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The Moderating Role of Organizational Inertia in the Causal Relationship Between Information Technology Utilization and Creativity with Organizational Agility (A Case Study of Employees of Khuzestan Telecommunication Company)

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Abstract

The aim of this study was to determine the moderating role of organizational inertia in the causal relationship between information technology utilization and creativity with organizational agility among employees of Khuzestan Telecommunication Company. In terms of purpose, this research was applied in nature and was conducted using an analytical survey method with a correlational-causal approach. The statistical population consisted of all employees of Khuzestan Telecommunication Company. According to records obtained from the Human Resources Department, the population comprised 700 employees. Data collection was carried out through a combination of library-based research and field distribution of questionnaires. To collect the required data, a questionnaire was designed based on instruments employed in previous studies. A five-point Likert scale was used for the questionnaire items. The validity of the instrument was confirmed through face validity, and its reliability was established using Cronbach's alpha coefficient. Data were analyzed using Structural Equation Modeling (SEM) with SmartPLS software. The findings indicated that the status of organizational agility was 2.97, organizational creativity was 3.10, organizational inertia was 2.56, and information technology utilization was 3.24. The results of hypothesis testing revealed that information technology significantly affects organizational agility (path significance value = 4.26; path coefficient between the two latent variables = 0.300). Furthermore, organizational creativity significantly influences organizational agility (path significance value = 3.61; path coefficient between the two latent variables = 0.189). Organizational inertia also exhibited a significant negative effect on organizational agility (path significance value = 10.98; path coefficient between the two latent variables = -0.588). Finally, organizational inertia moderates the causal relationship between information technology utilization and organizational agility in Khuzestan Telecommunication Company ($b = -0.124$, $t = 2.126$, $p = .034$). In other words, with the inclusion of organizational inertia as a moderating variable, the positive effect of information technology utilization on organizational agility is weakened.

Keywords: Organizational Inertia, Information Technology Utilization, Creativity, Organizational Agility.



1. Introduction

The contemporary business environment is characterized by rapid technological change, increasing competitive pressures, digital transformation, globalization, and continuously evolving customer expectations. Under such conditions, organizations are required to respond rapidly to environmental changes while maintaining efficiency, innovation, and sustainable performance. Consequently, organizational agility has emerged as one of the most critical capabilities enabling organizations to adapt to environmental uncertainty, exploit emerging opportunities, and sustain competitive advantage. Organizational agility refers to an organization's ability to sense environmental changes, respond quickly to emerging opportunities and threats, and continuously adapt its structures, processes, and resources to dynamic market conditions (Ahlbäck et al., 2017; Anunciação et al., 2022). Agile organizations demonstrate flexibility, responsiveness, learning capacity, and adaptability, allowing them to achieve superior organizational outcomes in increasingly turbulent environments (Appelbaum et al., 2017; Bangura & Lourens, 2024).

Recent studies have consistently emphasized the strategic importance of organizational agility as a determinant of organizational effectiveness and long-term success. Organizational agility has been linked to improved organizational performance, innovation outcomes, service quality, employee well-being, resilience, and competitive advantage. In rapidly changing industries, organizations possessing greater agility are more capable of responding to customer needs, technological advancements, and market disruptions than their less agile counterparts (Alotaibi, 2022; Bangura & Lourens, 2024; Cui, 2025). Furthermore, organizational agility serves as an intermediary mechanism through which organizations transform their capabilities and resources into superior performance outcomes (Abdel-Aty & Deraz, 2022; Chung et al., 2019). Therefore, identifying the factors that enhance or inhibit organizational agility has become a major concern for researchers and practitioners alike.

Among the various antecedents of organizational agility, information technology has received considerable scholarly attention. Advances in digital technologies have fundamentally transformed organizational operations, communication systems, decision-making processes, and knowledge management practices. Information technology provides organizations with the infrastructure necessary for rapid information exchange, efficient resource coordination, enhanced decision-making, and improved responsiveness to environmental changes. Organizations equipped with sophisticated information technology systems can collect, process, and disseminate information more effectively, thereby increasing their ability to detect opportunities and respond to market demands in a timely manner (Awwad et al., 2022; Cepeda & Arias-Pérez, 2018). Information technology capabilities contribute to organizational flexibility by enabling real-time communication, process integration, and data-driven decision-making, all of which are essential components of organizational agility.

The relationship between information technology and organizational agility has been supported by numerous empirical studies. Research indicates that information technology capabilities positively influence organizational agility by facilitating organizational learning, enhancing operational flexibility, and supporting dynamic capabilities (Awwad et al., 2022; Cepeda & Arias-Pérez, 2018). In addition, information technology serves as an important enabler of digital transformation and strategic adaptability, allowing organizations to respond more effectively to environmental changes and customer expectations. Studies conducted in various sectors have demonstrated that organizations with stronger information technology infrastructures exhibit higher levels of agility and improved organizational outcomes (Farzadmanesh et al., 2024; Rahmani et al., 2020). As organizations increasingly rely on digital platforms and technological innovations, understanding the role of information technology in fostering organizational agility becomes increasingly important.

In recent years, the emergence of advanced digital technologies, including artificial intelligence, big data analytics, cloud computing, and digital platforms, has further strengthened the connection between technology and organizational adaptability. Artificial intelligence capabilities, in particular, have been shown to enhance strategic agility and support creative processes within organizations by enabling rapid information processing and intelligent decision-making (Ameen et al., 2024). Similarly, big data analytics contributes to organizational agility by generating actionable insights and supporting organizational responsiveness to changing market conditions (Awan et al., 2021). These developments suggest that



information technology is no longer merely a support function but rather a strategic resource that plays a central role in shaping organizational agility.

