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# HOW DOES TRANSFORMATIONAL LEADERSHIP AND INNOVATION CLIMATE AS AN ANTECEDENT OF EMPLOYEE CREATIVITY IN THE ERA OF THE COVID-19 PANDEMIC

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#### Abstract

This research utilised the environment of innovation as a mediating variable to examine the impact of transformational leadership style on employee creativity during the COVID-19 pandemic. Respondents in this research were workers of startups. The sample consisted of 129 respondents. Using AMOS software, the Structural Equation Sampling (SEM) approach was employed to analyze the data. Transformational leadership has a good influence on employee creativity, transformational leadership has a positive effect on the environment of invention, and the atmosphere of innovation has a positive effect on employee creativity. This research confirms how transformational leadership has a favorable influence on employee creativity. This research confirms how transformational leadership and innovation atmosphere serve as precursors to employee creativity. The consequence of this research is that start-up companies must cultivate transformational leadership among their workers and cultivate an innovation-friendly environment so that employees' creativity can be enhanced on occasion. Keywords: Transformational Leadership, Innovation Climate, Employee Creativity.

#### Abstrak

Penelitian ini memanfaatkan iklim organisasi sebagai variabel mediasi untuk menguji dampak gaya kepemimpinan transformasional terhadap kreativitas karyawan di masa pandemi COVID-19. Responden dalam penelitian ini adalah para pekerja startup. Sampel terdiri dari 129 responden. Menggunakan perangkat lunak AMOS, pendekatan Structural Equation Sampling (SEM) digunakan untuk menganalisis data. Kepemimpinan transformasional berpengaruh baik terhadap kreativitas karyawan, kepemimpinan transformasional berpengaruh baik terhadap kreativitas karyawan, kepemimpinan transformasional berpengaruh positif terhadap lingkungan penemuan, dan suasana inovasi berpengaruh positif terhadap kreativitas karyawan, menurut hasil penelitian ini., melalui suasana inovatif, transformasional kepemimpinan memiliki pengaruh yang menguntungkan pada kreativitas karyawan. Penelitian ini menegaskan bagaimana kepemimpinan transformasional dan suasana inovasi berfungsi sebagai pendahulu kreativitas karyawan. Konsekuensi dari penelitian ini adalah perusahaan pemula harus menumbuhkan kepemimpinan transformasional di antara para pekerjanya dan menumbuhkan lingkungan yang ramah inovasi sehingga kreativitas karyawan dapat ditingkatkan sesekali.

Kata kunci: Kepemimpinan transformasional, Iklim rganisasi, Kreativitas karyawan

#### **INTRODUCTION**

Since the end of 2019 till now, the COVID-19 pandemic has had a significant impact on the way people live. This change is a result of the establishment of laws regarding health standards, limits on human mobility, and meeting constraints. The existence of these regulations necessitates that many companies, particularly startups, be able to swiftly adjust to their internal and external environments. Rapid adaptation is essential in today's constantly shifting corporate environment.<sup>1</sup> A startup is defined as a company that is new or still in the development or research phase to continue to discover markets and develop its goods. Therefore, new businesses must be able to continue to adapt to all the changes that arise. This is due to the fact that the quicker a corporation adjusts to its surroundings, the more potential benefits it may reap (new knowledge, demographics, the possibility of new financial resources and the possibility of industry changes).<sup>2</sup>

Employee inventiveness is essential to the competitiveness of a beginning company. In addition, staff creativity is described as the renewal of beneficial ideas pertaining to goods, services, processes, and manufacturing techniques.<sup>3</sup> In addition there is also a definition of Amabile (1988) who mentioned that creativity is a type of personality constellation and intellectual attributes exhibited by individuals when given the opportunity to devote a great deal of time to the creative process.<sup>4</sup>

In the current industrial and labor environment, it is essential for a new firm to have personnel with high levels of inventiveness. This is due to the fact that many company leaders and managers are aware that in order to survive market competition, companies want employees who can actively participate in tasks and work.

