

## **The Relationship of Leadership Styles And Sustainability: Regression Analysis of The Antecedents in Achieving Sustainable Performance**

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### **ABSTRACT**

*This study examines the relationship between Leadership Styles, including Transformational and Transactional Leadership, and Sustainability. This study also includes other variables, such as Entrepreneurial Orientation and Innovation Capability. This research uses a quantitative approach and 216 data are gathered. The results of this study stated that both leadership styles significantly and positively impact the other three variables. Though both of them have a significant impact, Transformational Leadership mostly has a higher impact than Transactional Leadership. There are two interesting findings in this study. First, the impact of Entrepreneurial Orientation on Innovation Capability is higher in Transactional than in Transformational Leadership. The second finding is that Innovation Capability negatively impacts Sustainable Performance in Transformational Leadership. The discussion, conclusion, limitations, and suggestions are provided in this journal.*

**Keywords:** *transformational leadership, transactional leadership, entrepreneurial orientation, innovation capability, sustainability.*

### **INTRODUCTION**

Sustainability issues have become a center of discussion for business and management, especially for small-medium enterprises (Wang & Huang, 2022). Thus academics and practitioners have been making great efforts to research sustainability-related factors with the hope of giving guidance and comprehensive models to achieve it. In response to societal demands and expectations, many businesses have initiated multiple sustainable development initiatives (Malik et al., 2020; Székely & Knirsch, 2005). Nissan, for example, intends to invest 2 trillion yen (approximately \$17.6 billion) over the next five years to accelerate the electrification of its product line (Frangoul, 2021). Mark Zuckerberg also rebrands Facebook as Meta Platforms because he wants to go "beyond social media" and believes Meta will be the next "big thing in social media" (Fernandez, 2022; Nadzir et al., 2019; Wasserman, 2021). These are examples of how the future of business is defined to achieve sustainability from an economic perspective. One of the primary motivations why achieving sustainability has become a final goal for today's businesses is that modern globalization allows borderless communication and high competition in national and global markets (Burawat, 2019).

Achieving sustainability has become the primary goal of many companies because of the change in our natural or earth system. The planet's life-support systems are being put in danger by environmental issues like biodiversity loss, water, air, and soil pollution, resource depletion, and excessive land use (Geissdoerfer et al., 2017; Lynch et al., 2021). World Bank Group stated that Indonesia is highly vulnerable to the effects of climate change. Those effects include extreme weather events such as floods and droughts, as well as long-term changes caused by rising sea levels, shifting rainfall patterns, and rising temperatures (World Bank, 2021). Indonesian companies should note these facts to start paying attention to their natural environment. Researchers have suggested that sensemaking of the external environment is the new primary responsibility of leadership. Leaders must assist the organization in staying aware of and adapting to the quick changes in its industry and new stakeholder demands (Metcalf & Benn, 2013).

Besides the environmental perspective, sustainability also talks about economic problems. Sustainability can also become companies' defense standard, especially amidst this pandemic. In Indonesia, 69% of family firms were experiencing a revenue decrease (KPMG, 2021). Another source from BanyanGlobal Survey also stated that the COVID-19 pandemic had negatively affected 82% of the family firms, and about half of them noted that the impact was substantial (Hannon, 2020). On the other side, big family firms such as Sampoerna can still conduct business despite facing a big crisis like the COVID-19 pandemic. These figures and facts show how some family firms cannot achieve sustainability amidst uncertainties and concerns, while others can. Companies need to achieve sustainability effectively with this high competition and tensions. To achieve these goals, companies need to maintain and updates their perspective in economical situation.

Sustainability includes creating a society that balances its economic, social, and environmental objectives (Székely & Knirsch, 2005). Geissdoerfer et al. (2017) defined sustainability as the balanced integration of financial performance, social inclusion, and environmental resilience to benefit current and future generations. According to Al Omoush et al. (2018), long-term competitiveness and sustainability require organizations to be more attentive to their surrounding environment, respond quickly and dynamically, and recreate themselves in response to current and future environmental conditions. In short, sustainability is the requirement that has to be achieved, and it also measures or grades the operations and impacts of entire businesses. These facts regarding unpredictable economic and environmental changes should be enough for Indonesian companies to start working on their sustainability plan.

