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The Influence Of Leadership Styles And Innovation Culture On Employee Creativity Level In Continuous Improvement Program Cycle At Pertamina Hulu Rokan

Pengaruh Gaya Kepemimpinan Dan Budaya Inovasi Terhadap Tingkat Kreativitas Karyawan Dalam Siklus Program Peningkatan Berkelanjutan Di Pertamina Hulu Rokan

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ABSTRACT
Pertamina Hulu Rokan is a new entity in the Upstream Subholding, Pertamina Hulu Energi which has a working area on the island of Sumatra. Most of its working area is in Pekanbaru, which is the work area of Ex. Chevron Pacific Indonesia (CPI). Pertamina Hulu Rokan is faced with the challenge of oil and gas production that must be sustained to maintain production sustainability. Continuous Innovation activities are activities that are routinely carried out by workers at Pertamina Hulu Rokan. This culture of innovation has taken place to maintain the performance of oil and gas production activities. The Innovation Culture that was formed was the Continuous Improvement Program (CIP). Every worker in the Zone 1, Zone 4, and Rokan Zone work areas makes innovations to produce value creation that is beneficial for the company in terms of revenue growth, cost saving, and cost avoidance. The number of innovations produced by workers is not always the same, and some do not exceed the innovation target set by the company. The role of leadership styles in the implementation of innovation culture is urgently needed as a role model for workers in making innovations independently. This study uses a quantitative approach, namely by conducting a questionnaire with variables Transformational Leadership, Transactional Leadership, Creativity, and Culture Innovation. The distribution of questionnaires was carried out thoroughly to workers from various functions located in the work areas of Head Office, Zone 1, Zone 4, and Rokan Zone. The results of the questionnaire were analyzed using Partial Least Square Structural Equation Modeling (PLS-SEM) to find out and evaluate which variables are significant and have the greatest influence on the management of innovation culture in PHR today. This research focuses on the most dominant Leadership Style so that the right strategies and solutions can be identified to increase the number of innovations with the aim of increasing value creation for the company. The results of this study show that Tranformational Leadership and Transactional Leadership have a significant impact on the culture of innovation, but Transfromational has a significant impact on the culture of innovation.
Keywords: *Continuous Improvement Program, Transformational Leadership, Transactional Leadership, Creativity Level*

ABSTRACT
Pertamina Hulu Rokan adalah entitas baru di bawah Subholding Hulu Pertamina, Pertamina Hulu Energi, yang memiliki wilayah operasional di Pulau Sumatra. Sebagian besar wilayah operasionalnya berada di Pekanbaru, yang merupakan wilayah operasional mantan Chevron Pacific Indonesia (CPI). Pertamina Hulu Rokan dihadapkan pada tantangan produksi minyak dan gas yang harus dipertahankan untuk menjaga keberlanjutan produksi. Kegiatan Inovasi Berkelanjutan adalah kegiatan yang secara rutin dilakukan oleh pekerja di Pertamina Hulu Rokan. Budaya inovasi ini terbentuk untuk menjaga kinerja kegiatan produksi minyak dan gas. Budaya inovasi yang terbentuk adalah Program Peningkatan Berkelanjutan (CIP). Setiap pekerja di wilayah kerja Zona 1, Zona 4, dan Zona Rokan melakukan inovasi untuk menghasilkan penciptaan nilai yang bermanfaat bagi perusahaan dalam hal pertumbuhan pendapatan, penghematan biaya, dan penghindaran biaya. Jumlah inovasi yang dihasilkan oleh pekerja tidak selalu sama, dan beberapa di antaranya tidak melebihi target inovasi yang ditetapkan oleh perusahaan. Peran gaya kepemimpinan dalam implementasi budaya inovasi sangat dibutuhkan sebagai

