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### Employee Creativity and Innovation: The Influence of Leadership Style, Public Service Motivation and Mediating Role of Psychological Empowerment

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# Kreativitas dan Inovasi Pegawai: Pengaruh Leadership Style, Public Service Motivation dan Peran Mediasi Psychological Empowerment

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#### **ABSTRACT**

Creativity and innovation are essential for enhancing public sector organizations and services. Given the hierarchical structure of public sector entities, leadership and employee motivation play a pivotal role in cultivating creativity and innovation. This study examines the effects of leadership styles such as transformational (TF), transactional (TSC), servant (SL), authentic (AL), and authoritarian (AU), along with public service motivation (PSM) on employee creativity and innovation (CI), through mediating psychological empowerment (PSE). Data obtained from 454 civil servants at Indonesia's Ministry of Manpower were analyzed using Covariance-Based Structural Equation Modeling (CBSEM). This study discovered that TF, SL, and AU, along with PSM, positively influence creativity and innovation through PSE. Conversely, TSC and AL do not have a notable impact. This study contributes both theoretical and practical contributions to the field of human resources and organizational development, by providing empirical evidence and deeper insights into the determinants of employee creativity and innovation.

**Keywords**: Creativity, innovation, leadership style, public service motivation, psychological empowerment, public sector.

### **ABSTRAK**

Kreativitas dan inovasi pada sektor publik merupakan faktor esensial untuk mengembangkan organisasi dan meningkatkan kualitas layanan publik. Mengingat struktur hierarkis entitas sektor publik, kepemimpinan dan motivasi pegawai memiliki peran penting dalam mendorong kreativitas dan inovasi pegawai. Tujuan utama penelitian ini adalah untuk mengkaji pengaruh leadership style yang mencakup transformational (TF), transactional (TSC), servant (SL), authentic (AL), dan authoritarian leadership (AU), serta pengaruh public service motivation (PSM) terhadap creativity and innovation (CI) pegawai melalui peran mediasi psychological empowerment (PSE). Data penelitian diperoleh melalui kuesioner daring sebanyak 454 responden yang merupakan pegawai negeri sipil di Kementerian Ketenagakerjaan Indonesia dan diolah dengan metode Covariance-Based Structural Equation Modelling (CBSEM). Penelitian ini menemukan bahwa TF, SL, dan AU bersama dengan PSM memiliki pengaruh positif signifikan terhadap creativity and innovation melalui peran mediasi PSE. Sementara itu TSC dan AL memiliki pengaruh negatif yang tidak signifikan. Penelitian ini memberikan kontribusi teoritis dan praktis pada bidang sumber daya manusia dan pengembangan organisasi dengan menyajikan bukti empiris serta wawasan yang lebih mendalam mengenai faktor penentu creativity and innovation pegawai.

**Kata kunci**: Kreativitas, inovasi, *leadership style*, *public service motivation*, *psychological empowerment*, sektor public.

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### INTRODUCTION

In the current era of expanding public expectations regarding services and public policies, it has become imperative for public sector organizations particularly in developing countries, to foster innovation by leveraging the creative potential of their employees (Gelaidan *et al.*, 2022). On the other hand, Torfing (2019) argues that over the past century, innovation has only been seen as a key driver of growth and welfare in the private sector. The dominance of hierarchical control and bureaucracy, as well as the relatively low levels of competition and economic incentives, are associated with barriers that hinder the realization of innovation in the public sector (Torfing, 2019). Therefore, the essential role of leadership in stimulating innovative behavior is crucial due to the hierarchical structure of public sector entities, as subordinates rely on leaders to create a supportive environment, remove obstacles, and provide guidance and motivation for innovation (Miao *et al.*, 2018). In addition, (Miao *et al.*, 2018) also emphasized the importance of organizations having employees with high public service motivation, to facilitate employee innovative behavior in public sector.

Furthermore, Al-Noaimi *et al.* (2022) explain that compared to the private sector, measuring innovation activities in the public sector is more difficult and challenging due to the complex governance structures and the lack of strong innovation measurement indicators in the public sector. The success of innovations produced by public sector organizations is often linked to indicators reflecting the extent to which employees demonstrate their performance through innovative work behaviors (Torfing, 2019). Additionally, Demircioglu and Audretsch (2020) state that public sector innovation refers to the number of aspects or dimensions influenced by an innovation. These include administrative or organizational processes, services, policies, human resource approaches, as well as the ways employees deliver services and approach problems.

Meanwhile in Indonesia, as one of the developing countries in Asia, compliance with the provision of public services is monitored and evaluated by the Ombudsman of the Republic of Indonesia. According to the 2022 report from the Ombudsman of the Republic of Indonesia, 21 ministries have achieved high compliance scores. However, from 2021 to 2022, The Ministry of Manpower experienced a decline in compliance score, from 88.42 in 2021 to 83.56 in 2022 (OmbudsmanRI, 2021, 2022). Based on the Ministry of Manpower's 2023 performance report, it was noted that several innovation programs, part of the reform initiative, have yet to optimally align with the eight areas of Bureaucratic Reform and the core values of organizational work culture, one of which is adaptive behavior, the ability to quickly adapt, continuously innovate, and develop creativity. Meanwhile, organizations that prioritize innovation must not only establish a work culture that fosters creativity but also require employees who exhibit innovative behaviors and strong leadership qualities (Demircioglu & Audretsch, 2020). Furthermore, according to Grošeli et al. (2021), to encourage employees to be creative and innovative, they must have desire or willingness, possess the necessary competencies, and be psychologically empowered (Gelaidan et al., 2022).