As previously mentioned, companies now face many economic, societal, and environmental crises. Consequently, all the companies' members must work together to achieve sustainability. Adopting sustainability within a company is more than just a public relations exercise. Sustainability can be achieved only when an active leader/manager within the company wins this approach (Székely & Knirsch, 2005). Since leadership significantly impacts Sustainable Performance and Sustainability is

the ultimate goal of every company, it means leadership might affect other areas in the company, such as culture. Pham & Kim (2019) have found that leadership skills can improve the relationship between environmental practices and sustainability performance. Ma & Jiang (2018) also stated that there is a strong relationship between leadership style and employee motivation; the correlation was positive with transformational style and negative with transactional style. Pantouvakis & Vlachos (2020) also stated that how leaders communicate may have important implications for organizational performance. These facts show how significant leadership and leaders impact corporate growth and sustainability.

Another factor that might impact companies in achieving sustainability is entrepreneurship attitude. Because of its inherent traits that emphasize opportunity, entrepreneurship has been a central topic debated and practiced in every firm. The emphasis on opportunity has become the fundamental quality of entrepreneurship and will guide the business toward long-term sustainability. According to Dhahri and Omri (2018), the significance of entrepreneurship in achieving sustainability goals is becoming an essential topic in recent discussions. Entrepreneurship, in addition to sustainability, has a significant impact on several critical business-related issues. According to Lynch et al. (2021), employee and management entrepreneurial behaviour can leverage a firm's Innovativeness, profitability, strategic and organizational renewal, or entry into new business fields. As a result, the term "sustainopreneurship" was introduced. Sustainopreneurship is the implementation of sustainability innovations: entrepreneurship and Innovation for sustainability (Lynch et al., 2021; Nawaz et al., 2021; Perera & Abeysekera, 2021; Vaicekauskaite & Valackiene, 2018). These findings suggest that entrepreneurship plays a vital role in business management and influences firm performance.

Although some of the studies support the statement that entrepreneurship has a significant impact on Sustainable Performance, some studies do not say so. Nor-Aishah et al. (2020) stated that Entrepreneurial Leadership significantly impacts Sustainable Performance environmentally and socially, but its impact is insignificant on economically sustainable performance. Dhahri & Omri (2018) also find that entrepreneurship in developing countries positively affects sustainable development's economic and social dimensions, while its effect on the environmental dimension is negative. These differences in results mean there is still no clear link between these two essential business variables. This difference further motivates this study to examine the relationship between entrepreneurship and companies' sustainable performance. Besides, there are still few research that explored the relationship between entrepreneurship and sustainability in Indonesia.

Based on the previously mentioned facts, this study would like to examine the impact of the entrepreneurial behaviour of employees on sustainability and the connection with leadership style. Prior studies have examined the influence of leadership styles on various managerial issues. Sow & Aborbie (2018) stated that leadership styles significantly impacted the transforming organizations and did have a role in achieving the change effort's success. Ma & Jiang (2018) said in their studies

that transformational leadership did not impact employees' creativity, while transactional leadership did. However, Burawat (2019) noted that transformational leadership partially affects companies' sustainable performance. Besides, Katper et al. (2020) also stated that transformational leadership significantly impacts organizational commitment. Leaders should note the importance of leadership in developing and nurturing entrepreneurship behaviour in companies. Thus, this study also would like to examine how leadership styles will impact the entrepreneurial behavior of employees in the company.

Unpredictable challenges and changes should not come as a surprise to businesses. When an organizational transformation is required, the appropriate leadership style, such as transformational and transactional styles, may help to ease the transition (Sow & Aborbie, 2018). While Burns (1978) recognized the two concepts as contradictory, Bass (1985) transactional and transformational leadership are distinct but not mutually exclusive processes that are combined within effective leadership (Farrukh et al., 2019). As business and leadership research changes and develops, there are a lot of leadership styles appear in the field. However, based on previous research on business management, two leadership styles are consistently being examined, which are transformational and transactional leadership. Some studies compared these two leadership styles in digital transformation (Sow & Aborbie, 2018), intrapreneurial behaviour in a higher education setting (Farrukh et al., 2019), followers' achievement goals (Hamstra et al., 2014), the development of innovation capability (AlNuaimi et al., 2021), promoting ambidextrous Innovation (Berraies & Zine El Abidine, 2019), and even corporate culture and sustainable performance (Wang & Huang, 2022). Some studies stated that there's no significant difference between these two leadership styles (AlNuaimi et al., 2021; Berraies & Zine El Abidine, 2019). Other studies claimed that one performs better in some management areas (Hamstra et al., 2014; Sow & Aborbie, 2018; Wang & Huang, 2022). Consequently, this study will compare how both leadership styles impact some management areas in companies.

