

# IMPACT OF TRANSFORMATION LEADERSHIP & JOB COMPLEXITY ON ORGANIZATIONAL INNOVATION: THE MODERATING ROLE OF JOB AUTONOMY - A CASE OF THE TRANSPORT AUTHORITY IN THE UAE

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## Abstract

The purpose of this study was to explore the impact of transformation leadership and job complexity on organizational innovation: the moderating role of job autonomy - A case of the transport authority in the UAE. Innovation is essential for organizations to remain competitive and it requires leaders who can inspire and motivate their followers to think creatively, and take risks. Job Complexity is defined as the extent to which employees have varied, independent, and discretionary roles in their job. Job Autonomy is the level of employees' decision making powers. Greater levels of job autonomy leads to satisfaction, and motivation. Transformational leadership (TL) is a leadership style to inspire followers, to motivate, and train them to develop their skills and abilities. TL is an effective leadership style for promoting organizational innovation. The research objectives and the literature reviews provided the conceptual framework to proceed the research in the right direction. Quantitative analysis was performed and the data was collected from the research survey from the selected samples, working under the Sharjah Roads and Transport Authority, UAE. Data entry was completed using SPSS software Version 26.0, and the same software was used to conduct data screening, the findings show that transformational leadership has an influence on job complexity, and job autonomy to enhance organizational innovation. All the hypotheses were tested and supported by the findings. The study has highlighted TL and job complexity as the potential paths to organizational innovation. This study suggested that a greater level of job autonomy provides employees with the ability to go beyond the norms to innovate further for the organizational benefits. The results of this investigation may serve as a guide for future studies in this particular segment.

**Keywords:** Leadership, Transformational Leadership, Job Complexity, Job Autonomy, Organizational Innovation, Employee Loyalty, Employee Engagement, Intellectual stimulation; Individualized consideration; Idealized Influence; Inspirational Motivation;

## 1.1 INTRODUCTION

Leadership is the process of influencing and directing people towards achieving common goals and objectives. It involves setting a vision for the future, communicating that vision to others, and inspiring and motivating employees to work towards realizing that vision. Effective leadership is essential for the success of any organization, as it helps to create a shared sense of purpose and direction, aligns the efforts of team

members towards common goals, and promotes excellence. Transformational leadership (TL) is a leadership style that focuses on inspiring and motivating followers to achieve their full potential, both personally and professionally (Zhu, & Wang, 2021). Transformational leaders inspire followers by setting a compelling vision and empowering them to take ownership of their work. They also provide training, mentoring, and support to help followers develop their skills and abilities, and they foster a culture of creativity, innovation, and continuous improvement. TL is an effective leadership style for promoting organizational innovation (Huang, & Huang, 2020).

Organizational innovation refers to the introduction of new ideas, processes, products, or services that improve the performance, and efficiency of an organization. Innovation is essential for organizations to remain competitive and adapt to changing market conditions, and it requires leaders who can inspire and motivate their followers to think creatively, and take risks. By inspiring and empowering followers to achieve their full potential, and fostering a culture of creativity and continuous improvement, transformational leaders can drive innovation and help their organizations to succeed in today's rapidly changing business environment. (Rosli, Yusof, Hamzah & Abdul Hamid, 2021).

## 1.2. Background of the Study

TL has been shown to have a significant impact on organizational innovation, particularly in relation to job complexity and job autonomy. Job complexity refers to the level of difficulty and challenge associated with a particular job. Transformational leaders can influence job complexity by providing their followers with challenging tasks that require them to use their skills and knowledge to their fullest potential. This can help to stimulate creativity and innovation by encouraging employees to think outside the circle and come up with new and better ways of doing things. Job autonomy refers to the level of independence and freedom that employees have in their work. Transformational leaders can increase job autonomy by delegating responsibility and decision-making authority to their followers. This can help to empower employees and encourage them to take ownership of their work, leading to greater motivation and commitment to achieving organizational goals.

In combination, the effects of transformational leadership on job complexity and job autonomy can lead to increased organizational innovation. When employees are challenged, motivated, and empowered, they are more likely to come up with new and innovative ideas that can help the organization to stay ahead of the competition and achieve targeted sustainable growth.

In order to ensure organizational growth, innovation is an essential management skill. The Sharjah Roads and Transport Authority (SRTA) focused on fostering innovation and creativity within the organization. Transformational leadership (TL) has been found to promote employee creativity, leading to organizational innovation through idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Shafi, Mohsin, Lei, & Sarker, 2020). TL can create a workforce that is more creative, paving the way for innovation in the organization. Job complexity is

another important factor in employee enrichment, where employees need to continually upgrade their skills and knowledge to remain employable and productive.