Therefore, referring to the issues, this study aims to examine the influence of leadership style and PSM toward CI through PSE as mediator, based on previous research models. Gelaidan *et al.* (2022) who tested the effect of leadership style on employee creativity and innovation through the mediating role of PSE among public sector employees, found that only certain leadership styles positively impacted creativity and innovation. Gelaidan *et al.* (2022) also recommend conducting further research in other developing countries, involving other leadership styles that may have a negative

influence, as well as intrinsic factors from employees. In other hand, Gyamerah *et al.* (2022) found that authoritarian leadership as part of paternalistic leadership had a negative influence on CI through PSE. Meanwhile, Rafique *et al.* (2023), who tested the dimensions of PSM on innovative behavior through the mediating role of PSE, recommend to reanalyze the research model by including the leadership style factor. Based on the findings and limitations of these three studies, we believe it is crucial to conduct further research by modifying the research model and retesting it in a different context to enrich previous findings. As Susanto (2020) pointed out, while many researchers have studied the antecedents of innovative behavior, Research focusing on the context of public sector organizations remains limited.

To address the gaps identified in the three aforementioned studies, we conducted a quantitative study involving 454 civil servants from the Ministry of Manpower in Indonesia. As one of the ministries that experienced a decline in compliance scores related to the provision of public services in Indonesia during 2021-2022, and continually striving to enhance its public service innovation, the findings of this study demonstrate how leadership styles and PSM can positively influence employees' creative and innovative behaviors in organizations with similar characteristics and conditions. By employing a modified research model and a distinct research context, this study presents novel findings regarding the influence of certain leadership styles. Additionally, this study provides theoretical and practical implications by providing insights for developing policies that support the fostering of optimal creative and innovative behaviors through leadership and the enhancement of employee motivation in public service.

### Literature Review

### Creativity and Innovation (CI)

The creative stage of the process refers to the initiation of ideas, while the innovation stage refers to the implementation of these ideas. Innovation is built from creative ideas as a basic element (Amabile, 1988). Amabile also defines organizational innovation as the success of implementing creative ideas in an organization. With this definition, the form of an idea can take the form of a product, process, service within an organization, or even a new procedure or policy created within an organization. Furthermore, Amabile (2011) developed the componential theory of creativity, which is based on the definition of creativity as the process of generating new ideas that are appropriate for a specific purpose. The componential theory of creativity posits that an individual's level of creativity will be high if they possess intrinsic motivation, expertise in their field, creative thinking skills, and work in an environment that strongly supports creativity (Amabile, 2011).

Referring to the componential theory of creativity, increasing employee creativity and innovation can be influenced by several factors. Perceived leadership style by employees can be a work environment condition that can support creativity. Research conducted in the past suggests that various styles of leadership can enhance creativity and innovation, leading to improved performance (Gelaidan *et al.*, 2022). In other hand, regarding to intrinsic motivation factor that influence creativity, Miao *et al.* (2018) stated that by increasing the dimensions of meaning and competence in PSE, public service motivation (PSM) can influence employee innovative behavior. PSM defined as employee motivation to always prioritize the public interest, by sacrificing personal interests in order to achieve community welfare (Susanto, 2020).

### Relationship between psychological empowerment (PSE) toward employee creativity and innovation (CI)

According to Grošelj *et al.* (2021), fostering creativity and innovation among employees requires them to possess the motivation, skills, and PSE (Gelaidan *et al.*, 2022). Additionally, the componential theory of creativity also state that individual's level of creativity will be high if they possess intrinsic motivation (Amabile, 2011). Meanwhile, Spreitzer (1995) defines PSE as an intrinsic motivation for task completion, comprising four cognitive variables: meaning, competence, self-determination, and impact. Gyamerah *et al.* (2022) demonstrated the favorable impact of PSE on employee creativity within the manufacturing industry in Ghana. Similarly, Rafique *et al.* (2023) conducted research in the public sector, reinforcing Dedahanov *et al.* (2019) findings that empowerment significantly influences innovative behavior. Similarly, Nguyen *et al.* (2023) study reaffirmed the vital importance of PSE in promoting innovative behavior. Meanwhile, the idea that PSE greatly affects the creativity and innovation of public sector workers was also supported by Gelaidan *et al.* (2022). Thus, the subsequent hypothesis is suggested:

H1: PSE has impact on CI.

## Psychological empowerment (PSE) as mediating effect between leadership styles and employee creativity and innovation (CI)

Gelaidan et al. (2022) reference Hughes et al. (2018) to emphasize that evaluating singular leadership variable is now considered outdated and inadvisable. They advocate for a more comprehensive approach, entailing the examination of various leadership variables and mediators, to yield greater understanding. Consequently, this study aims to fill those void by exploring how PSE mediates various leadership style toward CI. Moreover, this study aim to re-examined concept from Gelaidan et al. (2022) and to include additional leadership style variables that could potentially have a negative impact on employee CI. This study involved five leadership styles that were analyzed to see their influence on creativity and innovation through PSE.