Innovation Capability is also playing an essential role in business management. A previous study by Kardos (2012) stated that Innovation is a part of the support system for companies in achieving sustainability. There have been so many studies that examined the impact of Innovation on companies' performance and even sustainability. Kraus et al. (2012) also noted that managerial and organizational Innovation partially impacted successful corporate performance, while product innovation fully impacted corporate performance. Anning-Dorson (2018) stated that Innovation could give companies a competitive advantage in the field of competition with others competitors. This statement is also supported by the results of the study conducted by Distanont & Khongmalai (2018), who stated that to achieve sustainable development, Innovation will become a powerful asset in this important competition for the advancement, creation, and improvement of businesses to create competitive advantages equal to or better than competitors. A more recent study by Fernando et al. (2019) noted that Innovation unlocks better sustainable performance. To build a

company with good innovation capability, leaders should be supportive and participative so that collaboration and learning will be promoted. Thus, it will improve the performance of companies and business activities (Lam et al., 2021).

The importance of achieving sustainability and giving guidance to medium companies becomes the primary motivation for this research. The differences in results from previous studies regarding leadership styles and innovation capability become the research gaps that this study would like to fill. This study will challenge to compare the impact of leadership styles (transactional and transformational) on innovation capability, employees' entrepreneurship orientation, and sustainable company performance. This study will also provide an explanation regarding the relationship between the entrepreneurship orientation of employees and innovation capability on sustainable performance that will enrich the study of sustainability antecedents from the perspective of leadership studies. This study will be conducted using a quantitative approach and questionnaires for collecting the data. All the discussion, limitations, and suggestions for future research are also provided in each section.

## **THEORETICAL REVIEW**

### *Sustainability*

According to Pham & Kim (2019), sustainable practices are any practices that strive to achieve or support a sustainable value in the economy, society, and environment. According to Pantouvakis & Vlachos (2020), sustainability is the principle that future generations can access resources without current operations imposing economic, social, and environmental constraints. Using the definitions above, it is possible to conclude that Sustainable Performance should be measured by analyzing the economic, social, and environmental domains that are found in companies. This study prioritizes Sustainability as the primary or the end-goal.

The World Commission on Environment and Development defined sustainable development as "meeting the needs and aspirations of the present without risking future generations' ability to meet their own needs." (Malik et al., 2020). According to Afum et al. (2020), sustainable performance assures that firms stabilize their economic, environmental, and social performance goals comprehensively and integrated.

1. Economic performance is frequently measured using both operational and financial results.
2. Environmental Performance is achieved when companies reduce their solid and water waste, carbon emissions, use of contaminated and harmful inputs, frequency of environmental accidents, and overall environmental impact of a firm's activity.
3. Social Performance ensures that a company's social mission is accomplished and is measured by employee safety and health, improved community quality of life, vocational training for community members, and training of employees, among others.

### *Leadership Styles*

This study focuses on two types of leadership: transformational and transactional. Both leadership styles are concerned with improving employee performance but differ in setting objectives and motivation (Afsar et al., 2017). Both leadership styles complement each other to improve employee performance, but the difference is in goal setting and stimulation methods. Burns (1978) viewed the two ideas as being counterintuitive, but Bass (1985) insists that transactional and transformational leadership are distinct but complementary processes that work together to form effective leadership (Farrukh et al., 2019).