teladan bagi pekerja dalam melakukan inovasi secara mandiri. Studi ini menggunakan pendekatan kuantitatif, yaitu dengan melakukan kuesioner dengan variabel Kepemimpinan Transformasional, Kepemimpinan Transaksional, Kreativitas, dan Budaya Inovasi. Distribusi kuesioner dilakukan secara menyeluruh kepada pekerja dari berbagai fungsi yang berlokasi di area kerja Kantor Pusat, Zona 1, Zona 4, dan Zona Rokan. Hasil kuesioner dianalisis menggunakan Partial Least Square Structural Equation Modeling (PLS-SEM) untuk mengetahui dan mengevaluasi variabel mana yang signifikan dan memiliki pengaruh terbesar terhadap pengelolaan budaya inovasi di PHR saat ini. Penelitian ini berfokus pada gaya kepemimpinan yang paling dominan agar strategi dan solusi yang tepat dapat diidentifikasi untuk meningkatkan jumlah inovasi dengan tujuan meningkatkan penciptaan nilai bagi perusahaan. Hasil penelitian ini menunjukkan bahwa Kepemimpinan Transformasional dan Kepemimpinan Transaksional memiliki dampak signifikan terhadap budaya inovasi, namun Kepemimpinan Transformasional memiliki dampak yang lebih signifikan terhadap budaya inovasi.
Kata Kunci: Program Peningkatan Berkelanjutan, Kepemimpinan Transformasional, Kepemimpinan Transaksional, Tingkat Kreativitas

1. Introduction

Companies must run with innovation to survive in global competition, maintain competitiveness, improve economic performance, and contribute to national economic development (Dereli, 2015). Culture Innovation Performance can be affected by various factors, such as environment, culture, organisational structure, resources, employees' motivation, management support, and knowledge (Chang & Lin, 2015; Naranjo-Valencia et al., 2016; Pamfilie et al., 2012; Waldman et al., 2001). Although many factors may affect innovations, this study focuses on the effect of culture and leadership on innovation. Organisational culture is a complex set of values, convictions, assumptions, and symbols that reveal how an organisation conducts its business (Barney, 1986). Nacinovic et al. (2009) suggest that successful companies have just a few fundamental beliefs or values, one of which is that most organisation members should be innovators.

Leadership is a set of beliefs and values that influence people to cooperate in achieving specific goals; the organisational culture will gradually absorb those beliefs and values. The most important characteristic of leadership is the ability to influence others (Pamfilie et al., 2012).

Currently, the number of innovative ideas produced is identified based on work areas at Pertamina Hulu Rokan, which consist of Zona 1, Zona 4, and Zona Rokan. Where each work area has a different number of innovative ideas every year. The company sets an innovation target of 7% of the working population of the working area, which is stated in the Key Performance Indicators. From 2023 to 2024, the distribution of innovation ideas produced in each work location is as follows:

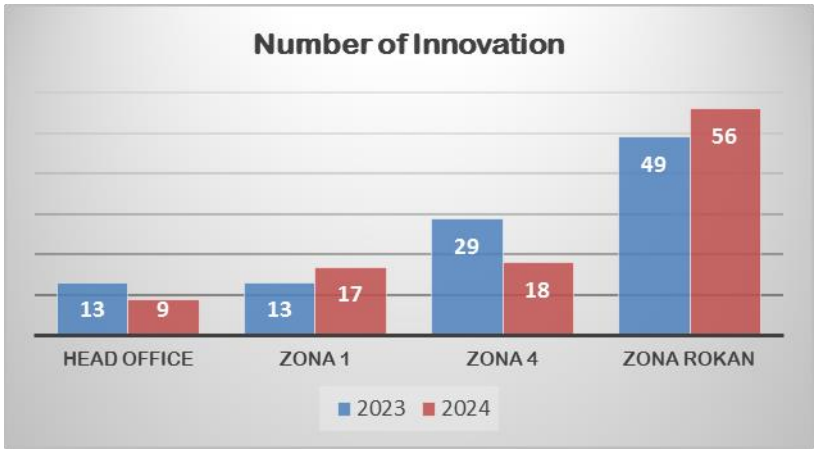

Figure 1. Number of Innovations Based on Work Area

From the table above, work locations have experienced an increase and a decrease in the number of innovations produced in 2023-2024. There are differences in the number of innovative ideas generated from each work area at Pertamina Hulu Rokan. The Continuous Improvement Program (CIP) activities also involve active employees in it, because the employees of the implementing parties are implementing innovation activities in each work area, the involvement of the number of workers can be seen in the data below:

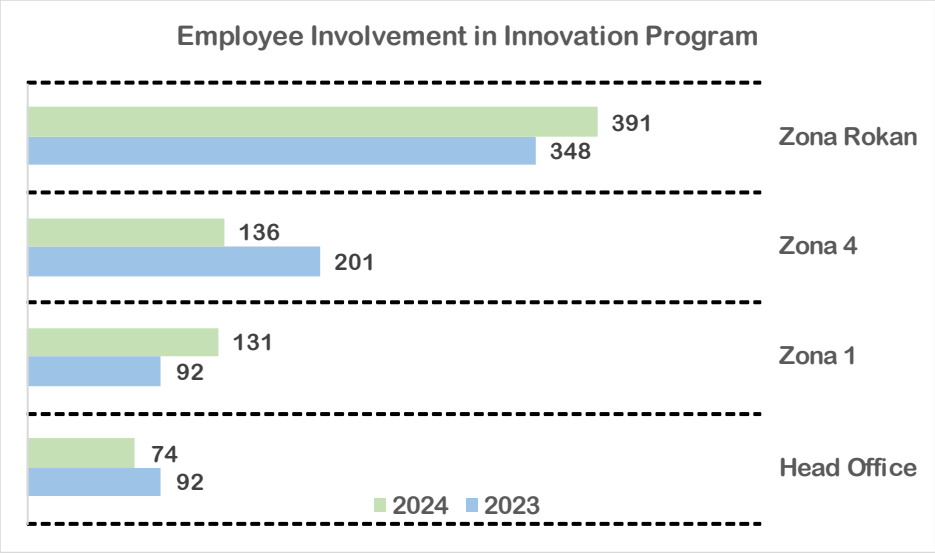

Figure 2. Employee Involvement in Innovation Program

Innovation is a complex and multifaceted phenomenon and is influenced by many factors. It may be an environment or a culture, almost a spiritual force, that drives value creation in a company (Wan Khairuzzaman, 2007). Meanwhile, results from various innovations produced throughout the Pertamina Hulu Rokan working area were obtained in the form of value creation, which impacted the company's operational performance. Value Creation is identified as Cost Saving, Cost Avoidance, and Revenue Growth.

Value creation is very beneficial for company performance; Companies need to increase the internalisation of a culture of innovation in company operational activities by increasing the involvement of company leaders and also each functional leader with the expectation that leadership involvement will increase employee motivation and open awareness in creating other innovative ideas that can help the company's operational sustainability. With the awareness and involvement of all workers and full support from company leadership, a conducive culture of innovation is likely to be created. Moreover, the company's targets will be to realise the creation of innovative ideas.

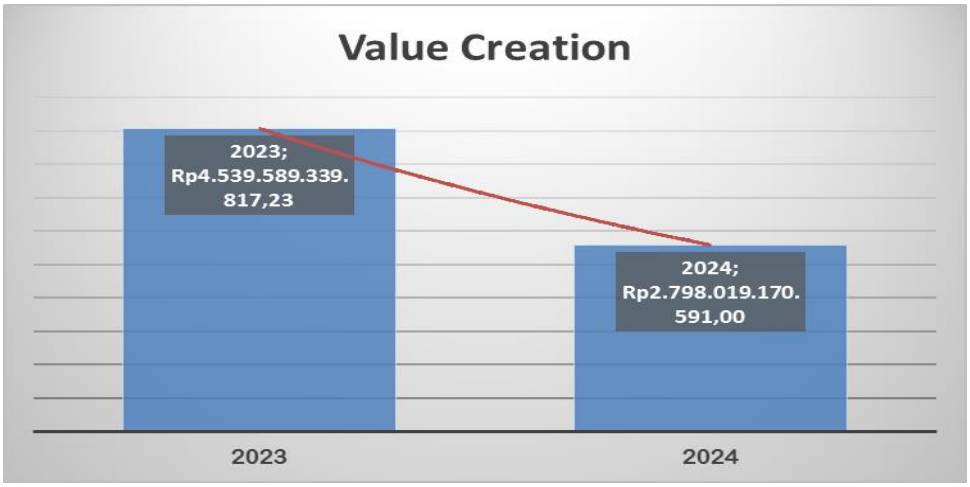

Figure 3. Value Creation in 2023-2024

There is a phenomenon that the value creation generated in 2024 will decrease compared to the previous year. This is a concern because the level of employee involvement and the number of innovations produced throughout 2023-2024 are inconsistent. This makes it curious whether there is a relationship between the influence of Leadership Style, Creativity, and Cultural Innovation. So it impacts the decline in the number of innovations and value creation.

2. Literature Review

Leadership Styles

Leadership is a key predictor of employee, team, and organisational creativity and innovation. Creativity and innovation drive progress and allow organisations to maintain a competitive advantage (Anderson, De Dreu, & Nijstad, 2004; Zhou & Shalley, 2003). Previous reviews that have focused explicitly on leadership and creativity or innovation have typically summarised existing research, provided overviews of dominant theoretical frameworks, identified 'gaps' within the literature, and noted practical implications (Klijn & Tomic, 2010; Shalley & Gilson, 2004).