Over the last couple of decades, the United Arab Emirates (UAE) public sector has experienced substantial waves of change with globalization. However, the diverse impacts on globalization across countries considerably emphasized the need for organizational innovation (Marzouqi & Sultan, 2019). The UAE government's determination to the innovation agenda stipulates acting fast, flexibility to change, embracing partnerships, and implementing the innovation agenda as essential procedures. As the United Arab Emirates (UAE) strives to implement a sustainable investment plan in human capital, the public sector is positioned as a service-oriented economy, hence required to take an exploratory approach toward public sector innovation. Innovation is indeed a vital management function to guarantee transformation, (Parahoo, Mumtaz, & Salem, 2020). Consequently, organizations require innovative employees to reach a high performance level. Innovative employees are distinctively perceived as vital, since they possess an innovative way of sharing ideas and approaching problems (Khassawneh, Mohammad, & Ben-Abdallah, 2022). The multidisciplinary nature of organizational innovation lends itself to both a richness of perspective and a difficulty for valuation and relevance. Facing intense globalized competition, there is widespread recognition that TL and organizational innovation are critical forces driving economic growth. The survival of organizations is presently dependent on innovation.

### **1.3 Significance of Research**

This study provides valuable contributions for policymakers and managers in the public service sectors of the UAE, supported by evidence from the SRTA. The Global Competitiveness Report has highlighted issues such as insufficient capacity to innovate and workforce education levels, which cannot be ignored, especially for public entities like the SRTA. Thus, the present study has significant implications for both academic and industrial practices.

In academia, this study bridges the gap in existing literature by comprehensively gathering and analyzing data on the relationship between TL, job complexity, job autonomy, and organizational innovation, (Afsar & Umrani, 2020). By providing empirical evidence that supports key theories in the literature, this study serves as a baseline for future studies in related areas.

Organizational development necessitates change, and it is increasingly essential for organizations to innovate and reform continuously to remain competitive in today's turbulent environment. Therefore, understanding the impact of TL and job complexity on organizational innovation is critical for future studies in this area.

Moreover, the study has significant implications for the national development of the UAE. Both federal and local entities can use the results to ensure more effective management changes. Given the challenging nature of data collection in the UAE, the functional significance of this study is paramount in achieving its objectives.

## 1.4 Research Problem

In today's competitive environment, the survival of organizations depends on their ability to be creative and innovative. As a result, managers and leaders are increasingly focused on finding ways to promote innovative behavior among employees. While the Sharjah Roads and Transport Authority (SRTA) transports millions of passengers each year, there is a need for a detailed study on how transformational leadership (TL), job complexity, and job autonomy impact organizational innovation. Theoretical arguments suggest that TL can positively influence employees' intrinsic motivation and commitment to innovation (Saeed, Bilal, Afsar, & Shah, 2019). Previous research has also shown that work autonomy contributes positively to organizational innovation. However, there is limited literature on the relationship between TL, job complexity, job autonomy, and organizational innovation, and there has been no documentation of a charismatic leader who inspires creativity, innovation, future outlook, and crisis management within SRTA. Scholars have attempted organizational personnel investigations, but comprehensive literature on this topic is lacking (Afsar & Umrani, 2020).

The Global Competitiveness Report has identified a limited educated workforce and insufficient capacity to innovate as the most significant challenges for doing business in the UAE, which undoubtedly affects the innovation of many organizations, including including SRTA (Figure 1.1).

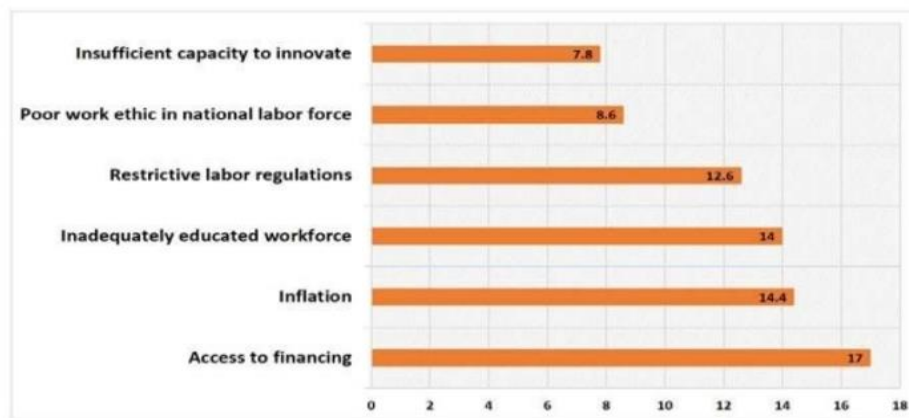


Figure 1: The most problematic factors for doing business in the UAE

### Global Competitiveness Report

Worldwide, people are recognizing the advantages of offering workers greater independence in the workplace. One of the benefits of TL is that it allows employees to gain more control over their work (Karam & Kitana, 2020). The primary objective of this research is to examine the reaction of SRTA employees in the UAE to an increase in work complexity. The author also argues that while it is challenging to study, job complexity and the loss of autonomy have a bearing on an organization's ability to innovate. Empowering workers with job autonomy enables them to adapt their work practices to their strengths and preferences. Each employee is entrusted with the responsibility of completing their assigned tasks. Job autonomy also encompasses the

