



Development of a transformative leadership model in the emergence of innovative work behaviors

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Abstract

In today's highly competitive and advanced world where innovation plays an important role, understanding the nature of employee behaviors in the emergence of innovative behaviors is essential to strengthen innovation and organizational success. By understanding the position and role of leaders in persuading employees to show creative behaviors, the current research has sought to develop a transformative leadership model in the emergence of innovative work behaviors. The way we are doing this research is by using both surveys and applied methods. In the first part of the research, we looked at other studies to find data, and in the second part, we asked 30 Pars airline industry experts to fill out a questionnaire. We used Smart PLS software to study how things are connected. At the end of the discussion, the analysis model shows that being a strong leader who inspires and takes action in making changes and running a business leads to a positive workplace. This affects how willing people are to take risks and be motivated to work, as well as how the leaders and employees learn and come up with new ideas. "Among the workers. "

Keywords: operational areas of change, organizational climate, transformational leadership, leadership functions, innovative behaviors.

Introduction

The airline industry has always been a leader in using new technology and changing how it works. It has gone through big changes over the years. The aviation industry uses new technologies like strong materials, software, and electronics. It has taken over 100 years to get to this advanced level and will continue to change in the future. become a big deal in technology (Mowery, 2023). The airplane has many complicated technologies and is seen as the safest and quickest way to travel. The aviation industry has made flying safer by always coming up with new ideas and making improvements to airplane technology during the making of aircraft



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(Chandola et al, 2023). New ideas can make things work better, cost less money, and help businesses make more things in factories. Additionally, modern systems use many advanced technologies like automation, robots, artificial intelligence, machine learning, virtual reality, and the Internet of Things. In 2021, Menezes and others published a study. In 2022, they published another one. However, digitalization has transformed the way the smart aviation industry works. New ways of using technology have made things work better, safer, and more secure in the way things are done, and have made passengers happier by knowing more about what they want and like (Abeyratne, 2020; Molchanova, 2020; Xiong and Wang, 2022). The use of technology has made it easier for airlines, airports, and other people involved in aviation to work together and communicate. (Kuisma, 2018) The airline industry is always changing because of new technology. To keep up with these changes, the aviation industry also needs to change. In the past few years, coming up with new ideas and being creative have been seen as very important for businesses to do well and be better than their competitors (Gansiniec et al, 2023). The importance of new ideas has caused lots of scientists to study and research this topic. Innovation is a popular subject that many researchers have studied. New ideas and improvements help organizations to grow and develop (Olavarrieta & Villena, 2014; Vila et al. , 2014) Coming up with new ideas is important for staying ahead in business and making sure the company does well over time. This helps to stand out from the competition and perform better. (Chen et al. , 2020) Many signs show that a company can make itself faster by getting employees moving and looking after their health (Bieńkowska et al. , 2022) It has been emphasized that "people, not products, are the primary assets of an innovative firm" (Gupta and Singhal, 1993, p. 41). It is not surprising that human resource management is becoming increasingly important in innovation (Seeck & Diehl, 2017). In the competitive world and according to the current changing conditions, the organization's human resources are the main competitive advantage that, if managed correctly, can be effective as a key factor in the success of organizations. Perhaps one of the new roles of human resource management can be seen as the development of organizational innovation. Innovation occurs when employees exhibit innovative behaviors and continuously develop new procedures to handle their tasks and solve workplace problems (Yaditmaja et al., 2023). Recently, the debate about the importance of human resource management for innovation has intensified (Easa & Orra, 2021), emphasizing the role of human resource management practices as "the application of a selection, training and development, performance evaluation and compensation". It is understood. Kianto et al., 2017, p. 12). Despite the importance of human resource management for innovation, there is little research in this area (Olavarrieta & Villena, 2014). So far, considerations have focused on high-performance work practices, especially motivating and engaging employees to create innovation, the importance of employee engagement, and their mobility and combination (Ng and Dastmalchian, 2011) to create innovation. In addition, innovation-based human resource management is considered a black hole (Seeck & Diehl, 2017) and one of the least explained organizational phenomena that needs to be supported by future research (Easa & Orra). , 2021; Jotaba et al., 2022). Managing people is harder than managing money or technology. A good