In addition to individuals with high levels of creativity, startup companies require a leader who can guide people through the process of deciding new ideas for use in their company operations. This is because leaders with a supportive personality will be able to impact employee creativity through direct project help, the development of subordinate abilities, and the enhancement of employee intrinsic motivation.<sup>5</sup>

<sup>&</sup>lt;sup>1</sup> Anna Font, "Pandemic Boost: 5 Reason Why There Will Be More Startup in 2021," last modified 2021, accessed March 15, 2023, https://www.eu-startups.com/2021/02/pandemic-boost-5-reasons-why-there-will-be-more-startups-in-2021/.

<sup>&</sup>lt;sup>2</sup> Michael H Morris, and John W Altman, "The Need for Adaptation in Successful Business Concepts : Strategies for Entrepreneurs The Need for Adaptation in the Successful Business Concepts : Strategies for Entrepreneurs Abstract" (Massachusetts: Cardiff Business School, 2001).

<sup>&</sup>lt;sup>3</sup> Jiseon Shin, M Susan Taylor, and Myeong-Gu Seo, "Resources for Change: The Relationships of Organizational Inducements and Psychological Resilience to Employees' Attitudes and Behaviors toward Organizational Change," *Academy of Management Journal* 55, no. 3 (2012): 727–748.

<sup>&</sup>lt;sup>4</sup> Teresa M Amabile, "A Model of Creativity and Innovation in Organizations," *Research in Organizational Behavior* 10, no. 1 (1988): 123–167.

<sup>&</sup>lt;sup>5</sup> Teresa M. Amabile et al., "Leader Behaviors and The Work Environment for Creativity: Perceived Leader Support," *Leadership Quarterly* 15, no. 1 (2004): 5–32.

A transformational leader is one who has the capacity to assist and motivate subordinates to think creatively and appreciate individual diversity in order to enhance job performance and develop the potential of subordinates.<sup>6</sup> Apart from that according to Bass & Avolio (1994) Along with intuition and sensitivity to the needs of others, leaders who exhibit the traits of transformational leaders can also combine creative insight, persistence, and enthusiasm.<sup>7</sup> Additionally, transformational leaders have their unique traits that set them apart from other types of leaders. According to Bass & Avolio (1994), these qualities include idealistic influence, motivational inspiration, intellectual stimulation, and individual concern.<sup>8</sup>

In addition to transformative leadership, the innovation atmosphere of a business also influences the creativity of its personnel. The function of a leader is inseparable from the innovative atmosphere fostered within the company. The support offered by executives in the form of a favorable atmosphere for organizational innovation can serve as a motivator for employees. When managers offer their workers the freedom to generate fresh concepts or come up with solutions to existing issues, workers may feel more motivated.<sup>9</sup>

#### THEORITICAL REVIEW

The componential theory of creativity is a comprehensive explanation of the social and psychological elements necessary for producing creative work.<sup>10</sup> This notion is grounded in the concept of creativity as the development of novel and purpose-fitting ideas or outcomes. According to this idea, each creative response requires four elements: one outside the person, the social context in which the individual works, and three inside the individual, including domain-related abilities, processes essential to creativity, and intrinsic task motivation.

Transformational leadership style is an assessment of subordinates to direct leaders' abilities to enable and motivate subordinates to think creatively and comprehend individual differences to enhance job performance and develop subordinates' potential.<sup>11</sup> Transformational leadership enables followers to have feelings of trust, adoration, loyalty, and respect for the leader. Followers are inspired to go above and beyond what is required of them. In line with the point of views Bass (1999), Tjahjono et al. (2018) explained his empirical findings revealed that

<sup>&</sup>lt;sup>6</sup> Bernard M. Bass and Bruce J. Avolio, "Transformational Leadership: Organizational Culture," *International Journal of Public Administration* 17, no. 3–4 (1994): 541–554.

<sup>&</sup>lt;sup>7</sup> Ibid.

<sup>&</sup>lt;sup>8</sup> Ibid.

<sup>&</sup>lt;sup>9</sup> Yanchun Zhang, Junwei Zheng, and Amos Darko, "How Does Transformational Leadership Promote Innovation In Construction? The Mediating Role Of Innovation Climate And The Multilevel Moderation Role Of Project Requirements," *Sustainability* 10, no. 5 (2018): 1–19.