timing and method of task completion, as well as the level of freedom and decision-making required to accomplish a task (Huang & Qiuling, 2021).

### **1.5 Research Objectives**

The objective of this study was to investigate how Transformational Leadership (TL) and job complexity impact organizational innovation while considering the moderating effect of job autonomy. The study had four main objectives:

- 1) To examine how TL impacts organizational innovation among employees of SRTA in UAE, with the mediating effect of job complexity
- 2) To investigate the impact of job complexity on organizational innovation among employees
- 3) To explore how job autonomy moderates the relationship between TL and organizational innovation among employees, and
- 4) To determine how organizational innovation is moderated by job autonomy and the relationship between job complexity, and TL among employees.

### **1.6. Research Questions**

- 1) How does TL impact organizational innovation among employees of SRTA in the UAE, with the mediating effect of job complexity?
- 2) What are the impacts of job complexity on organizational innovation among employees?
- 3) How does job autonomy moderate the relationship between TL and organizational innovation among employees?
- 4) How is organizational innovation moderated by job autonomy and the relationship between job complexity, and TL among employees?

### **1.7. Scope of the Study**

The SRTA, which is based in Sharjah, United Arab Emirates, was covered by the research. It belongs to the taxi and limousine services sector. Finding the influence of TL, job complexity, job autonomy, and organisational innovation and its effects on the UAE government entities is within the study's proper purview. This study will examine the relationship between the UAE's transportation authority and TL and describe how TL affects organisational innovation. As individuals progress in their careers, they tend to move from simple to more complex jobs. Those with higher abilities and certain personality traits tend to choose more complex jobs. Autonomy at work is also crucial, as it refers to the degree of freedom employees have while doing their jobs, including when and how they do their work, and the level of independence and discretion required (Ting, Kiong, Sui, & Nawanir, 2021; Chron, 2021).

### **1.8 Organization of Chapters**

This chapter provides an overview of the research background, the significance of the research, the problem statement, the research objectives, the research questions, and



the research scope. The second chapter provides the reviews of literature by various scholars, authors and research specialists. It also includes the study's conceptual framework, hypothesis, significance and limitations of the theories, and variable definitions. The third chapter discusses research methodology. The next chapter discusses the data analysis and findings. The final fifth chapter discusses the discussions and conclusions.

## 2.1 LITERATURE REVIEWS

Transformational leadership has been recognized as an effective leadership approach for enhancing employee motivation in various organizational settings (Chen, & Wang, 2022). Transformational leadership has been widely recognized as a key factor in enhancing organizational performance (Kim, & Lee, 2022). Wang, & Zhou, (2022) researched the relationship between job complexity and job performance. They found job complexity has been widely recognized as a key factor in shaping job performance (Wang, & Zhou, 2022). Job complexity has been recognized as an important factor in shaping employee well-being in various organizational settings (Li, & Liu, 2022). Chen, & Huang, (2022), researched the importance of knowledge sharing, creation, and utilization in the innovation process to offer practical implications for managers to foster innovation through effective knowledge management. They concluded that knowledge management has been recognized as a critical factor in promoting organizational innovation.

## 2.2 Underpinning Theories

Leadership theories are various schools of thought that attempt to explain the qualities and characteristics that enable individuals to become successful leaders. These theories emphasize traits and behaviours that individuals can adopt to improve their leadership skills. One such theory is Transformational Leadership (TL), which is often referred to as the relationship theory. TL emphasizes the relationships between leaders and followers and encourages leaders to inspire and motivate their teams to perform at their best. TL leaders are often charismatic and have strong communication and management skills, as well as a willingness to take risks and embrace change (Santoso, Elidjen, Abidinagoro, & Arief, (2019).

The Great Man Theory is another leadership theory that suggests that true leaders are born with innate qualities such as communication skills, charisma, social skills, intellect, and confidence. According to this theory, the best leaders are those who are naturally equipped to lead and are therefore born, not made. Transformational leaders exhibit specific behaviour that promotes high levels of performance and can inspire their followers to work towards a shared vision (Yang, Chen, Zhao, & Hua, 2020).