First, Jensen *et al.* (2019) defines character of a leader with a transformational approach is synonymous with efforts to develop and communicate the organization's vision clearly with the aim of encouraging employees to act beyond their personal interests, and always try to focus on achieving organizational goals. Gelaidan *et al.* (2022) found that psychological empowerment (PSE) mediates transformational leadership (TF) on employee creativity and innovation (CI). Meanwhile Schermuly & Meyer (2020) found that the TF approach through PSE can influence employees' state of mind when employees feel challenged in their work activities. Additionally, Stanescu *et al.* (2021) found that psychological empowerment mediates the influence of transformational leadership on creativity and innovation. Leaders with transformational leadership characters are argued to empower their subordinates through four dimensions, namely competence, meaning, self-determination, and impact. Thus, the subsequent hypothesis is suggested:

H2: PSE mediates TF connection toward CI.

Second, Jensen *et al.* (2019) argue that TSC should be seen as a formative construct, where the use of pecuniary and nonpecuniary rewards and sanctions jointly construe the conceptual and empirical significance of TSC. Tung (2016) discovered a positive correlation between TSC and innovative behavior through PSE, a result echoed by Hansen & Pihl-Thingvad (2019) in the public sector. Research conducted by Gelaidan *et al.* (2022)

also confirmed that PSE fully mediates the influence of TSC on CI. In contrast, Wei et al. (2010) revealed different findings, indicating that individual with transactional behavior was positively associated with subordinates' creative performance in teams with a higher PSE climate, but negatively linked to subordinates' creative performance in a lower PSE climate. Thus, the subsequent hypothesis is suggested:

H3: PSE mediates TSC connection toward CI.

Third, the influence of servant leadership (SL) on the creativity and innovation (CI) of public servants is likely to be manifested through psychological empowerment (PSE). Instead of placing emphasis on one's personal interests, SL is more concerned with meeting the needs of others and prioritizing the satisfaction of others (Greenleaf, 1977). The study by Khan *et al.* (2022) revealed that SL is associated to PSE, innovative working behavior and also job crafting. Furthermore, Gelaidan *et al.* (2022) which found influence of SL toward CI through PSE stated that servant leadership focuses on serving followers, recognizing their contributions, and prioritizing their needs over personal interests. In response, employees appreciate this approach and, in turn, stay committed to the objectives of leader and organization. In this way, a leader using SL approach can boost employee performance by fostering PSE among them (Gelaidan *et al.*, 2022). Consequently, based on the collective findings of these studies, researchers suggest that PSE mediates the influence of SL on CI. Thus, the subsequent hypothesis is suggested: **H4:** PSE mediates the relationship between SL and CI.

Fourth, authentic leadership (AL) is characterized as a type of leadership behavior that fosters empowerment, enhances psychological capacity positively, promotes a favorable ethical environment, and also cultivates greater self-awareness, internalized moral perspectives, balanced information processing, and transparent relationships between leaders and their subordinates, while also encouraging self-development positively (Walumbwa *et al.*, 2008). Research suggests that AL can have a positive impact on the creativity and innovation (CI) of civil servants through PSE (Shang *et al.*, 2019). These findings align with Shang *et al.* (2019), which highlights positive significant influence of AL on PSE as perceived by employees. However, Gelaidan *et al.* (2022) contrasting results, as their research did not find a significant impact of AL toward CI through mediating PSE, in contrast to the discoveries of Herrmann and Felfe (2014). Thus, the subsequent hypothesis is suggested:

H5: PSE mediates AL connection toward CI.

Fifth, this study aims to build on Gelaidan *et al.* (2022) suggestion to include leadership styles that could potentially have a negative impact on CI. In the other hand, Gyamerah *et al.* (2022) found a strong negative correlation between AU toward CI through PSE. The strict nature of paternalistic leadership is reflected in authoritarian leadership (AU), which involves enforcing strong authority and discipline over subordinates (Gyamerah *et al.*, 2022). Gyamerah *et al.* (2022) states that authoritarian leader's strict enforcement of discipline and unwavering obedience may be seen as unsupportive by employees, ultimately hindering the intrinsic motivation of subordinates and diminishing their sense of autonomy, impact, competence, and meaning. Similarly, Dedahanov *et al.* (2019) also discovered a negative link between AU and PSE. In contrast, Huang *et al.* (2015) claimed that in scenarios where leaders establish clear objectives and anticipate prompt decisions and favorable outcomes, authoritarianism operates effectively. Thus, the subsequent hypothesis is suggested:

**H6:** PSE mediates AU connection toward CI.

Relationship between psychological empowerment (PSE), public service motivation (PSM) and employee creativity and innovation (CI)

Lim *et al.* (2022) found results showing that there is a positive influence between PSM on the perceived quality of work unit products and services which becomes stronger when employees feel a higher level of PSE. Kundu *et al.* (2019) conducted research that aligns with the idea that the impact of PSM on performance perceptions will be more pronounced among public sector employees with high levels of PSE. Another study from Rafique *et al.* (2023) stated that by increasing employee PSE, PSM has the opportunity to increase employee CI. However, the results of research by Rafique *et al.* (2023) also showed that PSE failed to mediate the dimension of PSM, namely commitment to public interest, which was found to be insignificant to employee innovative behavior. Thus, the following hypothesis is suggested:

H7: PSE mediates PSM connection toward CI.