Another important determinant of organizational agility is organizational creativity. Creativity refers to the generation of novel and useful ideas, solutions, processes, products, or services that contribute to organizational effectiveness and innovation. In dynamic business environments, creativity enables organizations to identify innovative solutions, develop adaptive strategies, and continuously improve organizational processes. Organizational creativity serves as a foundation for innovation and change, helping organizations cope with uncertainty and complexity while maintaining competitiveness (Al Khasabah & Al-Badayneh, 2025; Beldjazia, 2022). Creative organizations are better equipped to generate new knowledge, solve complex problems, and identify emerging opportunities, thereby enhancing their capacity for agile responses.

The literature suggests a strong relationship between creativity and organizational agility. Creativity enhances the ability of organizations to adapt to changing circumstances by encouraging experimentation, learning, and innovation. Organizations that foster creative thinking among employees are more capable of developing flexible responses to environmental challenges and implementing innovative solutions in a timely manner. Empirical evidence indicates that organizational creativity positively influences agility, innovation performance, and organizational adaptability (Beldjazia, 2022; Mohammadi & Alizadeh, 2019). Furthermore, organizational creativity has been recognized as a key mechanism through which organizations transform knowledge and technological resources into innovative outcomes and agile capabilities (Awan et al., 2021; Cui, 2025).

Creativity also contributes to agility through its influence on organizational learning and knowledge creation. Organizations that encourage creativity typically develop cultures that support experimentation, collaboration, and continuous improvement. Such environments facilitate knowledge generation and sharing, which are essential prerequisites for agile behavior. Previous studies have demonstrated that knowledge creation processes contribute significantly to organizational agility and performance, highlighting the strategic value of creativity in modern organizations (Chung et al., 2019). Consequently, organizational creativity is increasingly viewed as a strategic resource that enables organizations to navigate uncertainty and sustain competitive advantage.

Despite the recognized importance of information technology and creativity in promoting organizational agility, organizations often encounter barriers that limit their ability to adapt and respond effectively to environmental changes. One of the most significant barriers identified in the literature is organizational inertia. Organizational inertia refers to the tendency of organizations to resist change and maintain existing structures, routines, beliefs, and practices despite environmental demands for adaptation. Inertia emerges from deeply embedded organizational routines, established decision-making patterns, cultural norms, and cognitive frameworks that hinder organizational responsiveness (Alós-Ferrer et al., 2016; Badeleh et al., 2019).

Organizational inertia has attracted increasing attention because of its profound implications for organizational performance, innovation, and adaptability. While stability and consistency can provide certain organizational benefits, excessive inertia may reduce flexibility, limit innovation, and impede organizational transformation. Organizations characterized by high levels of inertia often struggle to respond effectively to environmental changes, resulting in diminished competitiveness and reduced organizational effectiveness (Jafari et al., 2018; Kianpour et al., 2023). Consequently, organizational inertia is frequently viewed as a critical obstacle to organizational agility and strategic renewal.

Several scholars have investigated the antecedents and consequences of organizational inertia. Research has identified structural rigidity, cognitive limitations, resource dependencies, organizational routines, and social dynamics as major contributors to inertia (Kianpour et al., 2023; Rostamzadeh et al., 2023). Organizational inertia has been associated with reduced innovation, limited organizational learning, diminished adaptability, and weaker organizational performance (Babazadeh et al., 2019; Jafari et al., 2018). Moreover, inertia may prevent organizations from fully leveraging their technological and creative capabilities, thereby limiting the potential benefits of investments in information technology and innovation initiatives.

The negative relationship between organizational inertia and organizational agility has been documented in numerous studies. Organizations with high levels of inertia often experience delays in decision-making, resistance to change initiatives, and difficulties in implementing new technologies or innovative practices. These factors reduce organizational responsiveness



and hinder the development of agile capabilities (Chaharmahalizadeh, 2021; Deyhimpour et al., 2020). Furthermore, organizational inertia may undermine the effectiveness of strategic initiatives designed to enhance adaptability and competitiveness, making it an important variable to consider when examining organizational agility.

Recent research has suggested that organizational inertia may not only directly affect organizational agility but may also influence the relationships between agility and its antecedents. Specifically, organizational inertia may function as a moderating variable that weakens the positive effects of information technology and creativity on organizational agility. Although organizations may invest substantially in technological infrastructure and creativity-enhancing initiatives, the benefits of these investments may be limited when organizational inertia is high. In such circumstances, rigid structures, entrenched routines, and resistance to change can prevent organizations from effectively utilizing technological capabilities and creative potential (Cao et al., 2021; Farhadpour & Kazemi, 2023).

The moderating role of inertia has received growing attention in the literature. Previous studies have shown that inertia can weaken the relationship between organizational learning and innovation, thereby reducing organizational adaptability and performance (Babazadeh et al., 2019; Farhadpour & Kazemi, 2023). Similarly, research examining the relationship between creativity and agility has identified inertia as a potential barrier that limits the translation of creative ideas into agile organizational responses (Mohammadi & Alizadeh, 2019). Furthermore, information technology capabilities may fail to produce expected agility outcomes when organizations are constrained by rigid structures and resistant cultures (Cao et al., 2021; Rahmani et al., 2020).

The telecommunications industry represents an especially relevant context for examining these relationships. Telecommunications companies operate in highly dynamic environments characterized by rapid technological advancements, changing customer expectations, increasing competition, and ongoing digital transformation. In such settings, organizational agility is essential for maintaining competitiveness and delivering high-quality services. At the same time, telecommunications organizations often possess complex structures and established routines that may contribute to organizational inertia. Consequently, understanding how information technology utilization and organizational creativity influence organizational agility, and how organizational inertia moderates these relationships, is of considerable theoretical and practical significance.