The popularity of TL has led to the development of tools and measures to evaluate its effectiveness as a leadership style. Many studies have been conducted to investigate the factors that contribute to organizational innovation. It has been found that TL is a good choice for leadership in the Middle East and in the service sector, and is therefore an ideal leadership style to implement in the SRTA in the UAE

## 2.3 Conceptual Framework

The conceptual framework is a diagrammatic representation of the variables that is arrived at by the researcher to proceed further. It depicts the independent variable, mediating variable, moderating variable and dependent variable. It provides the proposed hypotheses and how to proceed further in the research.

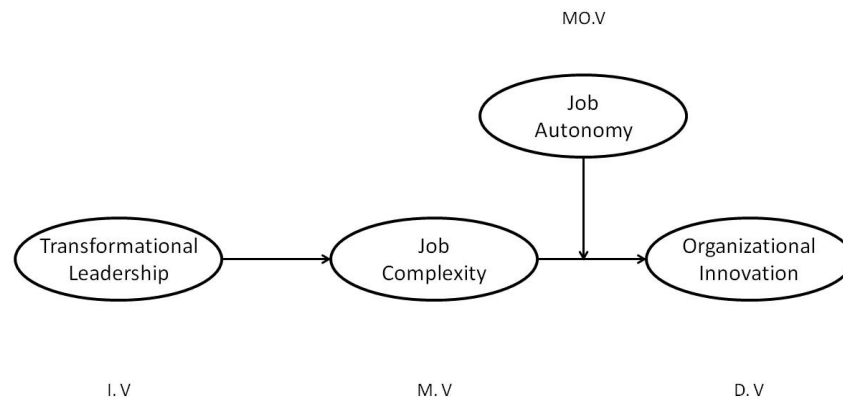


Fig 2: Conceptual Framework

## 2.4 Hypotheses

**H 1.** TL has a positive influence on organizational innovation through the mediating role of job complexity.

**H 2.** Job complexity with TL influences organisational innovation

**H 3.** Job autonomy has a moderating impact on job complexity, & on organizational innovation

**H 4.** Organizational innovation was influenced by TL and job complexity with the mediating role of job autonomy.

## 2.5 Discussion of Variables

**Transformational leadership** is a leadership style that motivates and empowers followers to achieve their objectives and develop themselves. TL promotes openness and trust among workers, enabling them to collaborate and communicate effectively, which are essential components of successful innovation. **Intellectual stimulation** involves challenging and supporting employees to think critically and creatively, resulting in the creation of fresh ideas and services. **Individualized consideration** is the degree of personalized attention and care provided by leaders to their employees, enhancing employee engagement, happiness, and dedication to the company. **Idealized influence** refers to a leader's capacity to serve as a role model and inspire a shared identity and mission among the workforce. **Inspirational motivation** involves leaders inspiring and motivating employees through communication, fostering a sense of purpose and motivation among employees, leading to enhanced creativity and innovation.

**Job Complexity** is defined as the extent to which employees have varied, independent, and discretionary roles in their job. Introducing more complex work can enhance employee engagement, motivation, and job satisfaction. This can lead to the encouragement of innovation and creativity within the organization as employees are more likely to generate fresh ideas for processes.

**Job Autonomy** is the degree of control that employees have over their job tasks and decision-making processes. Greater levels of job autonomy are linked with higher work satisfaction, motivation, and engagement, which can enhance organizational performance and facilitate innovation. Allowing employees, the freedom to make decisions inspires the development of creative solutions to problems. Furthermore, increased independence can enhance job satisfaction, which can lead to greater staff retention.

**Organizational innovation** involves the adoption of novel and improved procedures, methods, and structures. Organizations that cultivate an innovative culture and induce employees to take risks and think creatively are more likely to successfully incorporate new ideas and improve performance. This type of innovation can enhance efficiency, productivity, and competitiveness, leading to the development and success of the organization over time.

### 3.1 Research Methodology

The explanation of the research methodology is crucial to comprehend why specific research methods were chosen for the study. It includes the research approach and design, the target population, the sampling methods, the data collection tools, the data analysis techniques, and so on (Mishra & Alok, 2022). For this research, a cross-sectional study was conducted, focusing on the staff of SRTA in UAE, excluding top management and managers. According to Krejcie and Morgan, a sample of 368 participants was selected using the simple random sampling method, which was deemed suitable for this type of research. The random sampling method was utilized to ensure that the chosen sample accurately represented the research population. The study employed a quantitative approach.