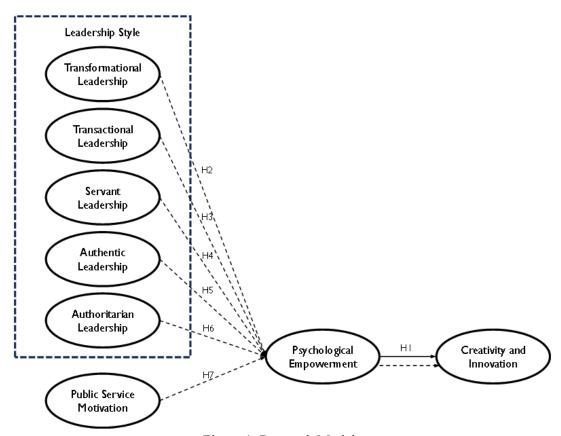


Figure 1. Research Models

As shown in Figure 1, based on the literature and previous research results, this study modified several previous research models from Gelaidan *et al.* (2022), Gyamerah *et al.* (2022) and Rafique *et al.* (2023), thus completing the research limitations suggested by the researcher. This modified model also describes the framework of the componential theory of creativity which emphasizes that individual creativity is formed from intrinsic motivation, represented in this model by PSE and PSM, as well as the leadership style of the leader who can build an environment that supports employee creativity.

### RESEARCH METHOD

### **Research Design**

This study uses a quantitative approach. The data was collected using non-probability sampling, followed by purposive sampling to filter data that fit particular criteria. The study requires civil servants with at least one year of service in Ministry of Manpower. They must have completed their probationary period, basic training, and be permanently assigned to a work unit. It's important to thoroughly understand both the leadership and the overall work environment.

The first stage was a pretest conducted on 37 respondents. The pretest results based IBM SPSS Statistics 26 software indicating the Kaiser Meyer-Olkin – Measure of Sampling (KMO-MSA)  $\geq 0.5$ . The Bartlett's Test of Sphericity (sig.) Value < 0.050, the factor loading value on the component matrix  $\geq 0.5$ , Cronbach's Alpha value obtained  $\geq 0.7$ . Therefore, this pretest result of 85 indicator items demonstrated good validity and reliability. Furthermore, the questionnaire was then circulated to a broader and more diverse group of participants for the primary analysis of the test. The data was collected through an online self-reported questionnaire from March 22, 2024, to May 3, 2024. A total of 499 responses were gathered, but only 454 (90.9 percent) met the criteria and were then processed using Lisrel 8.80.

The demographics and characteristics of the respondents are presented in Table 1. Male employees constituted the majority of respondents with 257 people (56.61 percent). The largest age group among the respondents was 35-<40 years, comprising 130 people (28.63 percent). 306 respondents as majority had a bachelor's degree (67.40 percent). The most common job position among respondents was staff, with 360 people (79.30 percent). Finally, the largest category of job experience among respondents was 10-<15 years, with 157 people (34.58 percent).

Table 1. Characteristics of Respondents

Profile	Classification	Numbers	Percentage
	Male	257	56,61%
Gender	Female	197	43,39%
	<25	4	0,88%
	25 - <30	58	12,78%
	30 - <35	107	23,57%
Age	35 - <40	130	28,63%
_	40 - <45	106	23,35%
	45 - < 50	25	5,51%
	>50	24	5,29%
	Diploma	42	9,25%
Education	Bachelor	306	67,40%
	Master	106	23,35%
	Staff	360	79,30%
Job Position	Subcoordinator	68	14,98%
	Coordinator	26	5,73%
	< 5 years	85	18,72%
	5 - <10 years	137	30,18%
Job Experience	10 - <15 years	157	34,58%
-	15 - < 20 years	48	10,57%
	>20 years	27	5,95%

### Measurement

This study utilized a 7-point Likert scale to measure various constructs. CI were assessed using 10 items developed by De Jong and Den Hartog (2010) which were also utilized by Gelaidan *et al.* (2022). PSE was measured using 12 items developed by Spreitzer (1995), encompassing four dimensions which were also utilized by Rafique *et al.* (2023) and Gelaidan *et al.* (2022). TF was measured using 7 items according to Jensen et al. (2019), TSC was measured using 12 items, considering three dimensions, also by Jensen *et al.* (2019). SL was measured using a 7-item short form of the SL-28 (SL-7) developed by Liden *et al.* (2015). AL was measured using the Authentic Leadership Inventory (ALI) developed by Neider & Schriesheim (2011), consisting of four dimensions and 16 items. AU was assessed using 9 items proposed by Farh & Cheng (2000) and later adopted by Gyamerah *et al.* (2022). Lastly PSM was measured using 12 items proposed by Kim (2009), considering four dimensions which also adopted by Rafique *et al.* (2023). In total, this study used 85 indicators.