 <sup>&</sup>lt;sup>10</sup> Teresa Amabile, "Componential Theory of Creativity" (Los Angeles: Sage Publications, 2013).
 <sup>11</sup> Majang Palupi, "Efforts to Improve Employee Creativity Through Transformational

<sup>&</sup>lt;sup>11</sup> Majang Palupi, "Efforts to Improve Employee Creativity Through Transformational Leadership," *Jurnal Manajemen Bisnis* 11, no. 2 (2020): 224–232.

transformational leaders have a role in managing change inside organizations.<sup>12</sup> Transformational leaders influence their followers through influencing their objectives, values, needs, beliefs, and ambitions.<sup>13</sup> Research conducted by Palupi et al. (2020) was also suggested that transformational leaders achieve this shift by comparing it to their followers' self-perception (values and personality).<sup>14</sup>

The innovation atmosphere is described as the organizational environment that encourages people to continue to create and think creatively. A good organization is one that is adaptive, versatile, entrepreneurial, and creative in its response to the ever-changing and competitive global market dynamics.<sup>15</sup> Organizations must support workers' unrestricted expression of ideas, especially by offering a fair and constructive evaluation. Employees should have the freedom to determine what task to perform and how to perform it when there are no excessive regulations.<sup>16</sup> Then, Van der Vegt et al. (2005) defines the atmosphere of innovation as workers' common awareness of policies, processes, and behaviors that foster the creation, acknowledgment, and manifestation of innovative ideas in the business.<sup>17</sup> If the organization's innovation atmosphere is favorable, employees will be able to submit and implement their fresh ideas. Measurement of the innovation climate presented by Jaiswal & Dhar (2015) where the ability of employees to work creatively is valued by superiors, the organization is described as one that is flexible and constantly adapts to change, this organization is open and responsive to change, and employees here typically get credit for various ideas.<sup>18</sup> These are just a few of the 16 items used to measure the results of the innovation climate.

Employee creativity is the generation of novel ideas to improve performance and boost effectiveness and efficiency.<sup>19</sup> Employees' innovative thinking, expertise, and abilities based on

<sup>&</sup>lt;sup>12</sup> Heru Kurnianto Tjahjono, Fajar Prasetyo, and Majang Palupi, "Kepemimpinan Transformasional Pada Organizational Citizenship Behavior Dan Komitmen Afektif," Jurnal Manajemen dan Pemasaran Jasa 11, no. 2 (2018): 217–232.

<sup>&</sup>lt;sup>13</sup> Palupi, "Efforts to Improve Employee Creativity Through Transformational Leadership."

<sup>&</sup>lt;sup>14</sup> Ibid.

<sup>&</sup>lt;sup>15</sup> Abdelrahman Zuraik and Louise Kelly, "The Role Of CEO Transformational Leadership And Innovation Climate In Exploration And Exploitation," European Journal of Innovation Management 22, no. 1 (2018): 84–104.

<sup>&</sup>lt;sup>16</sup> S. P Robbins and T. A Judge, *Essentials of Organizational Behavior (Global)* (United States:

Pearson, 2018). <sup>17</sup> Gerben S Van der Vegt, Evert Van de Vliert, and Xu Huang, "Location-Level Links 136 Between Diversity and Innovative Climate Depend On National Power Distance," Academy of Management Journal 48, no. 6 (2005): 1171-1182.

<sup>&</sup>lt;sup>18</sup> Neeraj Kumar Jaiswal and Rajib Lochan Dhar, "Transformational Leadership, Innovation Climate, Creative Self-Efficacy And Employee Creativity: A Multilevel Study," International Journal of Hospitality Management 51, no. 1 (2015): 30–41.