### 3.2 Research Instrument

The primary data was collected via closed-ended questionnaires that contained structured questions. The Likert rating scale was utilized to determine the degree of agreement or disagreement of the respondents with the given statement on a 5-point Likert scale. The 5-point Likert scale was interpreted as follows: 5 = Strongly Agree, 4 = Agree, 3 = Neither Agree nor Disagree, 2 = Disagree, and 1 = Strongly Disagree.

A questionnaire is a research instrument consisting of multiple questions that are administered to participants. It is a crucial tool for research as it includes a carefully crafted set of questions that are selected after thorough testing to obtain reliable responses from a selected sample. The survey questionnaire method provides a high level of predictive value for evaluating the effectiveness of individuals in society. The questionnaire used in this study was designed to collect data for measuring all the



constructs mentioned earlier. The language used in the questionnaire was simple and concise, without any complex or lengthy questions. As per standard practice, a question or statement in the questionnaire should not exceed 20 words or one full line when printed (Azeem, Ahmed, Haider, & Sajjad, 2021). The study employed straightforward, closed-ended questions to obtain the highest possible response rate.

### **3.3 Questionnaire Translation**

The participants were informed about the academic nature of the research and were guaranteed confidentiality. To answer each question, they had to mark the appropriate column with a tick, and no question should be left unanswered. A covering letter was created and attached to the questionnaire. A pilot test was conducted to evaluate the authenticity of the questions. Since the present study was conducted in the United Arab Emirates, it was imperative to translate the questionnaire into Arabic, considering that most of the respondents were Arab-speaking and had limited knowledge of other languages. The questionnaire was translated by a certified and skilled translator who carefully reviewed the survey's terminology and language. The accuracy of the translation was then verified by another professional specialist to ensure its reliability. The questions were dispatched for distribution. The questionnaires were sent through e-mail and couriers. The respondents were given ample time to respond. Then they were collected, interpreted and stored for further analysis.

### **3.4 Data Analysis**

This section provided an outline of the data analysis techniques that were utilized. Once the data had been collected, questionnaires were prepared for analysis. Prior to conducting any analysis, the research instrument items were thoroughly scrutinized using SPSS statistical package Version 26.0. This was done to ensure the accuracy of data entry, check for errors, and replace any missing values or outliers. Responses that had a high number of missing values or unengaged responses were eliminated from the analysis, as they could skew the results. Data entry was completed using SPSS software Version 26.0, and the same software was used to conduct data screening, descriptive analysis, correlation, and factor analysis. However, structural models with confirmatory factor analysis were carried out using the SEM technique and AMOS V.24 software, which was later justified. Analysis was utilized through Analysis of Moment Structures (AMOS). This software was chosen due to its advanced technical features as well as its user-friendly interface. A key benefit of using AMOS is that it provides a more precise evaluation of the discriminant validity of the instrument, as compared to exploratory analysis. The primary aim of this study is to confirm or refute an existing hypothesis, and AMOS was deemed suitable to achieve this objective (Statistics Solutions, 2020).

#### **4.1. Response Rate**

Out of the 579 questionnaires that were distributed, 379 sets were returned, out of which 368 responses were deemed suitable for analysis. This study achieved a response rate of 64%, which is considered very well when compared to similar studies found in the literature. Obtaining a high response rate needs careful attention to the research survey, including factors such as the motivation level of the population, the administration technique used, and the sample's representative of the entire population. A high response rate is critical as it impacts the accuracy of the results. The data analysis involved removing a total of 11 questionnaires, where 9 were eliminated due to missing data for more than 25% of the questions, and 2 were removed due to unengaged responses. Therefore, the data used for the analysis consisted of 368 cases out of the 379 sets that were returned. Roscoe (1975) recommended a response rate of at least 10 percent and a minimum of 30 percent of responses for questionnaire-based distribution in order to avoid sample bias. According to Sekaran and Bougie (2013), these guidelines were met in the current study, as the response rate was 64 percent. To ensure confidence in the goodness of the fit test, a sample size of at least 100 is recommended by Hoyle (1995). As the final sample size in this study is 368, SEM can be used with confidence. Therefore, there is no sample bias in this study and SEM can be utilized to analyze the data.

#### **4.2. Demographic Profile of the Respondents**

This section provides a descriptive analysis of the respondents' profiles, using basic descriptive statistics such as frequencies and percentages to summarize the data collected. Table 1 presents the frequency and percentage of respondents' demographic information in the study sample. The results indicate that there were more male (51%) than female (49%) respondents. Additionally, the majority of the respondents (68%) were single, while 26% were married and only 3% were divorced, with 3 respondents falling into the "other" category. The age groups of the sample showed that only 3% were above 50 years old, while 97% were in the age group of 20 to 49 years. In terms of educational background, 38 respondents (10%) had a diploma, 179 (49%) had completed secondary school, 108 (30%) had a bachelor's degree, 23 (6%) had a master's degree, and the remaining 20 (5%) had a PhD.