Although previous studies have separately investigated the relationships among information technology, creativity, organizational inertia, and organizational agility, relatively limited attention has been devoted to examining these variables simultaneously within a comprehensive causal framework. Moreover, empirical evidence regarding the moderating role of organizational inertia remains limited, particularly in the context of telecommunications organizations (Abualazm et al., 2024; Belikova et al., 2024; Farzadmanesh et al., 2024; Heidari, 2024). Addressing this gap can contribute to a more comprehensive understanding of the mechanisms through which organizational agility is developed and constrained.

Therefore, the present study aims to investigate the moderating role of organizational inertia in the causal relationship between information technology utilization and organizational creativity with organizational agility among employees of Khuzestan Telecommunication Company.

2. Methods and Materials

Considering its objective, the present study is applied research, and in terms of data collection method, it is descriptive. The data collection instrument in the present study was a questionnaire. The questionnaire used in this study consisted of two sections. The first section was related to measuring demographic variables, and the second section was related to measuring the research variables. The second section of the questionnaire included 30 items. Gao et al.'s (2020) Information Technology Utilization Questionnaire, Choi's (2025) Standard Organizational Creativity Questionnaire, Gao et al.'s (2020) Organizational Agility Questionnaire, and Huang et al.'s (2013) Organizational Inertia Questionnaire were used to collect data, all based on a Likert scale. The statistical population consisted of all employees of Khuzestan Telecommunication Company, whose number, according to the Human Resources Department, was 700. Considering that the questionnaire included 30 items, the minimum sample size was considered to be 300 and the maximum 450 participants. Data were analyzed using structural equation modeling with SmartPLS software.



3. Findings and Results

Table 1 presents demographic characteristics of participants.

Table 1. Frequency Distribution of Respondents Based on Demographic Characteristics

Variable	Category	Frequency	Percentage
Gender	Female	114	40.0
Gender	Male	171	60.0
Educational level	Diploma	12	4.2
Educational level	Associate degree	0	0.0
Educational level	Bachelor's degree	134	47.0
Educational level	Master's degree	131	46.0
Educational level	Doctoral degree	8	2.8
Work experience	5 years or less	16	5.6
Work experience	6–10 years	9	3.0
Work experience	11–15 years	39	13.7
Work experience	16–20 years	119	41.7
Work experience	21 years or more	102	36.0
Age	25 years or younger	9	3.2
Age	26–35 years	15	5.2
Age	36–45 years	119	41.7
Age	46–55 years	126	44.3
Age	56 years or older	16	5.6

Table 2. Measures of Central Tendency, Dispersion, and Normality Distribution of Variables

Variable	Mean	Standard Deviation	Kolmogorov–Smirnov Statistic	Significance Level
Organizational agility	2.97	1.38	0.186	$p < .001$
Organizational creativity	3.10	1.22	0.205	$p < .001$
Organizational inertia	2.56	0.926	0.252	$p < .001$
Information technology utilization	3.24	1.16	0.251	$p < .001$

Table 2 presents the means and standard deviations of the research variables. Accordingly, in response to the research questions, it can be stated that the status of organizational agility in Khuzestan Telecommunication Company is at a moderate-to-low level (2.97). The status of organizational creativity in Khuzestan Telecommunication Company is at a moderate-to-high level (3.10). The status of organizational inertia in Khuzestan Telecommunication Company is at a moderate-to-low level (2.56). The status of information technology utilization in Khuzestan Telecommunication Company is at a moderate-to-high level (3.24). In addition, the Kolmogorov–Smirnov test was used to examine the normality of the variables. Since the significance level of this test for all variables was lower than .05, it can be claimed with 95% confidence that the distribution of all variables is not normal. Therefore, the researcher is permitted to use SmartPLS structural equation modeling software for model fitting and model validation.

In this study, Cronbach's alpha method was used to assess the reliability of the questionnaire. To calculate reliability, 30 questionnaires were first distributed among members of the statistical population and collected, and Cronbach's alpha coefficients were calculated using SPSS version 28. In this study, the questionnaire was also provided to experts in the subject area of the research. After receiving their comments, the necessary corrections were applied to the questionnaire, and its final form was developed. Based on their opinions, the questionnaire had the necessary capability to identify and collect the required data; therefore, the validity of the research instrument was confirmed. Confirmatory factor analysis was also used to determine the validity of the questionnaire. Confirmatory factor analysis provides researchers with a reliable method for evaluating construct validity. Confirmatory factor analysis examines whether the existing data fit a highly restricted pre-empirical structure that estimates equivalence conditions. Based on confirmatory factor analysis, items with a t-statistic greater than 1.96 are considered significant and remain in the questionnaire. As the results of this analysis shown in Table 3 indicate, all questionnaire items had significant t-statistic values, and none of them needed to be removed.