Transformational leaders inspire trust, seek to develop leadership in others, sacrifice themselves, and act as moral agents, focusing themselves and their followers on goals that go beyond the immediate needs of the workgroup (AlNuaimi et al., 2021). This type of leader intellectually influences, inspires, motivates, and valorizes their subordinates personally (Bass, 1985; Berraies & Zine El Abidine, 2019). On the contrary, transactional leaders confront their followers' self-interest by offering a reward or recognition in return for cooperation and compliance with task requirements (AlNuaimi et al., 2021). Transactional leadership is built on the exchange process, with a strong focus on attitude and behaviour as mediators between followers and leaders (Farrukh et al., 2019; Yukl et al., 2002). Control, authority, and exchange relationships between transactional leaders and their subordinates, which indicate positive reinforcement for attaining performance, are the foundation of transactional leadership (Berraies & Zine El Abidine, 2019). Employees are rewarded for achieving goals and disciplined for unproductive behavior. Transactional leaders define the performance criteria for their followers and motivate them by providing valuable outcomes that align with their personal interests in exchange for achieving goals (Bass, 1985; Berraies & Zine El Abidine, 2019).

Previous studies provide explanations about the relationship between leadership styles on innovation capability. Lam et al. (2021) stated that leaders should be supportive and participative to promote collaboration and learning, which lead to innovation capability. Thus, it will improve the performance of companies and business activities. In the Indonesian education setting, transformational leadership impacted teachers' innovation capability during the COVID-19 pandemic, while transactional leadership only significantly affected innovation capability through organizational learning (Fadillah et al., 2020). The same results were also found in the management setting. Alblooshi et al. (2020) stated that transformational leadership influenced innovation behaviour through a commitment to change, while transactional leadership led to less innovative performance than other leadership styles. Based on these results, this study proposed the first hypothesis:

*H1: Transformational Leadership significantly impacts innovation capability, while transactional leadership does not.*

Prior studies also examined the relationship between leadership styles and employee entrepreneurship. Afsar et al. (2017) survey demonstrates that transformational leadership positively influences entrepreneurial behaviour, whereas transactional leadership has a negative influence. Fries et al. (2021) also supported the previous statement by stating that transformational leadership has a high overlap with entrepreneurship behaviour, while transactional leadership has a low overlap. Boukamcha (2019) also said that transactional leaders do not tolerate failures and do not value Innovation that is not in the firm's best interests, which can nullify the establishment of an essential basis for Innovation as a corporate entrepreneur. Based on these results, this study proposes the second hypothesis:

*H2: Transformational Leadership significantly impacts employees' entrepreneurship, while transactional leadership does not.*

This study also examines the relationship between Leadership Styles and Sustainability. An earlier study by Burawat (2019) proved that transformational leadership impacted sustainable performance in Thai companies. This statement is supported by Vila-Vázquez et al. (2018), who stated that transformational leaders increase job engagement, which is a critical component of the human dimension of organizational sustainability. On the other hand, little research examines the relationship between Transactional Leadership and sustainability. Hansen & Pihl-Thingvad (2019) stated that transformational leadership and one component of transactional leadership, namely verbal rewards, are positively associated with innovative behaviour, which leads to sustainability. Based on this statement and previous research regarding the relationship between transactional leadership with other variables (most of them stated that transactional leadership leads to less innovation capability and entrepreneurship behaviour), this study proposes the third hypothesis:

*H3: Transformational Leadership significantly impacts sustainability, while transactional leadership does not.*

#### *Entrepreneurship of Employees*

Since the seminal work of Joseph Schumpeter (1962/1934, 1939), entrepreneurship has been studied as a 'process of creative destruction (Ferreira et al., 2020). The concept of Innovation (Drucker, 1986) is at the heart of entrepreneurship, as entrepreneurs bring new solutions to the world, destroying and replacing previous ways of doing things (Schaltegger et al., 2018). Entrepreneurship has become the global engine of economic and social development (Audretsch, 2002). Entrepreneurial firms sustaining continuous Innovation are more likely to survive in a dynamic environment (Ben Youssef et al., 2018).

Bruce et al. (2020) define entrepreneurship as doing new things or things already being done in a new way (Innovation). Miller (1983) describes an entrepreneurial firm as "engaging in product market innovation, embarking on somewhat risky ventures, and is the first to come up with 'proactive' innovations, beating competitors to the punch." This definition includes three Entrepreneurial

Orientation (EO) dimensions: Innovativeness, risk-taking, and Proactiveness. A firm is considered entrepreneurial when (Miller, 1983): (1) Technological and product innovations are created regularly, (2) the risks associated with introducing new products and services and/or entering new markets are deliberately faced, (3) the firm is more proactive than its competitors in exploiting new market opportunities.