Yaping Gong, Jia-Chi Huang, and Jiing-Lih Farh, "Employee Learning Orientation, Transformational Leadership, and Employee Creativity: The Mediating Role of Employee Creative Self-Efficacy," Academy of Management Journal 52, no. 4 (2009): 765-778.

their experience and qualifications constitute creativity.<sup>20</sup> Employee innovation involves a high degree of intellectual engagement; hence, employees must be incentivized to exert significant effort in order to produce breakthroughs. In addition, innovative personnel might contribute beneficial and novel suggestions for implementing essential product and service modifications.<sup>21</sup> Khalili (2016)stated that in order to favorably affect employee creativity and innovation, leaders must reward creative and innovative work and give innovation assistance.<sup>22</sup>

# H1: Employee creativity is influenced positively by transformative leadership.

Research conducted Zhang et al. (2018) who believe transformational leadership has a good influence on the innovation atmosphere.<sup>23</sup> The research that was conducted backs this up as well Moolenaar et al. (2010) claims that an inventive climate benefits from transformative leadership.<sup>24</sup> Research conducted by Zuraik & Kelly (2018) moreover, it was discovered that CEO transformational leadership enhances the environment for innovation.<sup>25</sup> Research by Moolenaar et al. (2010) regarding the role held by Principals: Researching the connection between transformational leadership in social network positions and the atmosphere of innovation in schools reveals that these two variables are positively correlated.<sup>26</sup>

# H2: There is a good relationship between transformative leadership and innovative climate..

Research conducted by Sanda & Arthur (2018) along with Jaiswal & Dhar (2018) who believe that the atmosphere for innovation has a good and significant impact on employee creativity.<sup>27,28</sup> This is also backed by research that has been undertaken Ghosh (2015) explains that

<sup>&</sup>lt;sup>20</sup> Mohsin Shafi et al., "The Effects Of Transformational Leadership On Employee Creativity: Moderating Role Of Intrinsic Motivation," *Asia Pacific Management Review* 25, no. 3 (2020): 166–176.

<sup>&</sup>lt;sup>21</sup> Christina E Shalley and Lucy L Gilson, "What Leaders Need to Know: A Review Of Social and Contextual Factors That Can Foster or Hinder Creativity," *The Leadership Quarterly* 15, no. 1 (2004): 33–53.

 <sup>&</sup>lt;sup>22</sup> Ashkan Khalili, "Linking Transformational Leadership, Creativity, Innovation, and Innovation-Supportive Climate," *Management Decision* 54, no. 9 (2016): 2277–2293.
 <sup>23</sup> Zhang, Zheng, and Darko, "How Does Transformational Leadership Promote Innovation In

<sup>&</sup>lt;sup>23</sup> Zhang, Zheng, and Darko, "How Does Transformational Leadership Promote Innovation In Construction? The Mediating Role Of Innovation Climate And The Multilevel Moderation Role Of Project Requirements."
<sup>24</sup> Nienke M Moolenaar, Alan J Daly, and Peter J C Sleegers, "Occupying The Principal Position:

<sup>&</sup>lt;sup>24</sup> Nienke M Moolenaar, Alan J Daly, and Peter J C Sleegers, "Occupying The Principal Position: Examining Relationships Between Transformational Leadership, Social Network Position, And Schools' Innovative Climate," *Educational Administration Quarterly* 46, no. 5 (2010): 623–670.

<sup>&</sup>lt;sup>25</sup> Zuraik and Kelly, "The Role Of CEO Transformational Leadership And Innovation Climate In Exploration And Exploitation."

<sup>&</sup>lt;sup>26</sup> Moolenaar, Daly, and Sleegers, "Occupying The Principal Position: Examining Relationships Between Transformational Leadership, Social Network Position, And Schools' Innovative Climate."
<sup>27</sup> Aminu Sanda and Nana Ama Dodua Arthur, "Relational Impact of Authentic and Transactional

<sup>&</sup>lt;sup>27</sup> Aminu Sanda and Nana Ama Dodua Arthur, "Relational Impact of Authentic and Transactional Leadership Styles on Employee Creativity: The Role Of Work-Related Flow And Climate For Innovation," *African Journal of Economic and Management Studies* 8, no. 3 (2017): 274–295.

the creative environment has a favorable and substantial impact on employee creativity.<sup>29</sup> This research, using a novel methodology, examined the characteristics of self-leadership in relation to employee creativity, creative climate, and innovation readiness in the workplace. There is a significant connection between self-leadership; employee creativity; a climate of creativity; and an innovative orientation in the workplace, according to the findings of structural modeling equation analysis based on sample responses from research, design, and development units of a variety of organizations across India's industries.