Item	Categories	Frequency	%
Gender	1. Male	189	51
	2. Female	179	49
Marital Status	1. Single	248	68
	2. Married	97	26
	3. Divorced	12	3
	4. Widowed	11	3
Age	1. 20 - 29 years	180	49
	2. 30 - 39 years	132	36
	3. 40 - 49 years	45	12
	4. Above 50 years	11	3
Educational Background	1. Diploma	38	10
	2. Secondary	179	49
	3. Bachelor's Degree	108	30
	4. Master's Degree	23	6
	5. Ph.D./DBA Degree	20	5
Source: Research Survey. AUTHOR			

**Table 1: Demographic Profile of Respondents**

### 4.3. Reliability Testing

According to Table 3, all the values of Cronbach's alpha are more than 0.786 and are regarded as good or excellent. This reveals that all the variables possess strong reliability. Normal Cronbach's alpha value should be more than 0.7.

Variable	Construct	Cronbach's Alpha	AVE
Dependent Variable	Organizational Innovation	0.786	0.978
Independent Variable	Transformation Leadership	0.816	0.976
Moderating Variable	Job Autonomy	0.885	0.977
Mediating Variable	Job Complexity	0.799	0.968

**Table 2: Reliability**

### 4.4. Correlation Matrix

Sekaran and Bougie (2012) suggest that the Pearson correlation matrix can be used to establish the connection between variables. In our research, we utilize the correlation matrix to detect the correlation between independent, dependent, mediating & moderating variables. The correlation value can vary from -1.0 to +1.0, and it is important to determine if the correlation between variables is statistically significant. A widely accepted significance level in social science research is  $p < .05$ . The correlation analysis calculates the Pearson correlation coefficient denoted by "r" to determine if variables are correlated. The "r" value of the Pearson correlation coefficient ranges from -1 to +1.

For the independent variable TL, according to table 4, the value of 'r' is .921, .934, & .951, there is a significant positive association between the variables. Similarly, in job autonomy, the moderating variable, the value of 'r' is .921, .935, & .922 inferring a high

positive association. The value of 'r' for job complexity, the mediating variable is .934, .935, & .943 indicating a significant positive correlation between the variables. The dependent variable, organizational innovation,'r' value is .951,.922 & .943, inferring a significant positive correlation with other known variables. Since all the 'p' values, (Sig 2 tailed), are less than 0.05, the standard value, they are statistically significant.

		Correlations			
		TL	Job Autonomy	Job Complexity	Organizational Innovation
TL	Pearson Correlation	1	.921**	.934**	.951**
	Sig. (2-tailed)		.000	.000	.000
	N	368	368	368	368
Job Autonomy	Pearson Correlation	.921**	1	.935**	.922**
	Sig. (2-tailed)	.000		.000	.000
	N	368	368	368	367
Job Complexity	Pearson Correlation	.934**	.935**	1	.943**
	Sig. (2-tailed)	.000	.000		.000
	N	368	368	368	367
Organizational Innovation	Pearson Correlation	.951**	.922**	.943**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	368	368	368	368

\*\* . Correlation is significant at 0.01 level (2-tailed).

**Table 3: Pearson Correlation among the Constructs**

#### 4.5. Kaiser-Meyer-Olkin (KMO) Value

It determines if the size of the sample is enough for factor analysis. The normal acceptable value must be above 0.5 (Kaiser, 1974). And according to Hutcheson & Sofronie (1999):

KMO = 0.90 is Marvelous

KMO = 0.80 is Meritorious

KMO =0.70 is Middling KMO =0.60 is Mediocre KMO =0.50 is Miserable

KMO below .50 is Unacceptable

In this particular test, the KMO value is 0.878 which infers the KMO value is marvellous. Bartlett's test of Sphericity that depicts the correlation matrix is different from the matrix, the Sig. value should be less than 0.05. And the Sig. value here is 0.000.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.878	
Bartlett's Test of Sphericity	Approx. Chi-Square	2522.841
	df	6
	Sig.	.000

**Table 4: KMO and Bartlett's Test**

#### 4.6 Communalities

Communalities		
	Initial	Extraction
TL	1.000	.952
Job Autonomy	1.000	.938
Job Complexity	1.000	.955
Organizational Innovation	1.000	.957
Extraction Method: Principal Component Analysis.		

**Table 5: Communalities**

To put it differently, communalities demonstrate the shared variation among variables and factors. When communalities are higher, it implies that a larger proportion of the variable's variance has been accounted for by the factor solution. According to McDonald (1985), communalities should be equal to or greater than 0.5 to achieve more accurate factor analysis measurements. Jain (2018) also suggested that higher communalities indicate a larger amount of extracted variance in variables by the factor solution. Accordingly, all the values are above 0.5 and accurate for factor analysis management.