### RESULT AND DISCUSSION

### Measurement model analysis

The data shown in Table 2 are sample indicators that have highest and lowest SLF values that form the construct, most indicators have SLF values above 0.50. There are several indicators with SLF values below 0.5, namely CI1 of 0.31, CI2 of 0.45, AU5 of 0.47, and CPI3 of 0.43. However, based on Hair *et al.* (2019), for research with a sample size greater than 350, the minimum factor loading value for an indicator categorized as significant is 0.30. In this study, the number of samples used was 454 samples, so all indicators can be concluded as valid. Moreover, a reliability test was carried out by calculating the construct reliability (CR) value and the average variance extracted (AVE) value. A construct is considered reliable if it has CR value >0.7 and an AVE value >0.5 (Hair *et al.*, 2019).

There are constructs with AVE values below 0.5, such as creativity and innovation (CI), and authoritarian leadership (AU), but they have CR values above 0.6. By considering the statement from Fornell and Larcker (1981), construct with an AVE below 0.5 can still be said to be significant if they have a CR value >0.6. The commitment to public interest dimension in the public service motivation variable with a CR value of 0.59 may cause by the low SLF and high error value of the CPI3 indicator. However, this study still maintains the CPI3 indicator refer to Hair et al. (2019), stated that items whose value is inadequate can be retained to meet the minimum number of indicator items for each construct. Furthermore, Hair et al. (2019), stated that the minimum acceptable number of indicator items is three indicators for each construct, the use of indicators less than three should be avoided.

Table 2. Validity and Reliability Result

First Order Construct	Second Order Construct	Sample Indicators	Standardized Loading Factor (SLF)	Composite Reliability (CR)	Average Variance Extracted (AVE)
Creativity		CI1	0,31	0,90	0,48
and		CI2	0,45		
Innovation (CI)		CI8	0,85		

First Order Construct	Second Order Construct	Sample Indicators	Standardized Loading Factor (SLF)	Composite Reliability (CR)	Average Variance Extracted (AVE)
Transformati onal		TF4	0,83	0,97	0,80
Leadership (TF)		TF5	0,98		
	Transaction al	PR	0,82	0,87	0,69
	Leadership (TSC)	NPR CS	0,90 0,77		
Pecunial		PR1	0,78	0,93	0,77
Reward		PR3	0,94	,	,
Non- Pecunial		NPR3	0,92	0,95	0,81
Reward		NPR4	0,87		
Contingent		CS1	0,86	0,95	0,82
Sanction		CS2	0,94	- 7- <del>-</del>	~,~ <b>~</b>
		SL1	0,66	0,88	0,51
Servant		SL4	0,74	2,00	-,
Leadership		SL6	0,79		
	Authentic	SA	0,99	0,99	0,94
	Leadership	RT	0,96	· <b>/-</b> -	- <i>y</i>
	(AL)	IMP	1,00		
	,	BP	0,94		
Self-		SA1	0,69	0,84	0,57
Awareness		SA4	0,80	ŕ	ŕ
Relational		RT1	0,82	0,91	0,72
Transparance		RT2	0,88	ŕ	ŕ
y		RT4	0,86		
Internalized		IMP1	0,94	0,89	0,67
Moral		IMP2	0,80	•	,
Perspective		IMP3	0,75		
Balanced		BP1	0,90	0,91	0,73
Processing		BP4	0,77		•
		AU1	0,82	0,85	0,40
Authoritarian		AU5	0,47		
Leadership		AU9	0,60		
	Public	APM	0,63	0,86	0,61
	Service	CPI	0,87		
	Motivation	COM	0,84		
	(PSM)	SS	0,76		
Attraction to		APM1	0,87	0,87	0,70
Policy		APM2	0,88		
Making		APM3	0,75		
Commitment		CPI1	0,61	0,59	0,33
to		CPI2	0,65		
Public Interest		CPI3	0,43		
Composion		COM2	0,76	0,84	0,64
Compassion		COM3	0,84		

First Order Construct	Second Order Construct	Sample Indicators	Standardized Loading Factor (SLF)	Composite Reliability (CR)	Average Variance Extracted (AVE)
Self-sacrifice		SS2	0,93	0,88	0,70
		SS3	0,77		
	Psychologic al	ME	0,77	0,96	0,69
	Empowerm ent	COMP	0,89		
	(PSE)	SD	0,67		
	PSE	IM	0,58		
Meaning		ME1 ME2	0,83 0,90	0,91	0,77
Competence		COMP2 COMP3	0,88 0,71	0,85	0,65
Self		SD1	0,83	0,79	0,56
Determintati on		SD2	0,70	·,,,,	3,50
Impact		IM1 IM2	0,85 0,65	0,77	0,53

### Structural model analysis

As shown in Table 3, result of each goodness of fit measurement test indicating that 7 of the 11 goodness of fit indicators have shown values above the reference value. Referring to Hair *et al.* (2019), to state that the model built is fit, researchers do not need to meet all existing GOF criteria. 3 or 4 GOF measures that meet the criteria are sufficient to categorize the model as a fit model, provided that the researcher must report at least one measure value on each goodness of fit indices.