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system for managing employees is very important for a business to run well. The business needs good ways to manage and support its employees (Aslam et al, 2023). So, researchers, managers, and policy makers care about what comes before innovation because new technology and innovation are really important for making the economy grow. (Sohn et al, 2023) So, many government organizations need to encourage their employees to come up with new ideas. Employees who are motivated to come up with new ideas for their work and for the organization are showing innovative work behavior. This suggests that innovative behavior is a creative process in which employees are motivated to use unusual methods to solve their job problems. Research results showed that leadership styles predict employees' innovative behavior in the workplace (Gonzel-Jensen et al., 2018; McCann and Sparks, 2019; Zheng et al., 2019). Styles are the way a leader leads and affects how their team behaves and thinks. This makes sure that people will do what their leader asks them to do. Scientists think that transformational and interactive leadership are the best indicators of how creative and new ideas public workers can come up with. A manager who is good at leading and works well with others is more successful than other managers. A transformational leader can encourage their team to use their creativity and new ideas at work. Also, it gives leaders the ability to influence and makes their team members believe in their ability to get the job done. Unfortunately, different studies have different opinions about how transformational and transactional leadership affect innovative behavior (Hansen & Pihl-Thingvad, 2019). Also, they point to the positive effect of the relationship between transformational-transactional leadership and innovative behavior (Muchiri et al., 2020). Some studies showed the negative effect of transformational leadership (Chang and Li, 2021; Ma and Jiang, 2018) and transactional leadership on innovative behavior (Afsar et al., 2017; Gunzel-Jensen et al., 2018). As a result, the different results of previous studies are necessary for further studies. Innovative work behaviors are not considered very important in the job description because they are not considered in the organizational reward system because they are optional extra-role behaviors that go beyond employee performance expectations (Amankwaa et al, 2019). A few research studies have shown that leadership, especially transformational leadership, has a big impact on how employees come up with new ideas and work. In recent years, studies have found that good leadership is important for encouraging employees to be innovative at work. Workplace leaders decide how resources are used, what tasks people do, and how employees behave. By using things we already have, like rewards, or creating new things, like knowledge (Fischer, 2017). Transformational leadership is a very important style of leadership that has a big impact on how well a company does, like how innovative it is and how happy its employees are (Le and Lei, 2019). However, we need to learn more about how transformational leaders help employees to be more creative at work. So, it's really important for a company to have good leaders who can help their employees work better and come up with new ideas for products, services, and how they do their work (De Zubilki et al. , 2019) So, transformational leadership is suggested as a way to deal with and solve the problems that come up when trying to be open to new ideas and ways of doing things.



Research literature

Transformational Leadership

Today, effective leadership is one of the main factors of growth and progress in organizations, and by using work management, it is possible to create a suitable environment for sustainable development and correct and optimal management of banks' affairs, as well as to prevent the wastage of energy and capital of banks. . Extensive changes and globalization in today's world require a different and new leadership style that realizes the goals of the organization with the optimal use of material and human resources and assets and is able to develop capacities and use them (Mortazavi et al., 2006). Transformational leadership, as one of the most effective leadership styles, emphasizes the development of followers, encouraging them to self-actualize and strive to fulfill commitments beyond expectations (Asgari et al., 2008).