Leadership has been viewed as a social process in a group context in which the leader influences followers' behaviours to meet desired organisational goals. The leader's role as an influencer or required behaviours may range from being inspirational, motivational, and visionary to a role that involves the design of an appropriate organisational context. Bruce Avolio and Bernard Bass referred to these as transformational and transactional leadership styles. Researchers will use systematic and narrative techniques to review the literature. The recommendations will help reorient the field so that future findings will be more robust and yield meaningful policy implications. It will also provide a systematic review of the leader variables studied, their relationship with creativity and innovation, and a review and categorisation of proposed mediators of these relationships. Many leadership variables have been examined as predictors of workplace creativity and innovation.

Creativity

Creativity and innovation drive progress and allow organisations to maintain a competitive advantage (Anderson, De Dreu, & Nijstad, 2004; Zhou & Shalley, 2003). "Creativity, as has been said, consists largely of rearranging what we know to find out what we do not know. Hence, to think creatively, we must be able to look afresh at what we normally take for granted." - George Kneller. Creativity is the ability to make or otherwise bring something new into existence, whether a new solution to a problem, a new method, a device,

or a new aesthetic object or form (Kerr, Barbara, 2025). Creativity and innovation are nuanced concepts that each incorporate several distinct but closely related processes that result in distinct but often closely related outcomes (Anderson et al., 2004, 2014). Creativity is becoming increasingly important today due to the rapid pace of change and the need for new and innovative solutions to complex problems. That is what makes us human. Creativity is the lifeblood of progress, and without creativity, we would stagnate.

The same is true of creativity and innovation. However, the definition of Anderson et al. (and many others) states that creativity and innovation are "outcomes and products" that will invariably result in an identifiable benefit. If we follow this logically, an idea cannot be creative until it leads to identifiable benefits to the organisation. Even if we leave aside potential concerns regarding the precise meaning of 'identifiable', 'benefits', and 'organisation' here, such definitions remain problematic. A creative idea or innovative process cannot exist until the effects are known. Would cars, vaccines, or computers be considered lacking in creativity if they had not resulted in profitable endeavours? Are we to regard the processes that led to the discovery of DNA as more creative and innovative with each new identifiable benefit we find? Further, such a definition means that creativity and innovation only exist within a particular temporal space. In other words, something can change from being uncreative to creative and back to uncreative again, depending upon market forces, such as the high-speed aeroplane Concorde.

Culture Innovation

Innovation originated from the Latin "innovare," meaning 'to make something new'. Though the importance of innovation is increasing these days, understanding the whole concept remains difficult (Szmytkowski, 2005). Innovation is counted among the growth engines in the world that have accelerated growth at a double pace, as recorded during 1945-2001, in the high technology sector (Leary, 2002), and no doubt, innovation is considered vital for competitiveness, prosperity, and economic growth. In its broadest sense, innovation is about creating and implementing a new idea in a social context to deliver commercial benefits. Innovation is the tangible action or outcome of activities in the organisational environment.

An innovation culture is the company's collective behaviours, values, and practices where employees strive for progress, creativity, and problem-solving without being asked to do so. An innovative culture is one possible characteristic of company culture. Therefore, cultural innovation has been considered a multi-dimensional context encompassing the intention to be innovative, the infrastructure to support innovation, operational level behaviour necessary to influence a market, value orientation, and the environment to implement innovation (Dobni, 2008). Companies that encourage innovation can have increased employee engagement, productivity, and long-term organisational growth. The only way for companies to continue to grow now and in the future is to adapt through innovation, as the wise saying goes, "Innovation is anything but business as usual". Clayton Christensen, a professor at Harvard University, divides innovation into three types: efficiency, sustainment, and transformation. This classification of three types of innovation is often used as a reference for business and non-business organisations in planning and implementing innovation.

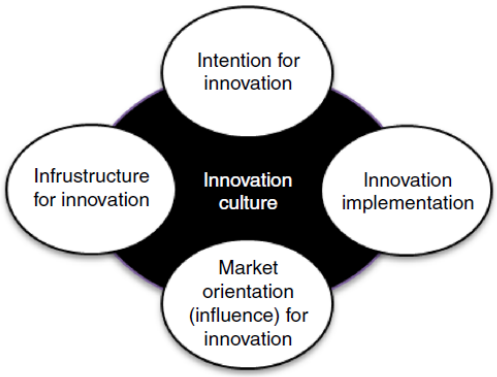

Figure 4. Innovation Culture Dimentions

3. Research Methods

The population in this research is all the employees who work in PT Pertamina Hulu Rokan work area with a working period of more than 1 year and have been involved in company innovation activities, which is located in the Head Office Jakarta, Zona 1, Zona 4, dan Zona Rokan, consists above 500 employees. In this research, there will be 113 participants who have filled out the online questionnaire, which the researcher sent through email. The research was conducted in Jakarta from January to February 2025 using Microsoft Forms tools, which were emailed through Microsoft Outlook provided by the company.