Previous research by Ferreira et al. (2020) stated that entrepreneurial orientation mediates the relationship between dynamic and innovation capabilities. This statement was supported by Genc et al. (2019), who noted that the influence of internationalization on Innovation is indirect and fully mediated by the market and entrepreneurial orientation. However, a study by Zhai et al. (2018) claimed that the relationship between entrepreneurial orientation and innovation capability is significantly positive. Based on the mentioned results, this study proposes the fourth hypothesis:

*H4: Employees' Entrepreneurship significantly and positively impacts Innovation Capability*

The next relationship that this study would like to analyze is between entrepreneurship and sustainability. According to Ben Youssef et al. (2018), the relationship between entrepreneurship and sustainable development becomes strongly positive when high Innovation and institutional quality levels exist. According to this study, entrepreneurship is sensitive to macroeconomic variables (quality of institutions, Innovation, export, etc.) to achieve long-term goals. Another study by Nor-Aishah et al. (2020) combines the concepts of leadership and entrepreneurship and investigates their impact on long-term performance. According to the findings, entrepreneurial leadership significantly impacts environmental and social sustainability but has little effect on economically sustainable performance.

Dhahri and Omri (2018) conducted a national-scale study. They discovered that entrepreneurship in developing countries positively affects sustainable development's economic and social dimensions while negatively affecting the environmental dimension. More research, also conducted at the national level by Raposo et al. (2020), concluded that countries that implement higher-level national entrepreneurship systems achieve better results in terms of sustainability. Despite some differences in the results, we propose the fifth hypothesis based on this literature:

*H5: Employees' Entrepreneurship significantly and positively impact Sustainability*

#### *Innovation Capability*

The last variable is Innovation Capability. A firm's innovation capabilities are assumed to include both technological and social Innovation (Chatterjee & Chaudhuri, 2021). It is essential to acknowledge that future social and environmental crises will occur. Innovation capability is the skills and knowledge required to assimilate, improve, and develop new technology (Rhee & Stephens, 2020; Zawislak et al., 2012). In response to market opportunities, a firm's ability to constantly develop

technologically new or improved products and operate new or enhanced processes is defined as innovation capability (Rhee & Stephens, 2020).

Firm innovation capability enables businesses to deal successfully in dynamic business environments by creating products and/or processes that improve firm performance (Singh et al., 2022). Another study also mentioned that Innovation Capability improves sustainable performance (Fernando et al., 2019). Thus, Innovation Capability is essential in being maintained and developed in companies. Based on the study conducted by Singh et al. (2022), the last hypothesis of this study is:

*H6: Innovation Capability significantly and positively impacts Sustainability* (Arial 10 Normal, Sentence Case)

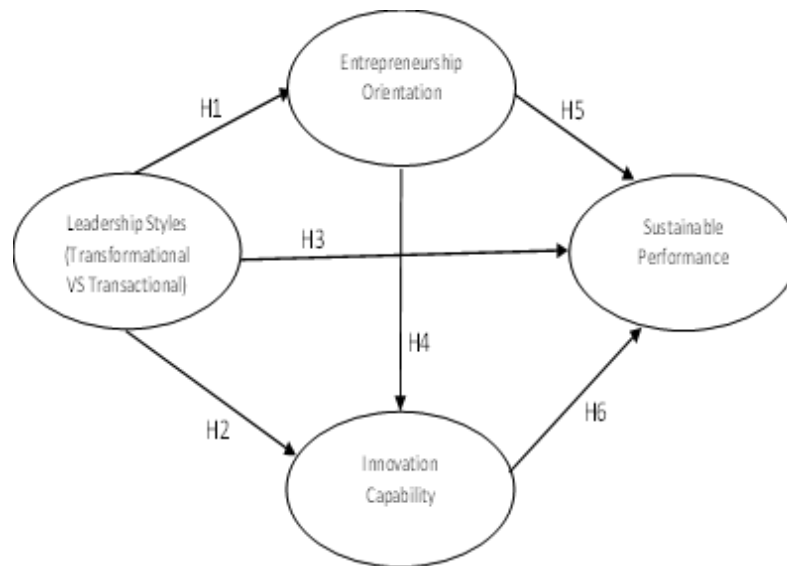


Figure 1. Conceptual Framework

**METHODOLOGY**

This research uses a quantitative approach use inferential statistics (regression) in the analysis process. Generally speaking, inferential techniques are methods for predicting or generalizing a population or things where it is possible to measure not all persons or things (Wilcox, 2017). George & Mallery (2018) stated that the primary purpose of inferential statistics is to explore relationships between variables.