Table 3. Indices of the Studied Constructs

Construct	Subscale	Item	Factor Loading	t-Value	Cronbach's Alpha	Composite Reliability	AVE
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Organizational agility	—	OA1	0.935	112.47	0.925	0.953	0.870
Organizational agility	—	OA2	0.937	116.77			
Organizational agility	—	OA3	0.926	106.36			
Information technology utilization	IT flexibility	IT_Flex1	0.837	48.99	0.962	0.967	0.727
Information technology utilization	IT flexibility	IT_Flex2	0.839	50.09			
Information technology utilization	IT flexibility	IT_Flex3	0.843	49.16			
Information technology utilization	IT flexibility	IT_Flex4	0.848	51.70			
Information technology utilization	IT integration	IT_Integ1	0.874	66.45			
Information technology utilization	IT integration	IT_Integ2	0.852	51.31			
Information technology utilization	IT integration	IT_Integ3	0.858	53.68			
Information technology utilization	IT coverage	IT_Cover1	0.871	65.15			
Information technology utilization	IT coverage	IT_Cover2	0.879	64.91			
Information technology utilization	IT coverage	IT_Cover3	0.842	52.36			
Information technology utilization	IT coverage	IT_Cover4	0.836	49.35			
Organizational creativity	—	OC1	0.897	63.56	0.877	0.924	0.802
Organizational creativity	—	OC2	0.900	72.39			
Organizational creativity	—	OC3	0.890	58.64			
Organizational inertia	Insight inertia	Insi1	0.807	37.56	0.949	0.955	0.620
Organizational inertia	Insight inertia	Insi2	0.805	38.22			
Organizational inertia	Insight inertia	Insi3	0.794	38.55			
Organizational inertia	Insight inertia	Insi4	0.755	29.92			
Organizational inertia	Action inertia	Act1	0.826	42.21			
Organizational inertia	Action inertia	Act2	0.790	34.22			
Organizational inertia	Action inertia	Act3	0.761	30.48			
Organizational inertia	Action inertia	Act4	0.770	32.15			
Organizational inertia	Action inertia	Act5	0.767	30.96			
Organizational inertia	Psychological inertia	Psy1	0.769	29.78			
Organizational inertia	Psychological inertia	Psy2	0.812	39.25			
Organizational inertia	Psychological inertia	Psy3	0.785	35.44			
Organizational inertia	Psychological inertia	Psy4	0.791	34.17			

According to Table 3, regarding factor loadings, since the factor loadings of all items were above 0.50 and the t-values were greater than 1.96, all items remained in the model, and no item was removed from the measurement model. This indicates adequate and appropriate reliability of the research constructs.

The term construct validity refers to whether the items of a questionnaire measure the same subject and concept intended by the researcher (Ghiyasvand, 2016). In this study, two criteria, namely the Fornell–Larcker criterion and the Heterotrait–Monotrait Ratio (HTMT), were used. According to the first criterion, the square root of the average variance extracted of each construct should be greater than the correlation of that construct with other constructs. This means that the correlation of each construct with its own items is greater than its correlation with other research constructs. The second criterion, namely the calculation of the HTMT coefficient, is considered by Henseler et al. (2015) to be the most reliable method for judging discriminant validity and is based on the Monte Carlo simulation method. If this coefficient is below 0.90, discriminant validity exists between two reflective constructs. The findings related to the first criterion, namely the Fornell–Larcker criterion, are presented in the following table.



Table 4. Fornell–Larcker Criterion: Correlation Matrix and Square Root of the Average Variance Extracted of the Variables

Variable	1	2	3	4
1. Information technology utilization	0.853			
2. Organizational inertia	-0.487	0.787		
3. Organizational creativity	0.445	-0.307	0.896	
4. Organizational agility	0.627	-0.793	0.478	0.933

The values on the main diagonal of the matrix represent the square root of the average variance extracted.

According to the data in Table 4, the square root of the average variance extracted of all variables is greater than their correlations with other variables. Therefore, the second criterion of discriminant validity for the research variables was also satisfied.

Moreover, according to the data in Table 5 regarding the HTMT criterion, it can be observed that the coefficients are lower than 0.90; therefore, the third criterion of discriminant validity for the research variables was also satisfied.

Table 5. HTMT Coefficients in the Evaluation of Discriminant Validity

Variable	1	2	3	4	5	6
1. Information technology utilization						
2. Organizational inertia	0.506					
3. Organizational creativity	0.484	0.336				
4. Organizational agility	0.662	0.844	0.531			
5. Organizational inertia × organizational creativity	0.075	0.095	0.177	0.131		
6. Organizational inertia × information technology utilization	0.342	0.093	0.077	0.040	0.175	

As can be observed, in the measurement section, all indices are at an acceptable level, meaning that appropriate relationships have been defined between the constructs and their indicators.

At this stage, the Goodness-of-Fit (GOF) criterion, which includes both the measurement section and the structural section, was used to assess the overall fit of the model. Researchers have introduced the values of 0.01, 0.25, and 0.36 for this criterion as weak, moderate, and strong values, respectively (Wetzels et al., 2009). This criterion is calculated as the geometric mean of R^2 and the average communality:

$$GOF = \sqrt{[(\text{average communality}) \times (\text{average } R^2)]}$$

Table 5. Overall Model Fit Criterion

Variables	Coefficient of Determination (R^2)	Predictive Relevance (Q^2)	Communality Values
1. Information technology utilization	—	—	0.727
2. Organizational inertia	—	—	0.620
3. Organizational creativity	—	—	0.802
4. Organizational agility	0.476	0.321	0.870
Mean	0.476	—	0.755

$$GOF = \sqrt{[(\text{average communality}) \times (\text{average } R^2)]} = 0.599$$

The three values of 0.01, 0.25, and 0.36 indicate weak, moderate, and strong fit, respectively.

