.30%
Income Level	Less than Rs. 2000	27	4.52%
	2000 to 3000	78	13.07%
	3001 to 4000	91	15.24%
	4001 to 5000	158	26.47%
	5001 or above	243	40.70%
	Organization Certification	ISO 9001	173
ISO 14001		187	31.32%
OSHA		134	22.45%
Others		103	17.25%

### 3.5 Reliability

Reliability measured the consistency of the item used in the questionnaire. Cronbach’s alpha of 0.70 is considered as a good internal consistency [55]. The reliabilities of all the constructs used in the thesis are presented in following Table 4.

**Table 4:** Reliabilities of the Construct

Construct	Reliability
Transformational	0.856
Employees’ Empowerment	0.891
Idea Championing	0.903
Idea Implementation	0.868

### 3.6 Discriminant Validity

Discriminant validity was ascertained by computing the correlation of all the constructs used in this study. The generated results presented in Table 5. The discriminant validity results showed that the correlation between the pairs of constructs are below 0.85, as prescribed by researchers [66].

**Table 5:** Inter Item Correlation

	1	2	3	4
Transformational	1			
Employees’ Emp	0.347	1		
Idea Champ	0.389	0.396	1	
Idea Implemen	0.367	0.294	0.378	1

## 4 Summarized CFA Results

Items retained after CFA, 6 items represent transformational leadership and the first model exposed a suitable fit based on the standards for model fit. The single factor loadings expressed that all indicators were meaningful and loaded more than the least standard value of 0.5 [23]. The employees’ empowerment construct had only one factor, and after CFA showed that 5 items were retained. Two factors represent employees’ creativity: idea exploration and Idea Generation. Similarly, employees’ innovation had two factors: idea championing and idea implementation, 1 item removed after CFA. Replies to these 16 items were exposed to factor analysis, and as consequences showed the model comprised these items and fits the data well. Table 6 showed the status of retained variables after confirmatory factor analysis. The precised confirmatory factor analysis results of all constructs were presented in Table 7 which showed that the fit index for each of the construct is within/close to the agreed limit. Moreover, factor loading for each observed variable is at least 0.40 [23].

**Table 6:** Variables Status after CFA

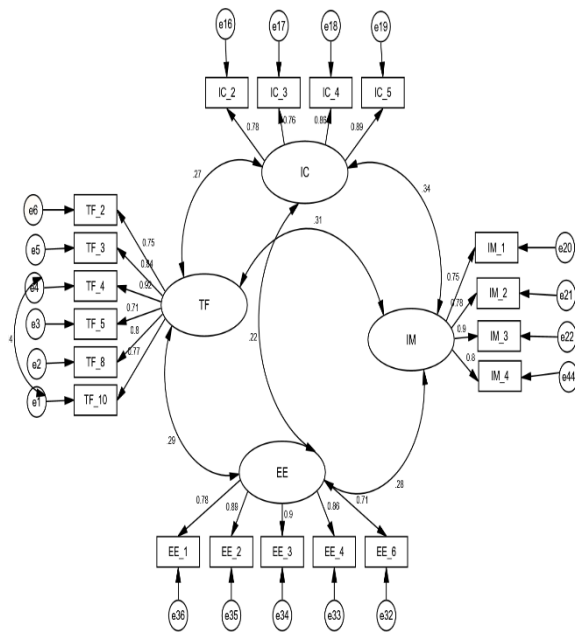
Construct	Original Items	Items Retained
Transformational	13	6
Employees’ Empowerment	8	5
Idea Championing	5	4
Idea Implementation	5	5

**Table 7:** Summarized CFA Results

Constructs	Chi-Square	df	CMIN/df	GFI	AGFI	CFI	RMSEA	AVE
Transfor mational	25.691	8	2.038	.973	0.931	0.978	0.067	0.641
Employee es’ Empowere ment	23.539	5	2.334	.971	0.946	0.983	0.064	0.684
Idea Champio ning	18.284	5	2.674	.982	0.957	0.986	0.070	0.672
Idea Impleme ntation	18.135	5	2.437	.981	0.961	0.989	0.068	0.714

## 5 Overall Measurement Model

Inspection of standardized residuals specified that all residual values were inside the threshold suggested by [59]. However, modification indices indicated that the indicators TF\_1, TF\_7 (transformational leadership), had unacceptably high values. After iteratively removing these redundant items, the overall model fitness came up in good shape. The overall measurement model is depicted in Figure 2.