The questionnaires are shared online, and 216 data are gathered. All variables are translated into items, and all measures included five-point Linkert scales, where 1 = "strongly disagree," and 5 = "strongly agree" unless otherwise indicated. Each scale was developed in English first, then translated into Bahasa Indonesia. Seven items were used for leadership styles to measure Transformational Leadership and four for Transactional Leadership (AlNuaimi et al., 2021). This study uses Entrepreneurial Orientation to measure employees' entrepreneurship perception and to picture how they perceive entrepreneurship in their roles. There are three

indicators for Entrepreneurial Orientation, which are Risk-Taking (three items), Innovativeness (three items), and Proactiveness (2 items). The measures for Entrepreneurial Orientation were designed based on a study by Khan & Ahmed (2019). For Innovation Capability, five items were used to measure the mentioned variable (AlNuaimi et al., 2021).

Once the responses are gathered, they will be analyzed using PLS-SEM to test the proposed hypotheses. This study use path coefficient value and R-square to know the extent of independent variables' effect on dependent variables. According to Hair et al. (2017), path coefficients are estimated path relationships in the structural model (i.e., between the constructs in the model). In comparison, R-square values are the amount of explained variance of endogenous latent variables in the structural model. The higher the  $R^2$  values, the better the construct is defined by the latent variables in the structural model that point at it via structural model path relationships. High  $R^2$  values also indicate that the values of the construct can be well predicted via the PLS path model.

The accepted value for path coefficients is above 0.3. A value that is in the range of 0.3-0.49 indicates a moderate correlation, while a value above 0.5 indicates a strong correlation. For R-square, the value of 0.25 indicates a weak effect, 0.5 indicates a mild or average effect, and 0.75 shows a strong influence (Hair et al., 2017). In this research, we also test seven hypotheses regarding the impact of included variables. To test those seven hypotheses, we can use P-values. P-values can be used to test the significance of the tested hypotheses. The hypotheses will be significant if the P-values are below 0.05.

Before the analysis process, the gathered data go through reliability and validity to test the reliability of the measures (questionnaires). The validity test relates to trustworthiness, authenticity, and credibility. This study uses cross-loading values to test the validity of the instruments or the questionnaires. The accepted value of cross-loadings is higher than 0.70. Meanwhile, the reliability test relates to consistency. The most important type of reliability for multi-item instruments is internal consistency—the degree to which sets of items on an instrument behave consistently. This study used Cronbach Alpha AND Composite Reliability to measure the measurement instrument's reliability or questionnaires. The accepted value of Composite Reliability and Cronbach Alpha should be higher than 0.7. However, it should not be higher than 0.95 because it indicates that all the indicator variables measure the same phenomenon (Jr et al., 2018).

## **RESULTS AND DISCUSSION**

Before going to the results, this study would like to present the results for the validity and reliability test of the measurement instruments. For the reliability test, this study uses the value of Cronbach's Alpha. If the value of Cronbach's Alpha is higher than 0.7, thus the instruments are reliable. If the value is below 0.7, then the instruments are not reliable. Below is the value of Cronbach's Alpha:

**Table 1. Cronbach's Alpha and Composite Reliability of the Instruments Used**

	Cronbach's Alpha	Composite Reliability
<b>TRANSACTIONAL LEADERSHIP (TRANCL)</b>	0.765	0.851
<b>TRANSFORMATIONAL LEADERSHIP (TRANS)</b>	0.918	0.935
<b>ENTREPRENEURSHIP ORIENTATION (EO)</b>	0.906	0.924
<b>INNOVATION CAPABILITY (IC)</b>	0.942	0.956
<b>SUSTAINABLE PERFORMANCE (SP)</b>	0.950	0.955

Table 1 shows that the instruments are valid because the values of Cronbach's Alpha and Composite Reliability are all above 0.70. Though some values are higher than 0.95, those are not far from 0.950. Thus, it can still be concluded that the instruments are reliable.