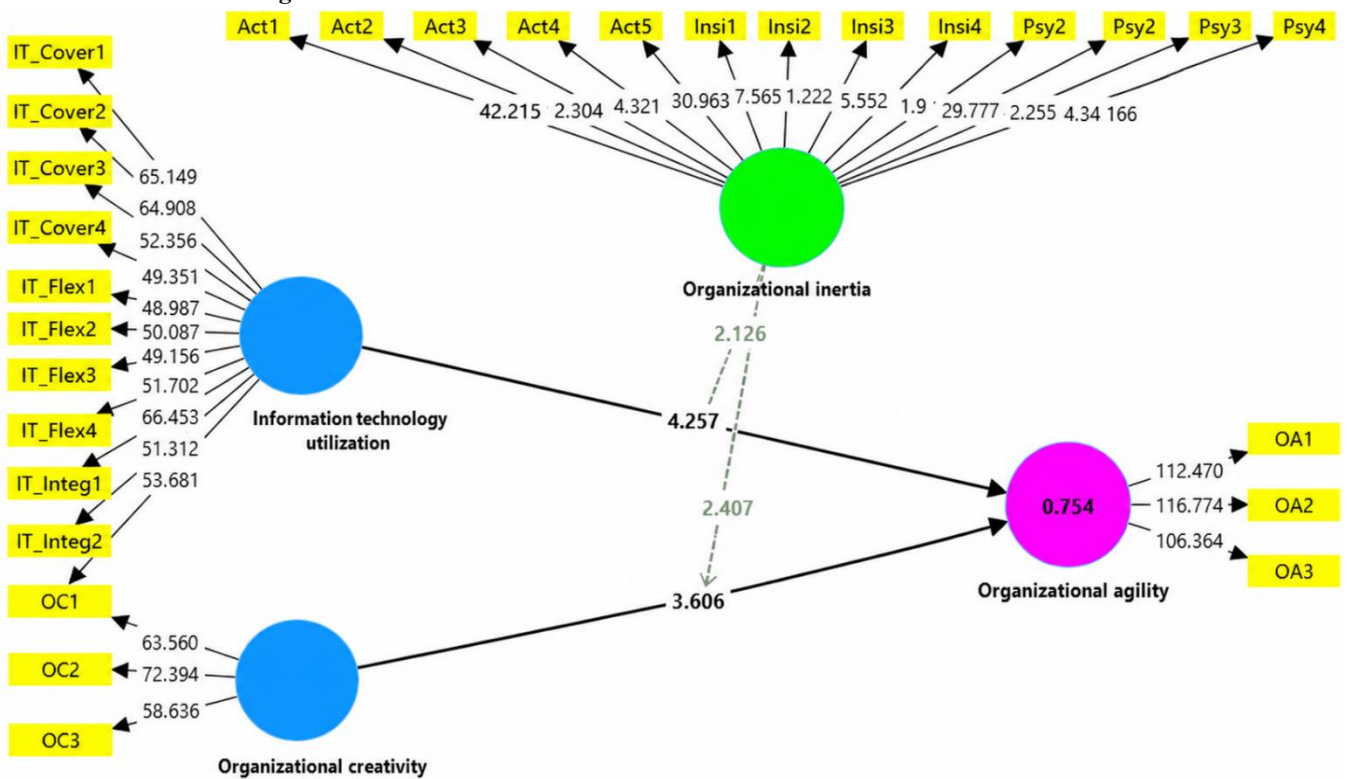
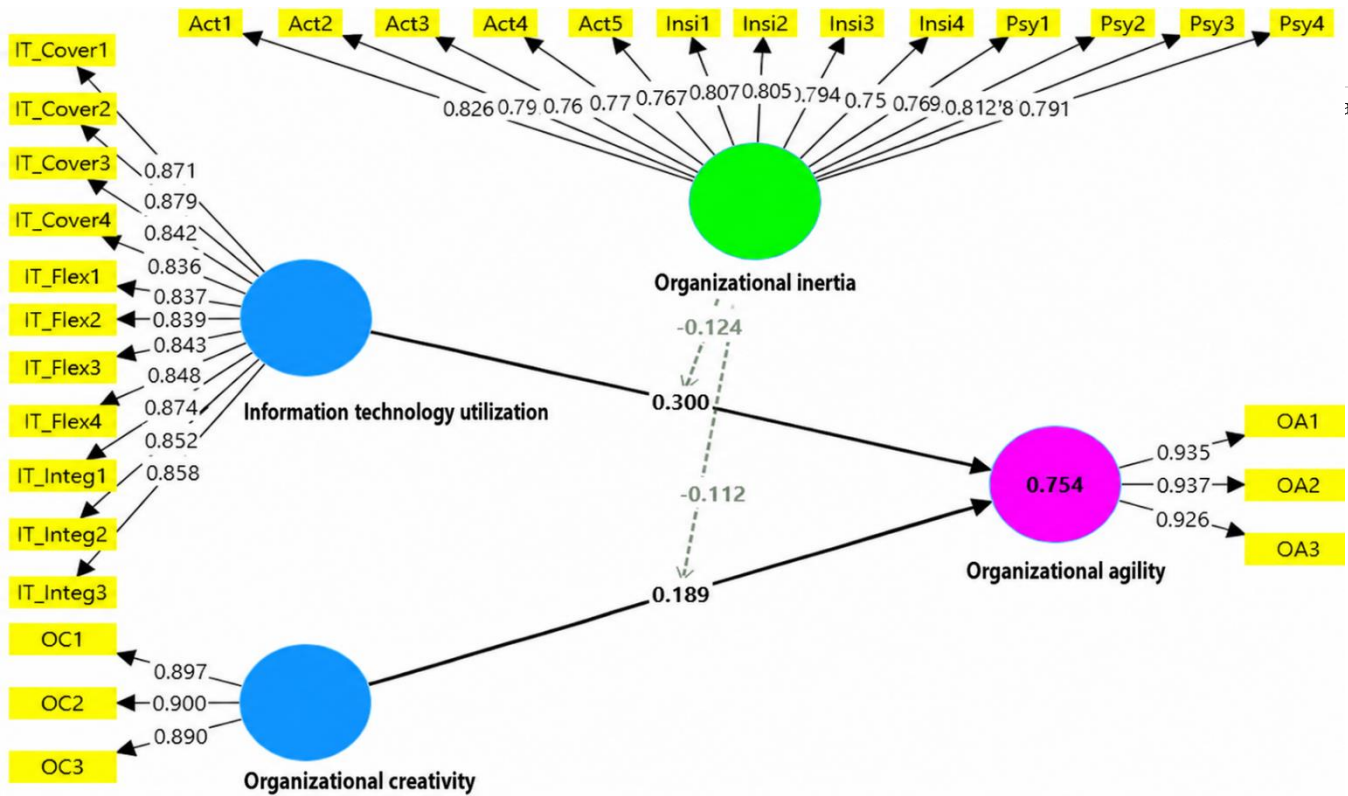
SRMR = 0.040, which is at an acceptable level.