Leaders who take responsibility and use creativity to motivate their employees can lead their organizations to become learning organizations. This can inspire employees to work harder and participate more willingly. (Mirkamali et al.) In 2019 Transformational leadership helps people come together as a group and make changes. This helps the organization learn and makes people think more creatively and confidently. Having a learning culture in a company leads to employees being very committed and adaptable to outside changes. This helps the company do better and makes employees less likely to quit their jobs (Zali, 2017). In today's world, we need to keep coming up with new ideas and making improvements to our organization in order to keep it moving forward and avoid it getting stuck or falling apart. To keep up with the fast-changing world, we need to be creative and come up with new ideas. We should be ready to adapt to changes and find new ways to deal with them. This will help us make a difference in the world. In 2018, according to the source (page 229). At the organizational level, the concept of creativity can be defined as the generation of valuable and useful new ideas for products, services, processes and trends by individuals or groups (Martins and Terblanch, 2003). New and creative actions

Being creative and trying new things is really important for businesses to be successful and keep growing, especially for hotels. It helps them to adjust to changes in the business world and stay competitive. In places like hotels that focus on using advanced technology and giving top-quality products and services, it's important for employees to come up with new and creative ideas for their work (Afsar and Badir, 2017; Chu and Walker-Price, 2018). This is because when employees are creative and come up with new ideas, they can find ways to help customers and make our products and services better (Kaya & Karatepe, 2020). Additionally, companies can use their employees' creative ideas to make plans for the future, grow their share of the market, and achieve long-term success. This will help them stay ahead of their competition. To make a business better and save money, it's important to figure out what makes employees in the hospitality industry come up with new ideas. This can help the business do



well even when things are changing quickly. The text is not visible, so I cannot rewrite it. Can you please provide the text that you would like me to simplify. Many studies have looked at how leadership affects how people work and found that it is important for creating new and innovative ideas (for example, Khaola and Coldwell, 2019; Nazir et al.)

Among many leadership styles, there has been a lot of focus on the effects of transformational leadership (Zhu and Vellamori, 2018). Empirical research has shown that transformational leadership, which strives to raise followers' expectations, create a sense of vision and mission, and help followers emphasize rational solutions, is a critical driver of employee creativity and innovative work behavior (Groschlej et al. et al., 2020, Jyoti and Dave, 2015). The effectiveness of transformational leadership in the busy and constantly evolving airline industry has been highlighted by several academics (e.g., Liang et al., 2017; Rabiul & Yen, 2021).

This leadership style encourages employees to reach their maximum potential by motivating them, stimulating their minds, and giving them the freedom to do so (Lee et al., 2019).

Transformational leadership and innovative work behavior

Transformational leadership is a style of leadership in which the leader, by changing the values, interests, beliefs and attitudes of followers, motivates them to act beyond expectations and personal interests (Arthur, 2014). According to Bass (1985), a transformational leader is a person who persuades followers to do something beyond what is normally expected. Indeed, by motivating their followers and stimulating their innovative ideas throughout the organization, transformational leaders create a flexible organizational environment that challenges employees' emotions and prompts them to seek creative and innovative perspectives at work. leads to. Transformational leadership is a multidimensional concept. This concept has four dimensions of ideal influence or charisma (acting as a role model and gaining the trust and respect of followers). Inspiring motivation (creating hope and increasing commitment in followers and creating an attractive and inspiring vision); intellectual stimulation (encouraging followers to challenge the status quo and encourage new approaches); and individual attention (paying attention to followers' needs and listening to their concerns).

Researchers state that transformational leadership is the main driver of employee innovation due to the creation of a positive and collaborative climate for change (Watts et al., 2020). Transformational leaders can also create innovation by modifying employees' values, beliefs, and motivations to innovate. In addition, Bass (1986) stated that one of the most important characteristics of a transformational leader is to create emotional relationships with his followers. These relationships, as stated by Hunt et al. (Hunt et al., 2004), expected to lead to higher levels of creativity and innovation. Transformational leaders also have high expectations that encourage employees to challenge the status quo, take risks, and especially pursue creative work (Gong et al., 2009).