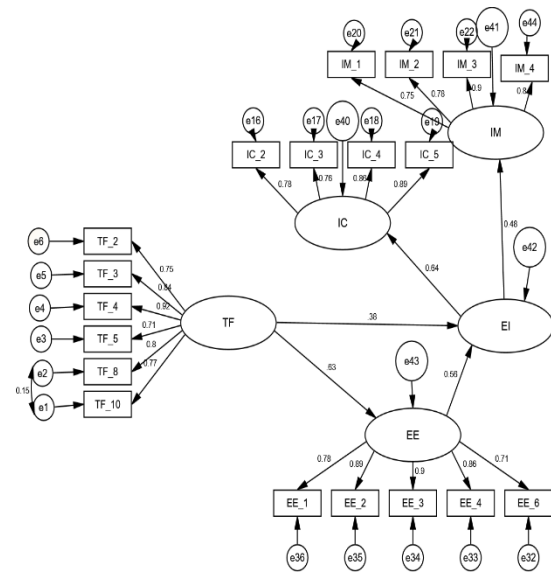
**Figure 2: Overall Measurement Model**

Chi-square = 806.108, df = 596, GFI = .947, AGFI = .917, CFI = .951, TLI = .942, RMSEA = .038, and Chi-square / df = 1.703

The results showed that the overall measurement model was well fitted which generated a RMSEA of 0.038 and chi square value of 806.108 with 596 degrees of freedom ( $p < 0.005$ ). The statistics for the test of fit were GFI= 0.947, AGFI=0.917, CFI =0.951 and CMIN/df = 1.703. In sum, the confirmatory factor analysis results specified that the overall measurement model is good.

**6 Structural Model**

In the measurement model (stage one), once all constructs were validated and acceptable fit attained [43, 59], a structural model can then be tested and obtainable as a second and key stage of the analysis [23]. The structural model has been defined as “the portion of the model that specifies how the latent variables are related to each other” [23]. The purposes of structural model to identify which latent constructs directly or indirectly affect the values of other latent constructs in the model [43]. The overall model is depicted below in Figure 3.



**Figure 3: Structural Model Innovation**

Chi-square = 674.309, df = 596, GFI = .945, AGFI = .911, CFI = .957, TLI = .949, RMSEA = .038, SRMR = .0214 and Chi-square / df = 1.894

The results showed that the structure model was well fitted which generated a RMSEA of 0.038 and chi square value of 674.309 with 596 degrees of freedom ( $p < 0.001$ ). The statistics for the test of fit were GFI= 0.945, CFI =0.957, AGFI=0.911 and CMIN/df = 1.894. In sum, the consequences specified that the structure model is good.

In the path diagram shown in Figures, the values for the paths connecting constructs with a single-headed arrow represent standardized regression beta weights. As in the measurement model, the values appearing on the edge of the boxes were variance estimates in which the amount of variance in the observed variables is explained by latent variables or factors, and values next to the double headed arrows showed correlations. The evaluation of the structural model of this study is showed in Table 8.

**Table 8: Testing Hypotheses**

Hypothesized Path	Standardized Estimate	T-Value	P-value	Result
H1: TF-->EI	0.38	4.841	***	Significant
H1a: EI-->IC	0.64	7.543	***	Significant
H1b: EI-->IM	0.48	5.812	***	Significant
H2: TF-->EE	0.63	7.441	***	Significant
H3: EE-->EI	0.56	6.921	***	Significant

In testing the hypothesized model, results presented in Table indicated that the hypotheses H1, H1a, H1b, H2 and H3 were statistically significant and in the hypothesized direction.

### 7 Employees' Empowerment as a Mediator

Hypothesis H4 tested the mediating relationship of employees' empowerment with leadership styles and employees' innovation. The procedure for testing mediator as outlined by [4] as followed.