A technique used in this research is nonprobability sampling. Non-probability sampling is a technique where the selection of units to be included in the sample is not based on random selection. Specifically, this research uses purposive sampling, where the researcher selects participants based on specific criteria. This technique is often used in qualitative research, where the researcher wants to study a specific group or phenomenon.

4. Results and Discussions

Demographic Analysis

Respondents involved in this research are all employees in Pertamina Hulu Rokan located in Head Office – Jakarta, Zona 1 – Jambi & North Sumatra Province, Zona 4 – South Sumatra Province, and Zona Rokan – Pekanbaru Province. The profiles of respondents in this study describe the characteristics of the distribution of respondents based on age, gender, work location, function, and years of involvement in innovation activities. The analytical tool or software used is the LPS SEM Using R. The profiles of the respondents who filled out the research questionnaire involving 113 respondents are described as follows:

Table 1. Analysis based on age

Age	Frequency	Percent
21-30 years old	13	12%
31-40 years old	35	32%
41-50 years old	44	39%
Above 50 years old	19	17%
Total	**113**	**100%**

Based on Table 1 when we view from the age category, it was found that this study consisted 113 people (12%) aged 21-30 years old, 35 people (32%) aged 31-40 years old, 44 people (39%) aged 41-50 years old and 19 people (17 %) who are over 50 years old so that this study was dominated by employees aged 31-40 years old and 41-50 years old.

Table 2. Analysis based on gender

Gender	Frequency	Percent
Male	94	85%
Female	17	15%
Total	**113**	**100%**

Based on Table 2, when viewed from the gender category, the number of male respondents was greater than that of female respondents, 94 people (85%) for male employees and 17 people (15%) for female employees.

Table 3. Analysis based on Work Location

Work Location	Frequency	Percent
Head Office Jakarta	27	24%
Zona 1	8	7%
Zona 4	14	12%
Zona Rokan	64	57%
Total	**113**	**100%**

Based on Table 3, when we view from the work location of the employee, this study consisted of 27 employees (24%) from the head office in Jakarta, eight employees (7%) from Zona 1, 14 employees (12%) from Zona 4, and 64 employees (57%) from Zona Rokan.

Table 4. Analysis based on Function of Employee

Function	Frequency	Percent
Production & Operation	63	56%
Development & Drilling	8	7%
Human Capital	12	12%
Legal Councel	1	1%
Strategic Planning	2	2%
Commercial	4	4%
Finance	3	3%
HSSE	9	8%
Information Technology	3	3%
Supply Chain Management	3	3%
Remediation & Site Retirement	3	3%
Corporate Secretary	1	1%
Total	**113**	**100%**

Based on Table 4, when viewed from the Function/Department Employees, this study consists of 113 employees from 12 different functions. Moreover, employees from the Production & Operations function dominate the respondents in filling out the questionnaire, with 56% of respondents.

Analysis based on Years of Experience in CIP 15

Table 5. Analysis based on Years of Experience in CIP

Years of Involve in CIP	Frequency	Percent
< 1 year	24	21%
1 – 5 years	63	56%
6 – 10 years	9	8%

Above 10 years	17	15%
Total	**113**	**100%**

Based on Table IV.5 when we view from the Experience of CIP, this study consisted of 24 employees (21%) who had experience < 1 year, 63 employees (56%) who had experience 1-5 years, nine employees (8%) who had experience 6-10 years, and 17 employees (15%) who had experience above 10 years.