Positive values of the Q^2 coefficient indicate the predictive capability of the model (Vinzi et al., 2010). Considering the obtained goodness-of-fit value of 0.599, the highly appropriate fit of the overall model is confirmed. In addition, the Standardized Root Mean Square Residual (SRMR) value of 0.040 indicates a good fit of the model to the data, because values lower than 0.08 are usually considered indicative of acceptable fit. These findings indicate that the SEM model provides an appropriate representation of the data and that the latent constructs are well defined and properly measured.

In the present study, the obtained data were analyzed using inferential statistics. The research method was descriptive, and the statistical technique of structural equation modeling, specifically confirmatory path analysis, was used. After conducting confirmatory factor analysis and ensuring model fit, the research hypotheses were tested. Accordingly, Student's t-test was used to examine the significance of the path coefficients between the latent variables. Since the confidence level considered in this study was 0.95, corresponding to an error level of 0.05, positive path coefficients with a t-statistic greater than 1.96 were



considered significant, and the related research hypotheses were confirmed. The results are presented in Table 6. In addition, the software outputs related to hypothesis testing are presented in Figures 1 and 2. Figure 1 shows the factor loading values and path coefficients, while Figure 2 displays the obtained t-statistic values.



At this stage, using PLS software, path analysis was employed to examine the relationships between the independent and dependent variables and to confirm the overall model. The significance coefficients and results of the relationships proposed in the research model are reported in the following table.

Table 6. Significance Analysis of the Estimated Effect Coefficients of the Research Model

Examined Relationship	Coefficient	t-Value	Significance Level	Result
Information technology utilization → Organizational agility	0.300	4.257	$p < .001$	Confirmed
Organizational inertia → Organizational agility	-0.588	10.977	$p < .001$	Confirmed
Organizational creativity → Organizational agility	0.189	3.606	$p < .001$	Confirmed
Organizational inertia × organizational creativity → Organizational agility	-0.112	2.407	0.016	Confirmed
Organizational inertia × information technology utilization → Organizational agility	-0.124	2.126	0.034	Confirmed

According to the findings in Table 6, and given that the significance values of the paths between all variables are greater than 1.96 and the obtained significance levels are lower than .05, all of the above relationships are accepted. In other words, regarding the research hypotheses, it can be stated that:

Table 7. Summary of the Moderation Analysis for Hypothesis 4

Hypothesis	Path Coefficient	Standard Error	t-Statistic	Significance Level	Result
Hypothesis 4: Organizational inertia moderates the causal relationship between information technology utilization and organizational agility in Khuzestan Telecommunication Company.	-0.124	0.058	2.126	0.034	Confirmed

Table 7 presents the results of the interaction effect of the moderating construct, organizational inertia, on the effect of information technology utilization on organizational agility. As shown in the t-statistic column, the significance of the moderating effect of organizational inertia was accepted, as the t-value was 2.126, which is greater than 1.96, and the corresponding p-value was 0.034. On the other hand, the path coefficient of this effect was -0.124, indicating the strength of the interaction effect ($b = -0.124$, $t = 2.126$, $p = .034 < .05$). This means that with the inclusion of organizational inertia, the effect of information technology utilization on organizational agility is weakened.

Table 8. Summary of the Moderation Analysis for Hypothesis 5

Hypothesis	Path Coefficient	Standard Error	t-Statistic	Significance Level	Result
Hypothesis 5: Organizational inertia moderates the causal relationship between organizational creativity and organizational agility in Khuzestan Telecommunication Company.	-0.112	0.047	2.407	0.016	Confirmed

Table 8 presents the results of the interaction effect of the moderating construct, organizational inertia, on the effect of organizational creativity on organizational agility. As shown in the t-statistic column, the significance of the moderating effect of organizational inertia was accepted, as the t-value was 2.407, which is greater than 1.96, and the corresponding p-value was 0.016. On the other hand, the path coefficient of this effect was -0.112, indicating the strength of the interaction effect ($b = -0.112$, $t = 2.407$, $p = .016 < .05$). This means that with the inclusion of organizational inertia, the effect of organizational creativity on organizational agility is weakened.