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This leadership style encourages employees to change their thinking and try new and difficult things. According to Amankwaa and others. In 2021, leaders who transform people make them feel really good about themselves and feel hopeful, so that they are more likely to work hard to reach their goals. "Reach or accomplish"

The theory of social cognition says that people's actions are influenced by things inside them and things around them. From an employee's point of view, internal factors mean how creative they are and their ability to come up with new ideas. The other factors are about the work environment and how leaders influence them.

Another theory that can explain the effect of transformational leadership on the innovative behavior of employees is the Job Demands-Resources (JD-R) model (50). According to this theory, job resources (such as transformational leadership) motivate employees and lead to positive work outcomes (such as innovative behavior) (Shafley et al., 2014). Supervision, job variety, perspectives, coaching, social support, voice, learning and growth paths, which can be seen as a system that can be structured by transformational leaders, are components of job resources. In addition, according to resource conservation theory, when an individual has job resources, he tends to accumulate personal resources (eg, dimensions of psychological capital) that are positively related to work psychology and performance. In this regard, psychological capital can be integrated into the JD-R model as a mediator between job resources (eg, transformational leadership) and positive work outcomes (eg, innovative behavior). Past empirical studies show a positive relationship between transformational leadership and innovation (Grasledge, 2020; Luvas et al., 2020; Chabi et al., 2019). Luvas et al. (2020) showed in a meta-analysis that there is a positive relationship between transformational leadership and individual and group innovation. A meta-analysis study by Li et al. (2020) also showed that there is a positive correlation between transformational leadership and creativity and innovation. Despite the above discussions, few studies have investigated the impact of transformational leadership on innovative work behaviors of employees in developing countries, especially in the public sector (Amankawa et al., 2019).

Research methodology

Due to the type of research, as well as the extent of the statistical community and the complexity of the statistical sample, and for faster access to the opinions of the respondents, the best method of data collection was considered in this research. The following methods were used in order to achieve the desired results and carry out the research method properly:

- Library studies: library resources were used to compile theoretical foundations, definitions and concepts, which have been the most important and useful source of scientific articles, theses, search engines on the Internet, banks and information sources.

Field research: We used a questionnaire to gather the information we needed and measure the research variables. The things we studied in our research were checked by experts before we



asked people about them. We used the questions that everyone agreed on to collect our data. "changed or turned into. "

This study describes and surveys the relationship between different things. It tries to collect data in a practical way. The researcher used math to study how things are connected and how they affect each other. Here are the explanations:

To do this research, we will study and learn about two different groups of people. This study used both numbers and descriptions to look at information (meta analysis). It focused on two groups: one with 20 experts who know a lot about leadership in the Pars airline industry, and another with 167 people who are also experts. Pars airline industry was chosen using Cochran's formula from a group of 295 people.

In this part, we explain in detail how we did the research and the steps we took to carry it out. Research is when someone tries to learn more about different things and how they are connected to each other. The researcher uses a step-by-step approach to gather information about how things work and what they mean. They collect data, think about it, evaluate the results, and then share their findings.

The research method is a way of doing things. It's a set of techniques that can be used in different situations. Using a research method means following a specific plan and steps to do the research. Research method is the first thing you need to think about when doing research. If you pick the right method for your research, you can finish it faster and trust the results more. Research method is how a researcher uses different ways and tools to get reliable and high-quality results in their research.

So, it's really important to pick a good way to do research and focus on making it scientific. The research right now is just exploring the issue to figure out what is going on. It is focused on the aviation industry in Pars and how new developments are happening. The research is descriptive and looks at how things are related, without changing anything. This research uses a mix of methods. It collects and analyzes real data using statistics, reviews literature, and analyzes content. It also gets opinions from experts using the Delphi method. This research looks at both quantitative and qualitative aspects, which has its advantages.