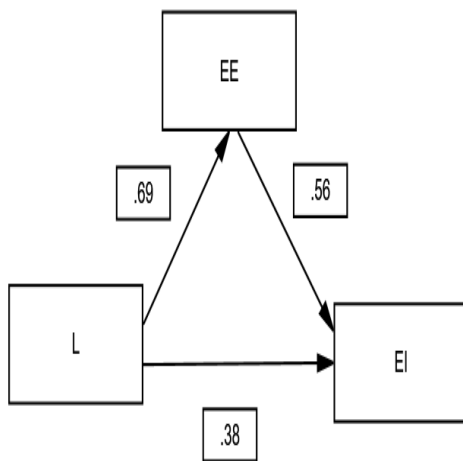


Figure 4: Mediating Effect

The model showed the mediating effects of employees' empowerment with leadership styles and employees' innovation. The procedure to find the mediation effect given by [4]. The indirect effect in the model is .40 (.69 x .56 = .40), while the direct effect is 0.38. Since the indirect effect is greater than the direct effect, the mediation occurs. The type of mediation was partial mediation since the direct effect of leadership styles to employees' innovation was also significant.

The results of any mediation test should be reconfirmed by using the bootstrapping procedure [4]. This study has conducted the Maximum Likelihood Bootstrapping procedure with bootstrap sample of 1000 and a bias correction confidence interval of 95%. The results obtained as shown in Table 9.

Table 9: The Results of Bootstrapping Procedure

	Indirect Effect	Direct Effect
Bootstrapping Results	0.41	0.38
Bootstrapping P-Value	0.001	0.000
Result	Significant. The mediation occurs	Significant

Thus, the result of mediation test has been confirmed by the bootstrapping procedure. Partial mediation occurs since direct effect was also significant. Hence the hypothesis H4: Mediation effect is accepted.

### 8 Conclusion

The research model established in this study combined the construct of transformational leadership with an employees' empowerment, employees' innovation. This model proposed that transformational leadership directly influences employees' innovation (idea championing and idea implementation). Moreover, employees' empowerment mediates those associations in Abu Dhabi's government organizations. Four hypothesis were expressed in this study to discover the transformational leadership related to employees' innovation and to inspect the proposed relationships. In this study, analyses were accomplished to investigate the objectives. The analysis elaborated an empirical examination of the direct relationship of transformational leadership on employees' innovation in Abu Dhabi. The second assessment was the level which viewed employees' empowerment mediate the relationship.

The evidence from the results of this study suggests that the influence of transformational leadership on employees' innovation is stronger its influence on their in Abu Dhabi's government employees. Employees' innovation refers to the implementation stage of new ideas: perhaps this might be due to leaders having more influence at the application stage than at the earlier idea generation stage. Evidence from the result phase also shows that the organisational position of leaders over employees means that they have more access to resources, an essential requirement of successful innovation. The findings show that leaders can have a greater influence on employees' innovation.

Some factors of transformational leadership, such as empowering employees to make decisions, providing an inspirational vision, or encouraging and supporting employees' idea generation, seem to nurture employees' innovation in Abu Dhabi organization contexts. This suggests that if eovernment leaders are to enhance their influence on employees' innovative behaviour, they will benefit from adopting the leadership identified in this study; appropriate style of leadership also can be created based on these findings.

It is found that employees' empowerment positively and significantly mediates the association of perceived transformational leadership with employees' innovation in Abu Dhabi's organizations. The finding suggests that employees with high levels of employees' empowerment are more responsive to innovative leadership then other



employees. The interaction of leadership and employees' empowerment results in more creative ideas, suggestions and innovative practices.

## 9. Implications of the Research

This study inspected employees' empowerment as a mediator in the associations among transformational leadership and employees' innovation. The consequences of this study delivered both practical and theoretical implications. Primary, this study signified the theoretical or empirical research concerning the significances of employees' empowerment in the leadership for the development of employees' innovation. In spite of the fact that employees' empowerment is a vital feature as a basic necessity for the operation active of employees [39]. There has been few empirical research of employees' empowerment in the leadership with styles for the development of employees' creativity and innovation [76] [77] [78] [79]. As projected, this study exposed the significance and impression of employees' empowerment associations in considerate idea generation, and improved our understanding of the employees' empowerment important to implementation of such ideas [80] [81]. Therefore, this study delivered a foundation for scholars to more test the associations between these concepts.

## 10. Future Research

Further research is desirable to spread our understanding of the constructs used in this study, by consuming diverse ways to examine them. This study has exposed several research openings in the field of leadership, specifically in the creativity and innovation of employees. Other parts that could be of researchers' attention contain, but not limited are, employees' empowerment on their creativity and innovation, it produce valuable influence and impact on activities of organizations.

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