Construct Testing Model 2

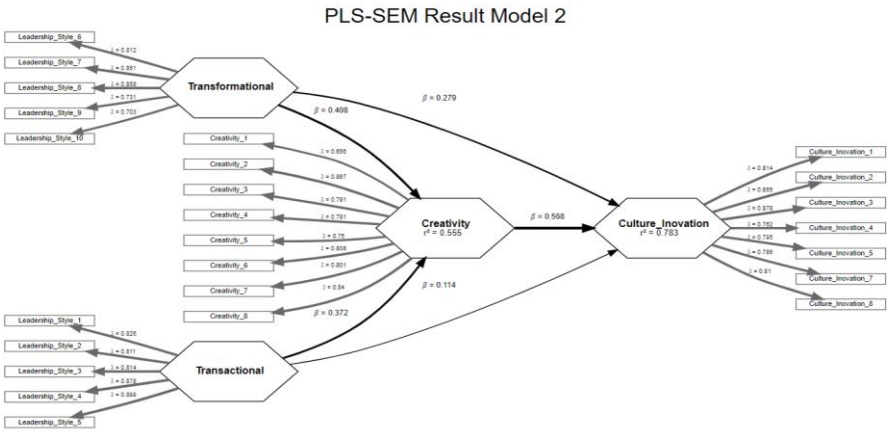

Figure 6. All Variables and Questions Model 2

Table 11. Model 2 Construct Testing

Construct	α	ρC	ρA	AVE	Eligibility
Transactional Leadership	0.901	0.927	**0.910**	0.717	Eligible
Transformational Leadership	0.853	0.894	**0.867**	0.629	Eligible
Creativity	0.912	0.929	0.920	0.622	Eligible
Culture_Inovation	**0.915**	**0.933**	**0.916**	**0.665**	Eligible

Interpretation :

a. Internal reliability (Cronbach's α, ρC, ρA > 0.70) was met for all constructs—an indication of excellent indicator consistency.
b. Convergent validity (AVE > 0.50) was also achieved, indicating that the indicators of each construct truly reflect the construct.

Loading Factor Model 2

Table 12. Loading Factor Model 2 Result

Construct	Indicator	Loading	Category	Remarks
Transactional	Leadership_Style_1	0.826	Eligible	
Leadership	Leadership_Style_2	0.811	Eligible	
	Leadership_Style_3	0.814	Eligible	
	Leadership_Style_4	0.878	Eligible	
	Leadership_Style_5	0.899	Eligible	
Transformational	Leadership_Style_6	0.812	Eligible	
Leadership	Leadership_Style_7	0.851	Eligible	
	Leadership_Style_8	0.858	Eligible	
	Leadership_Style_9	0.731	Eligible	
	Leadership_Style_10	0.703	Eligible	
Creativity	Creativity_1	0.656	Considered	Drop
	Creativity_2	0.867	Lolos	

	Creativity_3	0.791	Lolos
	Creativity_4	0.781	Lolos
	Creativity_5	0.750	Lolos
	Creativity_6	0.808	Lolos
	Creativity_7	0.801	Lolos
	Creativity_8	0.840	Lolos
Culture_Inovation	Culture_Inovation_1	0.814	Lolos
	Culture_Inovation_2	0.855	Lolos
	Culture_Inovation_3	0.878	Lolos
	Culture_Inovation_4	0.762	Lolos
	Culture_Inovation_5	0.795	Lolos
	Culture_Inovation_7	0.786	Lolos
	Culture_Inovation_8	0.810	Lolos

This table is used to assess the quality of individual items & detect weak indicators. Categories follow Hair et al. (2022) :

a. Very Good ≥ 0.708
b. Good 0.70 – 0.708
c. Poor 0.60 – 0.70 (can be maintained if AVE & CR are adequate)
d. Very Poor <0.60 (should be removed if there is no strong theoretical reason)

When compared with model 1, the values of α, ρC, ρA in all constructs increased and the AVE was above 0.50 (although some were red or decreased, the AVE value was still above 0.50), so that the Culture_Innovation_6 question can be deleted.

Path Coefficients Bootstrapping Model 2

Table 13. Path Coefficients Bootstrapping Table Model 2

Total Relation	Estimation	Lower Limit 95% CI	Upper Limit 95% CI	Result
Transactional → Creativity	0.372	0.168	0.571	Significant
Transactional → Culture_Inovation	0.114	-0.054	0.286	Not Significant
Transformational → Creativity	0.408	0.229	0.593	Significant
Transformational → Culture_Inovation	0.279	0.101	0.446	Significant
Creativity → Culture_Inovation	0.568	0.400	0.736	Significant

This table is used to find out to know which constructs influence which, how strongly and significantly. The direct relationship between Transactional to Culture Innovation is not significantly related. However, for other things such as the relationship between Transactional to Creativity, Transformational to Creativity, Transformational to Culture Innovation, and Culture Innovation to Creativity are significantly related.