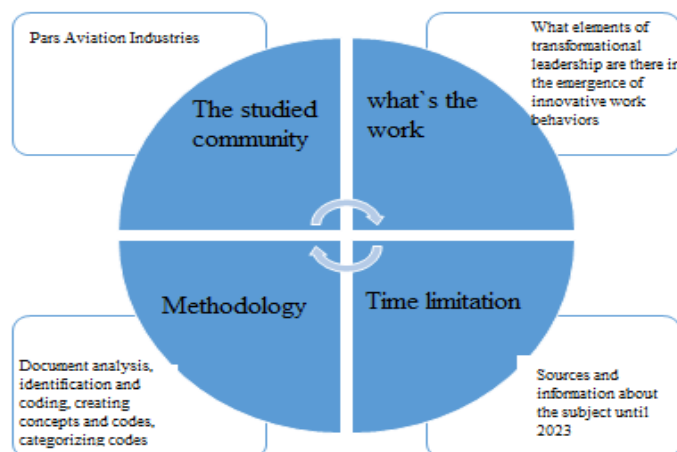
Analyzing and understanding information.

Discovery from the research of documents and books

This research was done in Tehran, and 30 teachers and experts were chosen using a method called snowball sampling. We used a one-on-one interview to gather information. To study the information, we used a method called qualitative content analysis with a traditional approach. The current research uses a method that describes and analyzes content. Content analysis is a way to study and analyze the important parts of a message in a organized and fair manner.



The first step: setting the research question; In this step, as the first stage of ultracomposite study, the basic press or presses are first set. In order to answer the research question in this method parameters such as; What is work? Study community? time limitation? And finally, there is the issue of how the method should be answered for the correctness of the synthesis method and the completion of the research. In the picture below, the research questions are specified along with the investigated parameters.



Picture 1. Research parameters and questions based on the first step of the metacombination method

Second step: systematic review of the works; In this step, all texts and articles related to the word question were examined. Qualified researches were selected to enter the meta-composite analysis. In meta-composite studies, secondary data conducted with qualitative methods are used in the subject area of the research to collect research data.

The third step: choosing the right articles; At this stage, the researcher must evaluate the quality of the stored resources based on comprehensive and restricted keywords in scientific databases. The purpose of this step in the meta-composite study process, which is considered an important step, is to eliminate studies with low validity.



Fourth step: extraction of text information; In this stage of the qualitative meta-study method (meta-composition); The researcher should select one of the nine methods of this method according to the nature of the subject and the collected sources.

Fifth step: Look carefully at and put together the qualitative results. After gathering the information in the last step, the researcher looked closely at and explained the qualitative findings from previous studies to give a new and organized interpretation using a new method. The table below has codes and categories for the adaptive approach.

Table (1) codes and categories of research components after the interview

Categories	code
Changing values	A1
Changing interests	A2
Change of beliefs	A3
Changing the attitudes of followers	A4
Exceeding expectations	A5
Acting beyond self-interest	A6
Creating a positive and collaborative atmosphere for change	A7
Creating emotional relationships with followers	A8
Challenging the status quo	A9
to take risks	A10
Stimulation of internal factors	A11
Stimulation of external factors	A12
Supervision	A13
Variety of work	A14
Perspectives	A15
coaching	A16
social support	A17
The way to learn and grow	A18
Pursuing creative work	A19
Encouragement to think differently	A20
Adopting a challenging new approach	A21
Motivating followers	A22
Creating a flexible organizational environment	A23
Challenging employees' emotions	A24
Ideal influence or charisma	A25
Inspirational motivation	A26
intellectual stimulation	A27
Individual attention	A28

Source: research findings

In the following, the following new codes are extracted by combining the indicators:

Table (2) codes and categories with comparative approach (second stage)



Components	Categories	code
Areas of change	A1,A2,A3,A4	ML1
Fields of action	A4,A5	ML2
Organizational atmosphere	A7,A8,A9,A23	ML3
risk taking	A10,A17	ML4
Employee motivation	A11,A12,A20,A21,A22,A24	ML5
Leadership functions	A13,A14,A15,A16	ML6
Creative learning	A18,A19	ML7
Transformational Leadership	A25,A26,A27,A28	ML8

Source: research findings

Sixth step: checking the quality of the results. We carefully looked at the information we gathered and made sure it was sorted and organized correctly. We also went back and double-checked the data to make sure it was accurate. All these things were done to make the research findings better. Another important tool that was used to make sure the research was valid was asking experts for their opinion. The experts' ideas were formed using a method called structural equations, which will be talked about later.