4. Discussion and Conclusion

The present study aimed to investigate the moderating role of organizational inertia in the causal relationship between information technology utilization and organizational creativity with organizational agility among employees of Khuzestan Telecommunication Company. The findings demonstrated that information technology utilization has a significant positive effect on organizational agility. Furthermore, organizational creativity was found to positively and significantly influence organizational agility. The results also indicated that organizational inertia exerts a significant negative effect on organizational agility. More importantly, organizational inertia significantly moderated the relationships between information technology utilization and organizational agility, as well as between organizational creativity and organizational agility, such that increasing levels of organizational inertia weakened the positive effects of information technology utilization and organizational creativity on organizational agility.



One of the important findings of the study was that information technology utilization positively affects organizational agility. This finding suggests that organizations that effectively utilize information technologies are better positioned to respond rapidly to environmental changes, coordinate organizational activities efficiently, and improve their adaptability to dynamic conditions. In modern organizations, information technology serves as a critical infrastructure that facilitates communication, knowledge sharing, decision-making, and operational integration. Through these mechanisms, information technology enhances organizational responsiveness and flexibility, which are core dimensions of organizational agility. The findings support the theoretical perspective that information technology capabilities represent strategic resources that enable organizations to sense environmental changes and respond appropriately to emerging opportunities and threats.

The positive relationship observed between information technology utilization and organizational agility is consistent with previous empirical studies. Cepeda and Arias-Pérez demonstrated that information technology capabilities significantly improve organizational agility by enhancing information processing capabilities and facilitating organizational adaptation (Cepeda & Arias-Pérez, 2018). Similarly, Awwad et al. reported that information technology capabilities mediate and strengthen organizational flexibility and agility by supporting dynamic capabilities and resource reconfiguration (Awwad et al., 2022). Rahmani et al. also found that information technology contributes directly to organizational agility and enables organizations to overcome structural constraints that hinder responsiveness (Rahmani et al., 2020). Furthermore, recent studies emphasize that advanced digital technologies, artificial intelligence, and digital transformation initiatives provide organizations with greater strategic agility and responsiveness in uncertain environments (Ameen et al., 2024; Cui, 2025). Therefore, the present findings reinforce the growing consensus that information technology is a fundamental enabler of organizational agility.

Another significant finding of the study was the positive effect of organizational creativity on organizational agility. This result indicates that organizations characterized by higher levels of creativity are more capable of adapting to changing environmental conditions and responding effectively to emerging challenges. Creativity allows organizations to generate innovative solutions, rethink existing processes, and identify new opportunities. Through these mechanisms, creativity enhances organizational flexibility and supports agile decision-making. Creative employees and organizational cultures encourage experimentation, learning, and continuous improvement, all of which contribute to the development of agile organizational capabilities.

The positive association between creativity and organizational agility is supported by a substantial body of literature. Beldjazia found that creative capabilities significantly contribute to strategic agility by enabling organizations to generate innovative responses to environmental changes (Beldjazia, 2022). Similarly, Al Khasabah and Al-Badayneh demonstrated that organizational creativity is closely linked to agility and serves as a mechanism through which organizations enhance adaptability and competitiveness (Al Khasabah & Al-Badayneh, 2025). Mohammadi and Alizadeh also reported a significant positive relationship between creativity and organizational agility across organizational settings (Mohammadi & Alizadeh, 2019). In addition, studies have shown that creativity enhances organizational learning, innovation, and knowledge creation, which in turn strengthen agility and organizational performance (Awan et al., 2021; Chung et al., 2019). These findings collectively support the notion that creativity is not merely an innovation-related construct but also a critical driver of organizational adaptability and agility.

The findings further revealed that organizational inertia negatively affects organizational agility. This result indicates that organizations characterized by rigid structures, entrenched routines, and resistance to change are less capable of responding effectively to environmental uncertainty and market dynamics. Organizational inertia limits flexibility and slows the implementation of change initiatives, thereby reducing the organization's capacity to adapt to emerging opportunities and threats. In highly dynamic industries such as telecommunications, where technological and market conditions evolve rapidly, excessive organizational inertia may significantly undermine competitiveness and performance.

The negative relationship between organizational inertia and organizational agility is highly consistent with prior theoretical and empirical evidence. Chaharmahalizadeh reported that organizational inertia significantly reduces organizational agility by constraining responsiveness and limiting adaptation processes (Chaharmahalizadeh, 2021). Similarly, Cao et al. found that organizational inertia negatively influences organizational agility and impedes the organization's ability to leverage technological resources effectively (Cao et al., 2021). Deyhimpour et al. demonstrated that overcoming organizational inertia



contributes directly to enhanced agility and organizational effectiveness (Deyhimpour et al., 2020). Other studies have emphasized that organizational inertia represents a major barrier to organizational evolution and strategic renewal because it reinforces existing routines and discourages innovation and adaptation (Badeleh et al., 2019; Jafari et al., 2018). Moreover, organizational inertia has been linked to reduced organizational performance, weaker innovation outcomes, and diminished strategic responsiveness (Kianpour et al., 2023; Rostamzadeh et al., 2023). Consequently, the present findings further substantiate the argument that reducing inertia is essential for achieving organizational agility.

One of the most important contributions of the present study lies in examining the moderating role of organizational inertia. The results demonstrated that organizational inertia significantly weakens the positive effect of information technology utilization on organizational agility. This finding suggests that although information technology provides organizations with valuable tools and capabilities for enhancing agility, the realization of these benefits depends on the organizational context. When organizational inertia is high, rigid structures, resistance to change, and entrenched routines prevent organizations from effectively utilizing technological resources. As a result, the agility-enhancing potential of information technology is substantially diminished.