Total Path Coefficient Model 2

Table 14. Total Path Coefficient Model 2

Total Relation	Estimation	Lower Limit 95% CI	Upper Limit 95% CI	Result
Transactional Leadership → Creativity	0.372	0.168	0.571	Significant

Transactional Leadership → Culture_Inovation	0.325	0.151	0.531	Significant
Transformational Leadership → Creativity	0.408	0.229	0.593	Significant
Transformational Leadership → Culture_Inovation	0.510	0.313	0.685	Significant
Creativity → Culture_Inovation	0.568	0.400	0.736	Significant

All path coefficients do not cross the zero value within the 95% confidence interval, therefore each effect is significant.

Heterotrait–Monotrait Ratio (HTMT) Model 2

Table 15. Heterotrsit-Monotrait Ratio (HTMT) Model 1

Total Relation	HTMT	Lower Limit 95% CI	Upper Limit 95% CI	Result
Transactional → Transformational	0.906	0.837	0.970	Significant
Transactional → Creativity	0.771	0.650	0.876	Significant
Transactional → Culture_Inovation	0.813	0.704	0.901	Significant
Transformational → Creativity	0.788	0.684	0.880	Significant
Transformational → Culture_Inovation	0.869	0.777	0.942	Significant
Creativity → Culture_Inovation	0.920	0.840	0.988	Significant

The HTMT confidence interval value must not pass 1 for any structure, because none of them pass, so all HTMT values pass the test. Based on the results of the analysis of model 2, it can be seen that in the loading factor, there is a question that has a low loading value, namely Creativity_1, so this question will be deleted.

Weighting of Questionnaire Result

Culture Innovaion Variable

Table 16. Weight Score of Culture Innovation

Construct	Indicator	Average	Total Score
Culture Innovation Score	Culture Innovation_1	3.37	26.96
	Culture Innovation_2	3.37	
	Culture Innovation_3	3.38	
	Culture Innovation_4	3.45	
	Culture Innovation_5	3.40	
	Culture Innovation_6	3.40	
	Culture Innovation_7	3.25	
	Culture Innovation_8	3.34	

Range Category

Table 17. Range Category Culture Innovation

Category	Range
Low	8 - 16

Medium	17 - 24
High	25 - 32

Based on the weighting score result of the culture innovation variable, which is 26.96, it is a highly significant category.

Leadership Styles Variable

Table 18. Weight Score of Leadership Styles

Construct	Indicator	Average	Total Score
Transformational Leadership	Leadership Style_1	3.42	16.66
	Leadership Style_2	3.27	
	Leadership Style_3	3.45	
	Leadership Style_4	3.22	
	Leadership Style_5	3.30	
Transactional Leadership	Leadership Style_6	3.41	
	Leadership Style_7	3.28	10.04
	Leadership Style_8	3.35	

Range Category

Table 19. Range Category Leadership Style Variable

Category	Range
Low	5 - 9
Medium	10 - 15
High	16 - 20

Based on the weighting score result of the Leadership Styles variable, the table above shows that Transformational Leadership gets a score of 16.66 and is in the High category, while Transactional Leadership gets a score of 10.04 and is in the Medium category. The conclusion is that the current implementation of Transformational Leadership is more dominant than Transactional Leadership.

Creativity Variable

Table 20. Weight Score of Creativity

Construct	Indicator	Average	Total Score
Creativity	Creativity_1	3.51	27.26
	Creativity_2	3.38	
	Creativity_3	3.36	
	Creativity_4	3.43	
	Creativity_5	3.35	
	Creativity_6	3.44	
	Creativity_7	3.45	
	Creativity_8	3.35	

Range Category

Table 21. Range Category for Creativity

Category	Range

Low	8 – 16
Medium	17 – 24
High	25 – 32

The creativity variable's weighting score is 27.26, making it a highly significant category.

Innovation Variable

Innovation variable data is generated from the appreciation or award categories received by the respondent in participating in Continuous Improvement Program (CIP) activities in 2023-2024, so that the data obtained is as below :

Table 22. Weighting Rewards Respondent

Category	Low	Medium	High
	0 - 5	6 - 10	11 - 16
Quantity	50	60	3
%	44%	53%	3%

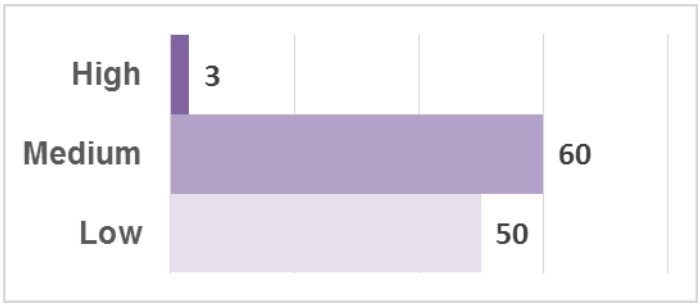

Figure 7. Achievement Chart of Respondent 3

From the table above, it can be seen that the rewards category achieved by dominant employees at the medium category level is 60 respondents, and the high level category is 3 respondents.