Hypotheses testing using linear structured relationships

At this stage, in order to evaluate the conceptual model of the research and also to ascertain the existence or non-existence of a causal relationship between the research variables and to check the fit of the observed data with the conceptual model of the research, the research model was also tested using the structural equation model. The results of the model test are reflected in the graph.

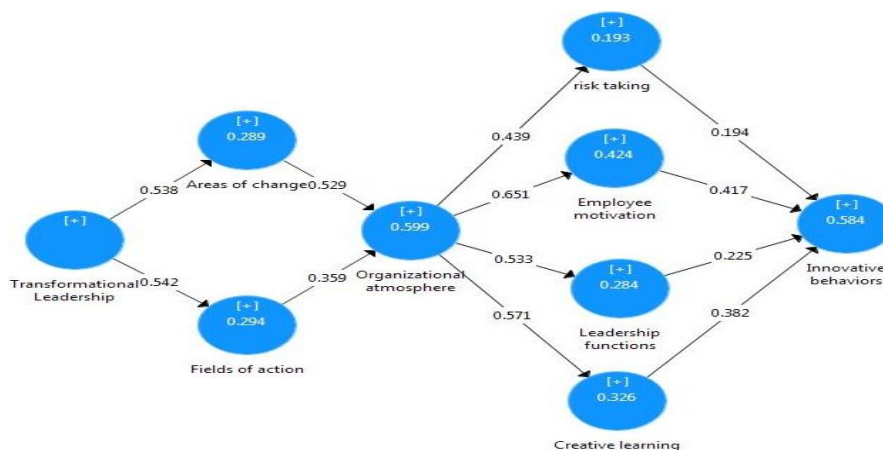


Diagram 1) Measurement of the overall model in standard mode

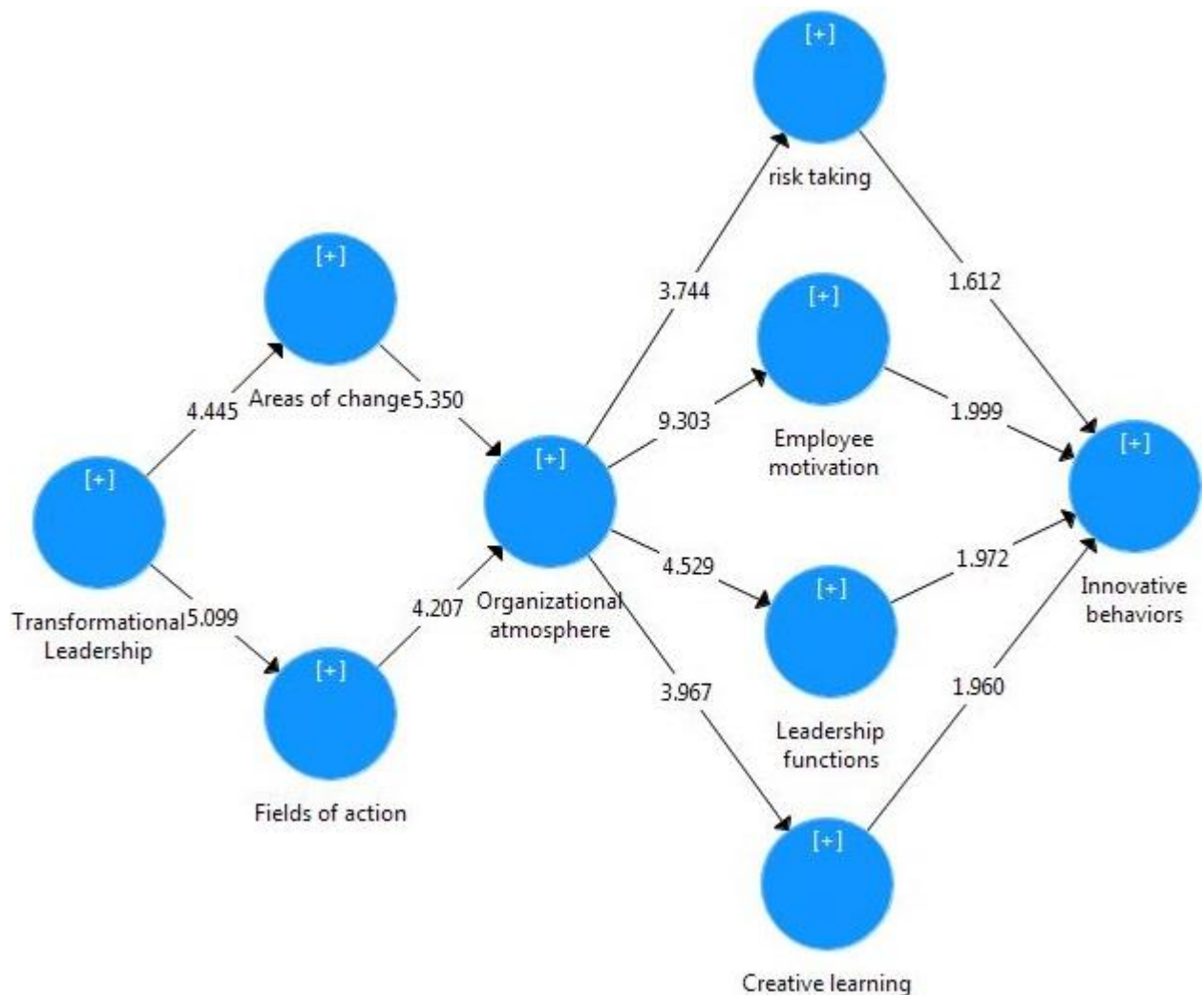


Diagram 2) Measurement of the overall model in the significant mode

Validity, reliability and fit of the model

Cronbach's alpha and composite reliability were used to measure reliability, convergent validity was used to measure validity, and GOF index was used to measure model fit:

Table (3) reliability and validity of external models

Fornell and Larcker matrix								MSV	AVE	CR	variable*
8	7	6	5	4	3	2	1				
							0.74	0.19	0.55	0.78	Areas of change
						0.80	0.34	0.47	0.64	0.84	Fields of action



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					0.87	0.47	0.33	0.42	0.61	0.91	Organizational atmosphere
				0.84	0.65	0.69	0.44	0.47	0.72	0.88	risk taking
			0.80	0.36	0.21	0.25	0.06	0.14	0.64	0.96	Employee motivation
		0.82	0.31	0.22	0.19	0.16	0.05	0.15	0.61	0.89	Leadership functions
	0.74	0.21	0.19	0.19	0.17	0.16	0.04	0.16	0.62	0.91	Creative learning
0.16	0.16	0.21	0.26	0.12	0.11	0.11	0.03	0.19	0.66	0.92	Transformational Leadership

A Cronbach's alpha of 0.7 or higher shows that something is reliable.

If the CR number for each structure is over 0.7, it means the measurement model has good internal stability.

An AVE value higher than 0.5 means that the convergent validity is acceptable.

The numbers 0.01, 0.025, and 0.036 are considered weak, medium, and strong values for GOF. The result of 0.62 shows that the model fits very well.