#### 4.7. Total Variance Explained

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.803	95.074	95.074	3.803	95.074	95.074
2	.089	2.215	97.289			
3	.061	1.531	98.820			
4	.047	1.180	100.000			
Extraction Method: Principal Component Analysis.						

**Table 6: Total Variances Explained**

In this particular Table 6, the figures represent the percentage of a variable's variance that can be accounted for by the retained factors. Eigenvalue, on the other hand, indicates the number of extracted factors that should add up to the number of items subjected to factor analysis. Variables with high values are well represented in the shared factor space.

#### 4.8. Convergent Validity: Average Variance Extracted (AVE)

To evaluate convergent validity at the construct level, a widely used metric is the average variance extracted (AVE). If the AVE value is 0.50 or greater, it implies that, on average, the construct accounts for more than half of the variation in its indicators. Conversely, if the AVE is less than 0.50, it indicates that, on average, the items still contain more measurement errors than the variance explained by the construct (Hair et al., 2013). In this particular research, all the AVEs are more than 0.5, and acceptable, demonstrating good standards of internal consistency and reliability

Variable	Construct	AVE
Dependent Variable	Organizational Innovation	0.978
Independent Variable	Transformation Leadership	0.976
Moderating Variable	Job Autonomy	0.977
Mediating Variable	Job Complexity	0.968

**Table 7: The average variance extracted (AVE)**

#### 4.9 Discriminant Validity: Fornell-Larcker Criterion

The Fornell-Larcker criterion was introduced to assess discriminant validity, which involves comparing the square root of the AVE values to the correlations between latent variables. Specifically, for each construct, the square root of its AVE should exceed its highest correlation with any other construct. Additionally, exogenous constructs should have correlations exceeding 0.5. The results of discriminant validity for the full model are presented in Table 4.8 and demonstrate that the square root of each construct's AVE is greater than its highest correlation with any other construct, and the values exceed 0.5, indicating acceptable discriminant validity.

	TL	JA	JC	OI
Transformational Leadership	0.953**			
Job Autonomy	0.921**	0.937**		
Job Complexity	0.934**	0.935**	0.955**	
Organizational Innovation	0.951**	0.922**	0.943**	0.956

**Table 8: Discriminant Validity**

#### 4.10 Testing of Hypotheses

	Original Sample(O)	Sample Mean (M)	STD Deviation	T staistics Value. M/Std.D	P Value
TL-> JC -> OI	0.68	0.66	0.1493	4.421	0.000
JC ->TL->OI	0.56	0.57	0.1526	3.736	0.000
JA->JC ->OI	0.45	0.44	0.1537	2.863	0.000
OI-<TL ->JC->JA	0.52	0.51	0.1504	3.391	0.000

**Table 9: Testing of Hypothesis**

**H1:** The impact of TL on organizational innovation has been observed, and the findings indicate a noteworthy positive influence of TL on organizational innovation ( $p < 0.001$ ), implying that TL has a beneficial impact on organizational innovation. When the senior management adheres to TL, it stimulates innovation within the organization.

**H2:** Job complexity with TL has an influence on organization innovation and the hypothesis is supported as the p-value is less than.05, according to Table 9. Similarly, H3 and H4 were supported as the p-value was less than.05, according to Table 9.



No	Hypotheses	Findings
H1.	TL has a positive influence on organizational innovation through the mediating role of job complexity	Supported
H2	Job complexity with TL has an influence on organisational innovation	Supported
H3	Job autonomy has a moderating impact on job complexity, & on organizational innovation	Supported
H4	Organizational innovation was influenced by TL and job complexity with the mediating role of job autonomy.	Supported

**Table 10: Hypotheses Status**

## 5.1 Discussions & Findings

In this section, the above data analysis and various parameters will be discussed to know how they respond to the research questions and research objectives.

- a) To examine how TL impacts organizational innovation among employees of SRTA in UAE, with the mediating effect of job complexity

The primary aim of this investigation was to analyze how transformational leadership influences organizational innovation among employees in SRTA, UAE. H1 hypothesized this objective, and the AMOS SEM path coefficient regression indicated a regression relationship value of 0.68 between transformational leadership and organizational innovation. As per transformational leadership theory, which was previously discussed, this leadership style promotes behaviour that fosters high levels of creativity and performance, allowing leaders to align followers with tasks that optimize their performance (Yang et al., 2020). The data analysis, including Pearson Correlation, reliability tests, and hypothesis testing, supports the notion that transformational leadership enhances organizational innovation.