Resume of Analysis

a. The direct relationship between transactional to creativity has a significant relationship, as well as the transformational to creativity, which has a significant relationship. Furthermore, if seen from the estimated value, transformational (0.408) has a greater value than transactional (0.372). Which means that transformational can explain creativity better than transformational.
b. The direct relationship between Transactional to Culture Innovation is not significant, in contrast to the relationship between transformational to Culture Innovation, which is significant. When viewed from the estimated value, transformational has a greater estimated value than transactional. Which means that transformational can explain and contribute better to Culture Innovation (0.279) compared to transactional to Culture Innovation (0.114).
c. If it is depicted using a curve, it will be seen that Transformational Leadership has a more significant influence than Transactional Leadership.

Table 23. Relation Table between Transformational and Transactional Leadership

Relation	Estimation	Lower Limit 95%	Upper Limit 95%	Result
Transactional Leadership → Creativity	0.373	0.164	0.554	Significant

Transactional Leadership → Culture_Inovation	0.067	-0.092	0.211	Not Significant
Transformational Leadership → Creativity	0.407	0.226	0.595	Significant
Transformational Leadership → Culture_Inovation	0.321	0.142	0.488	Significant

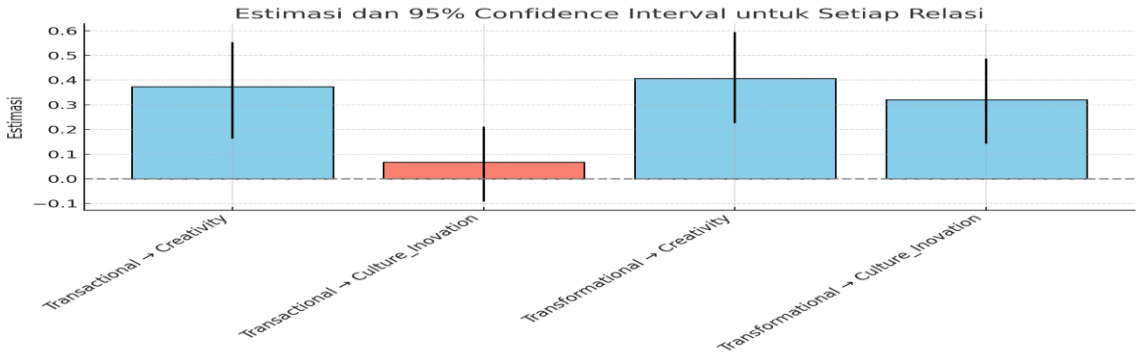

Figure 8. Comparison curve of Transformational and transactional leadership

5. Conclusion

Based on the research findings, it can be concluded that leadership styles have a significant influence on the development of an innovation culture within the organization. At Pertamina Hulu Rokan, the implementation of Transformational Leadership evident through the Continuous Improvement Program (CIP), the establishment of innovation targets in Key Performance Indicators (KPIs), and the cascading of these targets across all levels of leadership has effectively encouraged innovation. Meanwhile, Transactional Leadership complements this by providing structured rewards for employees who contribute valuable innovations that result in revenue growth, cost savings, or cost avoidance.

Leadership styles have also been shown to directly foster creativity by creating a comfortable environment, offering exposure and coaching, and motivating employees to generate innovative ideas. Creativity, in turn, plays a crucial role in shaping a strong innovation culture, as evidenced by the company's support systems such as the Sistem Tata Kerja (STK), which facilitates the process from idea generation to implementation. The innovation culture at Pertamina Hulu Rokan has created an ecosystem that promotes continuous improvement by encouraging open communication, empowering employees, and recognizing innovative thinking. Empirical analysis, including hypothesis testing through PLS-SEM, confirmed that creativity significantly impacts cultural innovation, with a high creativity score of 27.26. In summary, leadership styles are critical in establishing a robust innovation culture, enhancing creativity, and ensuring the long-term sustainability and growth of the company through continuous innovation.

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