Next is the validity test. This study used Convergent Validity, which refers to how well a measure correlates with other measures of the same construct (Jr et al., 2018). This study uses cross-loading values to test the convergent validity of the instruments used. Table 2 below shows the cross-loading values of each item from each variable (41 items in the questionnaire).

**Table 2. Outer Loadings of Each Item in the Questionnaire**

TRANSL		TRANCL		EO		IC		SP	
Items	Values	Items	Values	Items	Values	Items	Values	Items	Values
TRANS1	0.777	TRANCL1	0.692	EO1	0.717	IC1	0.914	SP1	0.668
TRANS2	0.823	TRANCL2	0.728	EO2	0.750	IC2	0.896	SP2	0.695
TRANS3	0.856	TRANCL3	0.799	EO3	0.728	IC3	0.887	SP3	0.717
TRANS4	0.867	TRANCL4	0.843	EO4	0.818	IC4	0.889	SP4	0.727
TRANS5	0.653			EO5	0.825	IC5	0.921	SP5	0.770
TRANS6	0.882			EO6	0.798			SP6	0.780
TRANS7	0.867			EO7	0.778			SP7	0.805
				EO8	0.794			SP8	0.784
								SP9	0.814
								SP10	0.749
								SP11	0.709
								SP12	0.719
								SP13	0.791
								SP14	0.736
								SP15	0.732
								SP16	0.740
								SP17	0.717

Based on Table 2 above, most of the values are above 0.70. Although some of them are below 0.70 (four of them are 0.653, 0.692, 0.668, and 0.695), those are not

far from 0.70, and when those values are rounded up, they become 0.70. Thus, it can be concluded that the instruments are valid.

For inferential analysis, this study used WARP-PLS to examine the proposed hypotheses. Before looking at the results of inferential analysis, there are four values to note: the Path coefficient, P value, R-square, and effect size. The path coefficient refers to a value that indicates the strength and direction of the correlation between one variable and another variable. P-value is the probability value which refers to the likelihood of obtaining an empirical t value at least as extreme as the one observed, assuming that the null hypothesis is supported. In other words, the p-value is the likelihood of incorrectly rejecting a true null hypothesis (i.e., assuming a significant effect when there is no significance).

In most cases, researchers choose a significance level of 5%, meaning that the p-value must be less than 0.05 for the relationship to be considered significant. The R-square value, also called the coefficient of determination, indicates how much an endogenous variable is influenced by its exogenous variables. In addition to assessing the R-square values of all endogenous constructs, the change in R-square value when a specified exogenous construct is removed from the model can be used to determine whether the ignored construct significantly impacts the endogenous constructs (Jr et al., 2018).

Consider the path coefficient and P-value of the proposed research model or hypotheses for Transformational and Transactional Leadership. Table 3 below shows the P-value value that will show whether the proposed hypotheses are accepted, partially accepted, or rejected. The Y-columns represent the independent or exogenous variable that impacts the endogenous or dependent variable.

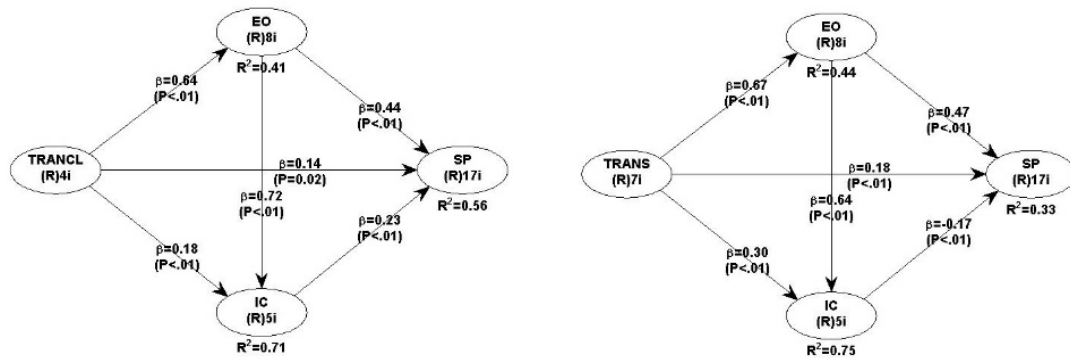
<b>Table 3. The Values of P-Value</b>				
	<b>P-Value</b>			
	<b>TRANCL</b>	<b>TRANS</b>	<b>EO</b>	<b>IC</b>
<b>EO</b>	<0.001	<0.001		
<b>IC</b>	0.003	<0.001	<0.001	
<b>SP</b>	0.015	0.004	<0.001	<0.001