Table 3. GOF Result

GOF	Measurement Test	Reference Value	Result	Conclusion
	GFI	$GFI \ge 0.90$ (good fit)	0,79	fit
Absolute Fit Indices	RMSEA	$RMSEA \le 0.07$	0,061	good fit
Absolute Fit indices	SRMR	$SRMR \le 0.08$	0,07	fit
	Normed Chi- Square	3:1	2,69:1	fit
	NFI	NFI > 0,9	0,96	good fit
Incremental Fit	NNFI	NNFI > 0.92	0,97	good fit
Incremental Fit Indices	CFI	CFI > 0.92	0,98	good fit
	RFI	RFI > 0.9	0,96	good fit
	IFI	IFI > 0,9	0,98	good fit
Parsimony Fit Indices	AGFI	AGFI > 0,90 (good fit)	0,76	fit
	PNFI	$PNFI \ge 0,50$	0,88	good fit

To carry out hypothesis testing, this research uses a CB-SEM analysis approach utilizing the LISREL 8.8 application. By using a confidence level of 95 percent, all hypotheses are tested using a two-tailed test approach so that the direction has not been determined. The hypothesis is open-ended so it provides the opportunity to get different results from research that has been conducted previously. Therefore, the t-table value that

is used as a reference is 1.96. The relationship between variables is considered significant if they obtain a t-value  $\geq$  1.96. This study examines the direct influence of PSE on CI. Apart from that, the indirect influence of leadership style and public service motivation variables on creativity and innovation through PSE was the main focus. By referring to the t-value obtained from the LISREL data processing results, the indirect effect will be considered significant if it has a t-value  $\geq$  1.96. This research focuses on testing indirect effects that are indirect-only. According to Zhao *et al.* (2010), indirect-only mediation tests do not need to test the relationship between the independent variable and the dependent. Therefore, if a t-value  $\geq$  1.96 is obtained for the indirect-effect value from the LISREL output results, the mediation effect can be considered significant.

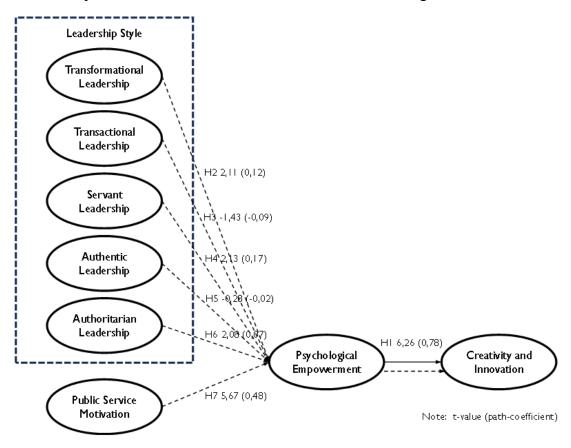


Figure 2. Path Diagram (t-values and path coefficient)

Hypothesis 1 (H1) examined the direct connection between PSE and CI. Figure 2 and Table 4 show a t-value of 6.26 for H1, confirming its significance and indicating that PSE has a positive impact on CI. Moreover, TF has a specific indirect impact on CI through PSE, with a t-value of H2 at 2.11, exceeding the threshold of 1.96. The result of indirect effect suggests that as a mediation variable, PSE show a significant effect, therefore result concluded that H2 is supported. Table 4 results were indicating that hypothesis H3 was rejected. The path coefficient has a negative total indirect effect value of -0.09 with a t-value <1.96. Hence, it can be inferred that PSE does not act as a mediator between TSC and CI. On the other hand, the findings suggest that PSE play as mediation in connecting SL with CI. This is supported by the path coefficient value of 0.17 and also t-value of 2.13 for H4. Contradict to proposed hypothesis, the indirect effect of AL on CI was not discovered to be influenced by PSE, as indicated by a t-value of -0.28. Therefore, H5 was not supported. Furthermore, H6 and H7 show acceptable results to be considered

significant mediation by having a t-value of more than 1.96. The impact of AU on CI is significantly mediated by PSE, with a t-value of 2.08. Likewise, relationship of PSM toward CI significant mediated by PSE with a path coefficient positive 0.48 also significant t-value 5.67.