#### H3: There is a good correlation between innovation atmosphere and employee creativity.

A leader must be able to inspire his people to maintain their innovative thinking. Leaders might assign employees a number of creative-development responsibilities. Additionally, leaders might offer assistance to employees. This may be accomplished by providing a secure and comfortable work atmosphere that employees can sense. This might make employees feel at ease and encourage them to continue developing unique ideas. According to the findings of Jaiswal & Dhar (2015) research, the innovation atmosphere mediates the connection between transformational leadership and employee creativity.<sup>30</sup> This confirms the aforementioned premise. The innovation atmosphere moderates the association between transformative leadership and employee creativity, according to another research conducted by Khalili (2016).<sup>31</sup> Research done by Chaubey et al. (2019) revealed that the connection between transformational leadership and employee creativity is mediated by creative self-efficacy and moderated by the physical work environment.<sup>32</sup> Consequently, based on the assertions and outcomes of prior research, the hypothesis for the two variables listed above is as follows:

H4: The connection between transformative leadership and workforce creativity is mediated by the innovation atmosphere.

<sup>&</sup>lt;sup>28</sup> Jaiswal and Dhar, "Transformational Leadership, Innovation Climate, Creative Self-Efficacy And Employee Creativity: A Multilevel Study."

<sup>&</sup>lt;sup>29</sup> Koustab Ghosh, "Developing Organizational Creativity And Innovation: Toward A Model Of Self-Leadership, Employee Creativity, Creativity Climate And Workplace Innovative Orientation," *Management Research Review* 38, no. 11 (2015): 1126–1148.

<sup>&</sup>lt;sup>30</sup> Jaiswal and Dhar, "Transformational Leadership, Innovation Climate, Creative Self-Efficacy And Employee Creativity: A Multilevel Study."

<sup>&</sup>lt;sup>31</sup> Khalili, "Linking Transformational Leadership, Creativity, Innovation, and Innovation-Supportive Climate."

<sup>&</sup>lt;sup>32</sup> Akriti Chaubey, Chandan Kumar Sahoo, and Naresh Khatri, "Relationship of Transformational Leadership with Employee Creativity And Organizational Innovation A Study Of Mediating And Moderating Influences," *Journal of Strategy and Management* 12, no. 1 (2019): 61–82.

The formulation of these hypotheses may be represented using the following research model:



**Figure 2.1 Research Model** 

#### **RESEARCH METHODS**

This quantitative research employs statistical analysis to examine all hypotheses using quantitative approaches. Utilizing *Google Form*, this research collected primary data through online surveys. This research's subjects were startup employees with a research focus on transformational leadership, innovation atmosphere as a mediating variable, and employee creativity as the independent variable. The sample method used in this research is convenience sampling. *Convenience* sampling is a *non-probability* sampling approach in which the target of the research sample is selected depending on their willingness to participate in the study.<sup>33,34</sup> In addition, Tjahjono et al. (2021) determine the sample size using the Maximum Likelihood Estimation (MLE) method, which ranges from 100 to 200 respondents. The number of respondents in this study's samples was 129.<sup>35</sup>

#### **RESULT AND DISCUSSION**

The validity test in SEM is frequently referred to as CFA or confirmatory factor analysis (Confirmatory Factor Analysis). The Confirmatory Factor Analysis (CFA) test is a method of multivariate analysis that may be used to validate if the measurement model constructed is consistent with the hypothesis. In this research consist of 38 item lists representing each variable and 129 respondents, the quality test of the instrument was conducted to determine if the research instrument fulfilled the valid and reliable requirements.

<sup>&</sup>lt;sup>33</sup> Heru Kurnianto Tjahjono, *Metode Penelitian Bisnis* (Yogyakarta: Visi Solusi Madani, 2015).

<sup>&</sup>lt;sup>34</sup> Uma Sekaran and Roger Bougie, *Metode Penelitian Untuk Bisnis: Pendekatan Pengembangan-Keahlian*, 6th ed. (Jakarta: Salemba Empat, 2017).

<sup>&</sup>lt;sup>35</sup> Heru Kurnianto Tjahjono, Agus Tri Basuki, and Majang Palupi, *Aplikasi SEM Dalam Studi Perilaku Organisasional* (Yogyakarta: UPP STIM YKPN, 2021).