Based on the P-Value in Table 3 above, since all of them are below 0.05, it can be concluded that all the relationships between exogenous and endogenous variables are significant. These values indicate that Transformational and Transactional Leadership significantly and positively impact entrepreneurial orientation, Innovation Capability, and Sustainable Performance. Thus, H1, H2, and H3 are partially accepted. Hypotheses H1, H2, and H3 are partially accepted because the results show that transformational and transactional leadership significantly and positively impact the other three variables. In contrast, those three hypotheses propose only Transformational Leadership that impacts the other three variables.

On the other hand, H4 and H5 are accepted. This study shows interesting fact regarding H6, which is about the relationship between Innovative Capability and

Sustainable Performance. In Transactional Leadership, the impact of IC on SP is positive, but in Transformational Leadership is negative. Thus it makes H6 partially accepted since the positive impact is only found in Transactional Leadership. Figure 2 shows the comparison of values for Transformational and Transactional Leadership so that a comprehensive picture of the hypotheses tested is shown.

**Figure 2. Results of Transactional (Left) and Transformational Leadership (Right)**



Although this study proves that both leadership styles impact the other three variables significantly, Figure 2 shows that all values are higher in Transformational Leadership. For example, the path coefficient of TranCL-EO is 0.64, while Trans-EO is 0.67. This result supports the statement stated by Fries et al. (2021) that Transformational Leadership has a higher overlap with the concept of Entrepreneurship than Transactional Leadership. This result could be because Transactional Leadership does not tolerate failure and does not prioritize Innovation (Boukamcha, 2019). This study also proved this statement by showing that the value of the path coefficient between Leadership Style and Innovation capability is higher in Transformational Leadership (0.30) than in Transactional Leadership (0.18). It proves that Transactional Leadership has little impact on Innovation Capability compared to Transformational Leadership.

Although almost all values are higher in Transformational Leadership, one value in Transactional Leadership is higher than in Transformational. The path coefficient of EO-IC in Transactional Leadership is higher (0.72) than in Transformational (0.64). This finding is interesting because it contradicts the previous study about the relationship between Leadership Styles, Entrepreneurial Orientation, and Innovation Capability (Iqbal et al., 2021). This study shows that Transformational Leadership has a greater impact on Innovation Capability, but its impacts become weaker through Entrepreneurial Orientation and even weaker compared to Transactional Leadership. This result might be due to the presence of rewards or punishment in Transactional Leadership that motivates employees to perform better through Entrepreneurial Orientation, which has a stronger impact on Innovation Capability.

Another interesting finding is the contradicting results between the relationship between Innovation Capability and Sustainable Performance in the two

leadership styles. In Transactional Leadership, the path coefficient of IC-SP is positive, while in Transformational Leadership is negative. It means that in Transformational Leadership, Innovation Capability impact Sustainability negatively. This result might be due to how Transformational Leaders highly value Innovation and development. More Innovation and development created in companies might lead to lower revenue since high Innovation requires more economic value (Ferreira et al., 2020; Khan & Ahmed, 2019). This result should not scare leaders to be Transformational Leaders, but it is to show the leader what negative impact might happen when they focus only on transforming others. Leaders should be more open-minded and smart by looking at the broader perspective. Focusing only on transforming others will make leaders not see other areas in companies, such as revenue or economic values. Thus, leaders need to consider everything while leading their companies.

#### **FURTHER STUDY**

At last, this study has some limitations that should be prevented in future studies to give a better picture regarding the relationship between Leadership Styles, Entrepreneurial Orientation, Innovation Capability, and Sustainable Performance. First, this study is limited to only two leadership styles which are Transactional and Transformational. Future studies may broaden the scope of research by including other leadership styles such as Autocratic, Servant Leadership, Laissez-Faire, and other styles. It will give a more comprehensive picture regarding which leadership style impacts the other variables better.

The second limitation is the analysis process. This study does not examine the mediation or moderation roles of Innovation Capability and Entrepreneurial Orientation. Future studies should add mediation analysis or even new variables to create a better picture regarding the antecedents of sustainability in companies.

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