Table 4. Hypothesis Test Result

Hypothesis	Path	Path Coefficient	t-value	findings
H1	PSE -> CI	0,78	6,26	Supported
Н2	$TF \rightarrow PSE \rightarrow CI$	0,12	2,11	Supported
Н3	$TSC \rightarrow PSE \rightarrow CI$	-0,09	-1,43	Not Supported
H4	$SL \rightarrow PSE \rightarrow CI$	0,17	2,13	Supported
Н5	$AL \rightarrow PSE \rightarrow CI$	-0,02	-0,28	Not Supported
Н6	$AU \rightarrow PSE \rightarrow CI$	0,07	2,08	Supported
H7	$PSM \rightarrow PSE \rightarrow CI$	0,48	5,67	Supported

### **Discussion**

The results of this study show that PSE has significant and positive impact on CI. Supports previous research which also shows the positive and significant influence of PSE on employee creative and innovative behavior (Dedahanov *et al.*, 2019; Gelaidan *et al.*, 2022; Gyamerah *et al.*, 2022; Nguyen *et al.*, 2023). This study found that employees who experience PSE are more likely to exhibit increased levels of CI. As research by Gelaidan *et al.* (2022) who also found that when public sector employees feel psychologically empowered they will tend to show creativity and innovation. Moreover, majority respondents indicated that their sense of psychological empowerment was evident when they perceived their job activities as personally meaningful, found their work to be significant, and felt confident in their ability to perform all tasks effectively. It fosters creative and innovative behavior and they are more likely to propose new ideas in work practices, persuade colleagues to support these innovations, and generate enthusiasm among supervisors for their innovative suggestions.

Moreover, there are six paths in this research model which show how leadership style, public service motivation and PSE influence CI. First, this study proves that PSE significantly mediates the relationship between PSM toward CI. PSM through PSE is the factor that most influences CI. In line with Lim et al. (2022) who found results showing that there is a positive influence between PSM on the perception of the quality of work unit products and services which becomes stronger when employees feel a higher level of PSE. Also corroborating the study from Rafique et al. (2023) which states that increasing employee PSE can provide public service motivation with the chance to enhance employee creativity and innovative behavior. The PSE's impact on employees' psychological response can motivate them to offer public services, thereby fostering more creative and innovative behavior. PSM is the stimulus that has the most influence on CI compared to the leadership style practices carried out by the leader. In the context of the Ministry of Manpower, to enable employees to find meaning in their job activities, feel confident in their ability to carry out tasks and job functions, and be motivated to exhibit creative and innovative behavior, they must possess a strong commitment to make sacrifices for the greater good of the public. Additionally, they need to have an interest in engaging in discussions about the public services within their work unit and be motivated to create public services that are beneficial for both the community and the work unit. Ultimately, this will drive employees to exhibit creative and innovative behavior.

Second, between SL and CI, PSE serves as a significant mediator. SL has a major impact on PSE after PSM. Through the mediating role of PSE on CI, SL has the second largest influence after the influence of PSM. Servant leadership is known as the definition of a leader who serves, not only serving the organization and society, but also serving the employees who are subordinate to him by developing the potential of employees to achieve organizational goals. Yang et al. (2019) cites research from Newman et al. (2017) stated that by stimulating the potential of subordinates and building trust by first serving others, leaders with a servant character tend to make their subordinates feel an increased sense of leadership in their work (Yang et al., 2019). In line with research by Khan et al. (2022) who discovered that servant leadership is associated with the PSE, job crafting, and innovative work behavior of employees. Moreover, in this study Employees feel psychologically empowered by understanding the meaning behind their job activities and tasks, and by having confidence in their ability to perform their work. This is facilitated through the stimulation of their direct supervisor's servant leadership character, which involves giving employees the freedom to solve problems in ways they see fit, emphasizing the importance of providing service to the public, and encouraging employees to seek assistance from their direct supervisor when facing work-related issues.

Third, the findings of this research show that PSE mediate the relationship between TF and CI. Through the mediating role of PSE on CI, TF has the third largest influence after the influence of public service motivation and servant leadership. This finding is in line with research by Gelaidan et al. (2022). Gelaidan et al. (2022) argues that TF has the main characteristics of motivating and involving subordinates so that it can increase subordinates' PSE. The findings of this research also strengthen research by Schermuly & Meyer (2020) which found that TF characters can influence employee work activities through PSE. Meanwhile, Schermuly et al. (2022) argue that leaders with TF characters express confidence in the competence of their subordinates to achieve organizational goals. The definition of TF presented by Jensen et al. (2019), also said that the character of the TF approach is synonymous with efforts to develop and communicate the organization's vision clearly with the aim of encouraging employees to act beyond their personal interests, and always try to focus on achieving organizational goals. In this study context, the influence of a leader with a transformational leadership character, who can help employees understand the work unit's targets and communicate them effectively, makes employees enthusiastic about those targets. This, in turn, boosts employees' confidence in their ability to perform job activities and understand the meaning behind their tasks, which will encourage creative and innovative behavior.

Fourth, this study did not find any evidence of PSE acting as a mediator between transactional leadership (TSC) and creativity and innovation (CI). Contrary to the findings from research by Gelaidan *et al.* (2022) and also Ambad *et al.*, (2021) which found the mediating influence of PSE on the relationship between TSC toward CI. The definition of TSC expressed by Jensen *et al.* (2019), that TSC is leadership that involves the use of three types of behavior based on performance or effort which include: the use of non-pecuniary rewards, pecuniary rewards, and sanctions (contingent sanctions). One reason that might cause TSC to be insignificant on CI in this research is the difference in organizational characteristics from previous research. Yudiatmaja *et al.* (2023) states that the TSC style emphasizes providing rewards and sanctions that are linked to employee innovative behavior. In this study, this result caused by lack of comprehensive performance management system that incorporates performance-based rewards and

establishes clear guidelines for evaluating employee performance, especially in encouraging creative and innovative behavior.