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Based on table 1, each item of the assertion is valid. It is clear that each of the claims regarding transformational leadership, innovation atmosphere, and workforce creativity is true.

Variable	Item	Factor Loading	Limit	Information
	KT1	0,829		Valid
	KT2	0,859		Valid
	KT3	0,856		Valid
	KT4	0,866		Valid
	KT5	0,875		Valid
	KT6	0,841		Valid
	KT7	0,830		Valid
Transformational	KT8	0,856	> 0,5	Valid
leadership	KT9	0,838		Valid
	KT10	0,868		Valid
	KT11	0,842		Valid
	KT12	0,882		Valid
	KT13	0,882		Valid
	KT14	0,856		Valid
	KT15	0,839		Valid
	II1	0,813		Valid
	II2	0,853		Valid
	II3	0,782		Valid
	II4	0,821		Valid
	II5	0,838		Valid
	II6	0,854		Valid
	II7	0,807		Valid
Lun and the Olimeter	II8	0,864	> 0.5	Valid
Innovation Climate	II9	0,841	> 0,5	Valid
	II10	0,887		Valid
	II11	0,869		Valid
	II12	0,850		Valid
	II13	0,860		Valid
	II14	0,854	1	Valid
	II15	0,864		Valid
	II16	0,848		Valid
	KK1	0,786		Valid
	KK2	0,858		Valid
Emplanas	KK3	0,795		Valid
Employee	KK4	0,862	> 0,5	Valid
Creativity	KK5	0,814		Valid
	KK6	0,827		Valid
	KK7	0,805		Valid

Table 1. Validity test

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Ghozali (2017), test findings are considered credible if their construct reliability value > 0.70 and they have a variance extracted value.<sup>36</sup> The findings of this test reveal that the value of C.R nsa AVE on the five research variables is more than 0.70 and 0.5 for each variable. On the basis of these data, it is possible to infer that the complete research instrument is dependable and may be utilized in this research.

According to table 2, all variables in this research had a *Construct Reliability* (CR) of 0.7 and a VE of 0.5. Therefore, it can be concluded that the construct indicators of transformational leadership, innovation atmosphere, and employee creativity in this research are credible.

Variable	Item	Factor Loading	Factor Loading <sup>2</sup>	Standard Measuremen Error	∑ Standard Measuremen Error	$(\sum Standard Loading)^2$	CR	AVE
Transformational	KT1	0,829	0,687	0,313	4,041	164,327	0,976	0,731
leadership	KT2	0,859	0,738	0,262				
	KT3	0,856	0,733	0,267				
	KT4	0,866	0,750	0,250				
	KT5	0,875	0,766	0,234				
	KT6	0,841	0,707	0,293				
	KT7	0,830	0,689	0,311				
	KT8	0,856	0,733	0,267				
	KT9	0,838	0,702	0,298				
	KT10	0,868	0,753	0,247				
	KT11	0,842	0,709	0,291				
	KT12	0,882	0,778	0,222				
	KT13	0,882	0,778	0,222				
	KT14	0,856	0,733	0,267				
	KT15	0,839	0,704	0,296				
Innovation	II1	0,813	0,661	0,339	4,590	182,385	0,975	0,713
Climate	II2	0,853	0,728	0,272				
	II3	0,782	0,612	0,388				
	II4	0,821	0,674	0,326				
	II5	0,838	0,702	0,298				
	II6	0,854	0,729	0,271				
	II7	0,807	0,651	0,349				
	II8	0,864	0,746	0,254				
	II9	0,841	0,707	0,293				
	II10	0,887	0,787	0,213				
	II11	0,869	0,755	0,245				
	II12	0,850	0,723	0,278				
	II13	0,860	0,740	0,260				
	II14	0,854	0,729	0,271				
	II15	0,864	0,746	0,254				
	II16	0,848	0,719	0,281				

 Table 2. Reliability Test

<sup>36</sup> Imam Ghozali, *Aplikasi Analisis Multivariate Dengan Program IBM SPSS 25* (Semarang: Badan Penerbit Universitas Diponegoro, 2018).