This finding can be interpreted through the lens of dynamic capability theory and organizational adaptation perspectives. Information technology alone cannot guarantee agility if organizational members are unwilling or unable to modify existing practices. Organizations characterized by strong inertia may adopt advanced technologies, but the actual integration and utilization of these technologies remain limited because existing structures discourage experimentation and change. Similar conclusions have been reported by Cao et al., who found that organizational inertia reduces the effectiveness of technological capabilities in enhancing organizational agility (Cao et al., 2021). Rahmani et al. also suggested that organizational inertia can act as a constraining force that limits the positive influence of information technology on organizational responsiveness (Rahmani et al., 2020). Furthermore, studies focusing on digital transformation indicate that successful technology utilization requires supportive organizational cultures and adaptive structures capable of leveraging technological opportunities (Ameen et al., 2024; Cepeda & Arias-Pérez, 2018). Therefore, the present findings emphasize that technology investments alone are insufficient unless accompanied by efforts to reduce organizational rigidity and resistance to change.

The study also revealed that organizational inertia significantly weakens the positive relationship between organizational creativity and organizational agility. This result suggests that creative ideas and innovative thinking do not automatically translate into organizational agility when organizational inertia is present. Although employees may generate valuable ideas and innovative solutions, rigid organizational structures and resistance to change may prevent these ideas from being implemented effectively. Consequently, the organization becomes less capable of converting creativity into adaptive and agile responses.

This finding is supported by previous research highlighting the detrimental effects of inertia on innovation and organizational learning. Mohammadi and Alizadeh found that organizational inertia moderates the relationship between creativity and organizational agility, reducing the effectiveness of creative capabilities in fostering adaptability (Mohammadi & Alizadeh, 2019). Similarly, Babazadeh et al. reported that organizational inertia weakens the positive influence of organizational learning on innovation outcomes (Babazadeh et al., 2019). Farhadpour and Kazemi demonstrated that knowledge inertia moderates organizational relationships by restricting the transformation of learning capabilities into innovation (Farhadpour & Kazemi, 2023). These findings suggest that organizational inertia acts as a structural and cognitive barrier that limits the conversion of creative potential into organizational action. The current results therefore extend prior research by demonstrating that organizational inertia not only directly reduces agility but also undermines the effectiveness of key antecedents of agility.

From a broader perspective, the findings of this study align with contemporary theories emphasizing the interaction between enabling and constraining organizational factors. While information technology and creativity function as enabling mechanisms that promote adaptability, organizational inertia operates as a constraining force that inhibits change and reduces organizational responsiveness. This dynamic interaction underscores the complexity of organizational agility and suggests that agility emerges not only from the presence of positive capabilities but also from the absence or reduction of organizational barriers. Consequently, managers seeking to improve agility should simultaneously invest in technological development, creativity enhancement, and inertia reduction initiatives.



The findings also have particular relevance for telecommunications organizations. Telecommunications companies operate within highly dynamic environments characterized by continuous technological innovation, digital transformation, and evolving customer expectations. Under such circumstances, organizational agility becomes a critical determinant of success. The present findings suggest that while investments in information technology and creativity are essential, their effectiveness depends substantially on the organization's ability to overcome inertia. Therefore, telecommunications organizations should prioritize structural flexibility, adaptive leadership, and change-oriented cultures to maximize the benefits of technological and creative resources.

Overall, the results provide strong empirical evidence supporting the integrated model proposed in this study. Information technology utilization and organizational creativity emerged as important antecedents of organizational agility, organizational inertia was identified as a significant inhibitor of agility, and the moderating effects of inertia highlighted its role as a critical contextual factor shaping organizational outcomes. These findings contribute to the growing body of literature on organizational agility by providing a more comprehensive understanding of how technological, creative, and structural factors interact to influence organizational adaptability and performance.

The present study has several limitations that should be considered when interpreting the findings. First, the study employed a cross-sectional research design, which limits the ability to establish definitive causal relationships among the variables. Second, data were collected through self-report questionnaires, creating the possibility of common method bias and social desirability effects. Third, the study focused exclusively on employees of Khuzestan Telecommunication Company, which may limit the generalizability of the findings to other industries, organizations, or geographical contexts. Finally, although organizational agility was explained by the proposed variables to a considerable extent, other influential factors such as leadership style, organizational culture, employee engagement, and environmental uncertainty were not examined.

Future studies may employ longitudinal designs to examine the causal dynamics among information technology utilization, creativity, organizational inertia, and organizational agility over time. Researchers are also encouraged to investigate these relationships in different organizational contexts, industries, and countries to enhance the generalizability of the findings. Additional studies could explore other moderating and mediating variables, such as organizational culture, transformational leadership, digital maturity, innovation climate, and knowledge management capabilities. Comparative studies between public and private organizations may also provide valuable insights into the contextual factors affecting organizational agility. Furthermore, qualitative and mixed-method approaches could deepen understanding of how organizational inertia emerges and how it can be effectively reduced.

Managers should invest in modern information technology infrastructures and ensure that employees possess the necessary skills to utilize these technologies effectively. Organizations should also establish supportive environments that encourage creativity, experimentation, and innovative thinking among employees. Efforts should be directed toward identifying and eliminating sources of organizational inertia, including excessive bureaucracy, rigid procedures, and resistance to change. Organizational leaders should promote adaptive cultures that emphasize flexibility, learning, and continuous improvement. Change management programs, employee participation in decision-making, and leadership development initiatives can further help reduce inertia and strengthen organizational agility. In the telecommunications sector specifically, maintaining agility requires continuous monitoring of technological trends, rapid adaptation to market changes, and the development of organizational structures capable of responding effectively to evolving customer needs and competitive pressures.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

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Conflict of Interest

The authors report no conflict of interest.



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