- b) To investigate the impact of job complexity on organizational innovation among employees

The second aim of this investigation was to assess how job complexity affects organizational innovation among employees in SRTA, UAE. The findings indicated a significant impact of job complexity on organizational innovation, with a  $\beta$  coefficient of 0.57, a t-value of -3.736, and a p-value of <0.001. Previous research by (Alameri Majed, Ameen, Isaac, & Bhaumik, 2019) also demonstrated a strong link between job complexity and innovation. This relationship was further confirmed by the data analysis, which included Pearson Correlation, reliability tests, and hypothesis testing,

- c) To explore how job autonomy moderates the relationship between TL and organizational innovation among employees

The third aim of this investigation was to explore how job autonomy moderates the relationship between TL and organizational innovation among employees in SRTA, UAE. Hypothesis H3 was tested and supported this. The findings

indicated that job autonomy has a moderating effect on the positive relationship between transformational leadership and organizational innovation among employees at SRTA, UAE. Specifically, dimensions like work schedule autonomy and work criteria autonomy were found to have a positive contribution towards organizational innovation, as evidenced by research conducted by Ting et al. (2021). Therefore, to achieve commitment and creativity in an organization, employees require a high level of job autonomy, as highlighted by Him (2020). This suggests that when employees are allowed to make decisions about their work schedules, task orders, and job planning, they are more likely to exhibit higher levels of organizational innovation. The data analysis, including Pearson Correlation, reliability tests, and hypothesis testing, supported this relationship.

- d) To determine how organizational innovation is moderated by job autonomy and the relationship between job complexity, and TL among employees.

The creation of a competitive and autonomous organizational environment, where employees are motivated, inspired, and intellectually stimulated, is a key component of transformational leadership. This type of environment encourages employees to take responsibility for their tasks and work collaboratively to improve operations, products, and processes, leading to innovation. This supports the notion that transformational leadership, along with job autonomy and job complexity (Alameri et al., 2019), is a driver of organizational innovation. The research conducted by Zhou and Gong (2019) also revealed a positive correlation between creative self-efficacy and job complexity. Studies have suggested that a greater level of job autonomy provides employees with the ability to go beyond the norm and innovate through the processes. Therefore, it is crucial for transformational leaders to embrace job autonomy to foster employee creativity and innovative methods. The data analysis, including Pearson Correlation, reliability tests, and hypothesis testing, supported this relationship.

## **5.2 Research Contributions & Implications**

The study has made significant research contributions by conducting a thorough empirical analysis to validate theories and assess the impact of TL on organizational innovation. It has also developed new concepts by highlighting TL and job complexity as potential paths to organizational innovation. Additionally, the research has revealed the moderating influence of job autonomy on TL and job complexity on organizational innovation within SRTA, a public sector organization in the UAE. Effective leaders are crucial for organizations to motivate and inspire employees, and this study demonstrates how job complexity and autonomy can also influence innovation within organizations. Overall, the research provides new insights into the relationship between TL, job complexity, and organizational innovation, and the study's extensive data analysis supports these findings. The study offers a comprehensive understanding of the antecedents of TL and their impact on individuals, groups, and overall organizational performance and innovation. The study's implications for academia are significant as it

opens up new perspectives on the influence of TL and job complexity on organizational innovation.

### 5.3 Limitations and Recommendations for Future Research

The researcher was unable to conduct an extensive study due to several constraints such as financial limitations, time restrictions, and geographical barriers. While the study did analyze multiple subjects, it could not address all the prevailing issues comprehensively. Therefore, there is a pressing need for a detailed study that covers all the necessary details and meets the industry's requirements. Only a handful of scholars have examined the perspective of innovative road construction companies and have not extensively published on transformational leadership, which plays a crucial role in knowledge creation and dissemination within organizations. Furthermore, the research model was only tested within SRTA in the UAE, and other researchers could validate the model in other public sectors in the UAE and different Arab countries or in other regions of the world. Additionally, this study only focused on the public sector and did not include the private sector. The current study only focused on a limited number of variables to predict organizational innovation, and future research could include additional variables such as reward and recognition, job satisfaction, and others. Furthermore, the study only explored TL and did not consider other types of leadership behaviours.

### 5.3. Conclusion

In conclusion, the research successfully achieved its primary objective of critically analyzing the relationship between TL, job complexity, job autonomy, and organizational innovation in the public sector of Sharjah. The study followed a well-defined methodology and conceptual framework, providing valuable knowledge to the field of public sector research. By examining the effect of valuable intangible resources on organizational innovation in the UAE, the study's findings could help Sharjah compete with other emirates in terms of performance, productivity, and innovation in their local government entities.

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