Fifth, PSE was found to have no role in mediating authentic leadership (AL) on creativity and innovation (CI). Contrary to the findings Khattak *et al.* (2022) as well as several other studies from Towsen *et al.* (2020), Joo and Jo (2017), Xu and Yang (2018), Zhang *et al.* (2018) which shows empirical evidence supporting a positive relationship between AL and PSE. However, in line with Gelaidan *et al.* (2022) who also failed to find a significant mediating effect of PSE between relationship AL toward CI. As Gelaidan *et al.* (2022) referenced Barsh *et al.* (2008) who claimed that the condition was caused by leaders lacking confidence in their ability to promote CI in their workforce.

Sixth, this study discovered that by means of PSE, authoritarian leadership (AU) exerts a beneficial impact on CI. When employees feel psychologically empowered because they are able to understand the meaning behind their job activities and tasks, and have confidence in their abilities, through the approach of AU by demonstrating a firm attitude and requiring employees to obey all commands, as well as making all decisions within the work unit, this will encourage creative and innovative behavior. These findings contradict the research of Gyamerah et al. (2022) who found the negative influence of AU on creativity through PSE. However, this study examines a bureaucratic organization that maintains traditional leadership styles inherited from previous generations which is more traditional, rigid and fragmented based on work unit structure. Those condition in line with several research findings which also found positive effect of AU in certain conditions, such as in work groups that have a traditional character (Shen et al., 2019), AU which focuses on discipline towards individual creativity mediated by self-efficacy (Zhao et al., 2022), and also on conditions where leaders set clear goals and prioritize making quick decisions (Huang et al., 2015). Although, hierarchical and traditional public sector organizational structures may have similarities to each other. However, the context of the work environment may influence these results, so further research is needed.

### **CONCLUSION**

The findings of this study offer both theoretical and practical implications. This research identifies the effects of leadership styles, encompassing five distinct styles, alongside public service motivation (PSM) on creativity and innovation (CI) through the mediating role of psychological empowerment (PSE), which has been scarcely examined in previous studies. Therefore, the empirical data presented in this research provide theoretical implications that enrich new perspectives and address previous research gaps. This study demonstrates that leadership styles and public service motivation influence employee creativity and innovation through the mediating role of psychological empowerment. In the context of employees at the Ministry of Manpower, psychological empowerment significantly mediates the impact of transformational, servant, and authoritarian leadership on creativity and innovation. The positive and significant influence of authoritarian leadership on creativity and innovation is also a unique novelty in this study because it is different from the findings of other studies. However, PSE did not act as mediator between TSC and CI, nor between AL and CI. Additionally, PSE effectively mediates the influence of PSM on CI. Based on these findings, in the context of this study, the role of leaders and employees with high PSM is crucial for enhancing employee creativity and innovation, in order to improve quality of public services.

The findings of this study indicate that within the context of the Indonesian Ministry of Manpower, among the three leadership styles that significantly positively influence CI,

SL emerges as the most impactful. The managerial implications of these findings underscore the importance of employee competency development through the SL approach. It is recommended that this approach be integrated into leadership training programs and serve as a mandatory requirement for employees aspiring to leadership positions or participating in leadership assessment programs. Employees experience psychological empowerment when they understand the significance of their job activities and work, have confidence in their ability to perform tasks, and are supported by the servant leadership qualities exhibited by their direct supervisors. This support includes granting employees the autonomy to solve problems in ways they deem appropriate, emphasizing the importance of service to the community, and encouraging employees to seek assistance from their supervisors when faced with work-related challenges. Ultimately, the servant leadership approach of supervisors fosters creativity and innovation by motivating employees to introduce innovative ideas into their work practices, persuade colleagues to support these ideas, and inspire enthusiasm among supervisors for the proposed innovations.

Additionally, public service motivation in this study also identified as a crucial factor in supporting employees creativity and innovation. Therefore, organizations must ensure that employees maintain a high level of public service motivation, as higher public service motivation leads to a greater drive to enhance competence and to engage in creative and innovative behaviors when delivering quality public services. Organizations can strive to recruit new employees with high levels of PSM and conduct assessments to determine the public service motivation of each employee. The results of these assessments can serve as a basis for providing regular education and training programs focused on public service topics, ensuring that employees remain motivated to develop effective public services that benefit both internal and external stakeholders.

This study has several limitations that can be considered for future research. The use of cross-sectional method may provide different results if conducted at another time. Therefore, it is recommended that further research be carried out with a longitudinal or mixed-method approach. The findings also reveal that the results for transactional, authentic, and authoritarian leadership contradict those of most other studies. This can occur due to differences in organizational characteristics and performance management approaches, in terms of rewards, the availability of competency improvement programs and also working culture, so that the data obtained from respondents is not yet saturated. Therefore, further research can be carried out again in other public or private sector organizations that have more established performance, work culture, and reward systems. Future research could also consider other mediating roles by referring to the self-determination theory (SDT) framework, involving extrinsic and intrinsic motivation of employees.

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