Employee	KK1	0,786	0,618	0,382	2,276	33,028	0,936	0,675
Creativity	KK2	0,858	0,736	0,264				
	KK3	0,795	0,632	0,368				
	KK4	0,862	0,743	0,257				
	KK5	0,814	0,663	0,337				
	KK6	0,827	0,684	0,316				
	KK7	0,805	0,648	0,352				

			Estimate	S.E.	C.R.	Р	Hypothesis
Transformational Leadership	<b>→</b>	Employee Creativity	.222	.074	2.978	0,003	Significant Positives
Transformational Leadership	<b>→</b>	Innovation Climate	.703	.088	8.025	0,000	Significant Positives
Innovation Climate	<b>&gt;</b>	Employee Creativity	.765	.099	7.719	0,000	Insignificant

Table 3. Hypothesis testing

On the basis of table 3, the relationship between variables may be described.

# 1. The Impact of Transformational Leadership on Employee Creativity

The estimated parameter value of the estimated regression weight coefficient is 0.222 and the CR value is 2.978, this shows that there is a relationship between Transformational Leadership and Employee Creativity. This means that the better Transformational Leadership will increase Employee Creativity. The testing of the connection between the two variables reveals a probability value of 0.003 (p <0.05), supporting the hypothesis (H1) that "transformational leadership has a beneficial effect on employee creativity", is supported.

# 2. The Effect of Transformational Leadership on the Innovation Climate

The estimated parameter value of the estimated regression weight coefficient is 0.703 and the CR value is 8.025, this shows that there is a relationship between Transformational Leadership and the Innovation Climate. This means that the better Transformational Leadership will improve the Innovation Climate. Testing the connection between the two variables reveals a probability value of 0.000 (p< 0.05), hence (H2) asserts, "Transformational leadership has a beneficial effect on the innovation atmosphere.

# 3. The Effect of Innovation Climate on Employee Creativity

The estimated parameter value of the calculated regression weight coefficient is 0.765, and the CR value is 7.719, indicating that Innovation Climate and Employee Creativity are related. This indicates that the stronger the Innovation Climate, the more creative the workforce will be. Testing the connection between the two variables reveals a probability

value of 0.000 (p <0.05), therefore supporting (H3), which asserts, "The innovation atmosphere positively influences employee creativity."

# 4. The Impact of Transformational Leadership on Employee Creativity as Mediated by Innovation Climate

According to the research findings, Transformational Leadership has an indirect influence on Employee Creativity via an Innovation Climate score of 0.524%. The direct effect is 0.216 so that the total effect is 0.216 + 0.524 = 0.740. The importance of the influence of Transformational Leadership on Employee Creativity through the Innovation Climate may be evaluated using the Sobel Test in the following manner:

	Input:		Test statistic:	Std. Error:	<i>p</i> -value:
а	0.703	Sobel test:	5.55410818	0.09682833	3e-8
b	0.765	Aroian test:	5.53176278	0.09721946	3e-8
sa	0.088	Goodman test:	5.57672658	0.0964356	2e-8
$s_{b}$	0.099	Reset all		Calculate	

# Figure 2. Sobel Test Result Concerning the Relationship between Transformational Leadership and Employee Creativity with Innovation Climate Mediation as a Mediation Variable

From the results of the Sobel test calculation above, a value of 5.554 is obtained, because the value of 5.554 > 1.96 with a significance level of 0.000 < 0.05 then proves that (H4) which states "Climate of innovation mediates the relationship between transformational leadership and employee creativity", is supported.

# CONCLUSION

The conclusion reached by this research is : 1) Employee creativity is enhanced through transformational leadership; 2) Transformational leadership has a positive effect on the innovation climate; 3) Innovation atmosphere influences employee creativity positively; and 4) Transformational leadership has a favorable effect on staff creativity, which is mediated through the innovation atmosphere.

# **IMPLICATIONS**

The consequence of this research is that startup companies must cultivate transformational leadership among their workers and cultivate an innovation-friendly environment in order to encourage employee creativity on a periodic basis.

# **RESEARCH LIMITATIONS**

- 1. This research used a technique of convenience sampling, which limits the sample's ability to generalize to the population.
- 2. Using a single data source to evaluate independent, dependent, and mediating factors at the same time has the potential for bias. This possibility for bias can be mitigated, however, by generating an anonymous questionnaire and including the names of variables.

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