Conclusion

The present study adds the development of the transformational leadership model to the emergence of innovative work behaviors to previous empirical research on the relationship between transformational leadership and the emergence of innovative behaviors. The goal was to develop a transformational leadership model in the emergence of innovative work behaviors (interdependent self-interpretation and independent self-development). This study suggests two important results:

In the past, research has found that transformational leadership is linked to more creative behavior. Please simplify this text. Transformational leadership has an impact on making changes and getting things done in a company. Transformational leadership has changed the way organizations work by encouraging change and taking risks. This has also made employees more motivated and creative, and has led to new ways of doing things.

Next, certain factors like risk-taking, motivation, leadership roles, and learning influence how transformational leadership leads to employees showing innovative behavior (Yung et al., 2003). Our findings suggest that when employees feel valued, trusted, and have control over their work, they are more likely to come up with new ideas and solutions. We found that when employees feel empowered and creative, they are more likely to come up with new and innovative ideas. This confirms what other researchers have also found.



In general, the study found that when managers use transformational leadership, employees are more likely to be innovative at work. This is similar to what other studies have found. (Grasledge et al. , 2020; Lovas et al. , 2020) This discovery shows that transformational leaders play a big role in helping employees use new ideas. Good leadership can inspire and motivate employees to do innovative work. Leaders who take care of their employees' needs and listen to their problems help their employees to be more open to new ideas and ways of working.

Restrictions on research

Just like with all research, this study has some restrictions.

Not enough study in this area

The government has people who collect information.

The information given is not correct.

Software boundaries

The main problem with research is that the results may not apply to other groups of people. This study also follows this rule. Its results can only be applied to the specific location and group of people in the study.

There were some problems with the questionnaire. Some people didn't want to answer, some didn't answer accurately, and some may have answered the questions in a bad way. This is one of the current limitations.

We collected individual research data from people themselves. But if their opinions and perceptions are mixed with biases and judgments, it could affect the accuracy of our research results.

Lack of educational files in the field of statistical analysis

Practical suggestions

In this section, according to the research results, practical suggestions are presented to the officials and managers of the aviation industry in Iran:

1. Employees should be encouraged to analyze success factors to enrich their knowledge.
2. Experienced employees and employees close to retirement should be invited to register their knowledge and experience.
3. Employees of the company should be trained in work teams.
4. Problem solving groups should be formed in the company consisting of employees from different departments.



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5. Creative ideas that appear from the employees should be evaluated by the manager and if necessary, the best idea will be rewarded.
6. Having the opportunity to talk with other personnel about successful work plans and activities in order to understand why they are successful.
7. The problems in the company should be solved not only by identifying the solutions, but also by identifying the causes and how to prevent them from occurring.
8. In the company, management skills such as leadership, coaching and team building should be emphasized as much as technical skills.
9. In the company, the training of employees should be emphasized equally at all levels.
10. Experienced employees should be hired from outside the company.
11. Employees share their experiences with others after completing the projects.
12. Employees should analyze success factors to enrich their knowledge.
13. Special projects in the company should be assigned to specialized employees in the company.
14. Acquiring knowledge from outside the company and updating it inside the company.
15. Increasing the necessary information and awareness of the activities of other competitors.
16. Strengthen work teams and create problem solving groups
17. Strengthening and supporting creative and innovative ideas and teaching them to company employees.
18. Creating opportunities for self-evaluation of employees in order to solve existing obstacles and problems for the development of the company.
19. Identifying employees who are more active in the field of organizational learning.
20. Putting employees in their specialized position to create motivation in the field of competition with each other for the benefit of the company
21. Creating product innovation to increase competitiveness with other companies in order to develop business performance
22. Increasing the level and specialized skills of the airline company employees, because the development of the level and specialized skills of the employees will increase the competitiveness among them in order to increase the product quality and as a result, the favorable commercial performance of the company.
23. Encouraging employees to create new ideas to develop business performance



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