

# Embracing Leadership Behaviour to Foster Creativity: the Mediating Role of Ambidexterity

Tony Antonio<sup>a</sup>, Fulgentius Danardana Murwani<sup>b</sup>, Innocentius Bernarto<sup>c</sup>,  
Niko Sudiby<sup>d</sup>, <sup>a</sup>Universitas Ciputra Surabaya, <sup>b</sup>Universitas Negri Malang,  
Indonesia, <sup>c,d</sup>Universitas Pelita Harapan, Indonesia, Email:  
<sup>a</sup>[tonyantonio@ciputra.ac.id](mailto:tonyantonio@ciputra.ac.id), <sup>b</sup>[f.danardana.fe@um.ac.id](mailto:f.danardana.fe@um.ac.id),  
<sup>c</sup>[innocentius.bernarto@lecturer.uph.edu](mailto:innocentius.bernarto@lecturer.uph.edu), <sup>d</sup>[niko.sudiby@lecturer.uph.edu](mailto:niko.sudiby@lecturer.uph.edu)

Creativity is perceived as an intellectual power of human beings that enriches people in multiple manifestations aspects of life. There are plenty of creative ways to develop creativity, but few give good results. This paper presents a study on the role of Servant Leadership Behaviour and Transformational Leadership behaviour to develop creativity. Furthermore, the effect of Ambidexterity as the mediator between leadership behaviour and creativity is investigated and acts as the novelty of the study. The research is conducted in a Business School since business studies provide more opportunities to accomplish creative tasks. The sample size was 102 consisting of students from the final year of their study. Data collection is given directly to the students and analysed by smart PLS (Partial Least Square) and presented in tables and figures. The reliability and validity assessments are carried. The result shows that both Servant Leadership and Transformational behaviour will not provide a positive effect on Creativity unless Ambidexterity mediates them. The role of Ambidexterity as a moderator is significant. The two leaderships behaviour is proper antecedent to Ambidexterity. Practising exploration and exploitation characteristics of Ambidexterity fosters the leaders' behaviour to increase the student's creativity.

**Keywords:** *Servant Leadership Behaviour, Transformational Leadership Behaviour, Ambidexterity, Creativity.*

## Introduction

Creativity is perceived as the intellectual power of human beings that keeps enriching people individually or in a team and organisation. It is considered one of the most valuable life skills since it manifests in multiple aspects of life. Creativity can be described as "*the potential to create or a personality trait, as a sudden flash of an idea or a long-lasting divergent thinking process, as a novel or original product or artistic expression*" (Sternberg & Lubart, 1999, p. 3). Rosing, Frese, and Bausch (2011) expanded the concept of Ambidexterity to Creativity. They suggested that specific leadership behaviour is needed to manage the ambidexterity process to develop creativity. It showed that Ambidexterity is a potential variable to mediate leadership behaviour on creativity.

The Effect of Transformational Leadership on Creativity has been primarily investigated. Chen, Li, and Tang (2009) concluded that Transformational Leadership is an essential enforcer for employees' creative idea generation with intrinsic motivation and creative thinking as the mediators. Rosing et al. (2011) showed a weak relation between Transformational Leadership and Creativity. They recommended that a single leadership style cannot effectively promote creativity. A further study on a particular set of leadership behaviour is needed. We propose specific leadership concepts of Servant Leadership and Transformational Leadership behaviour to foster creativity. Yoshida, Sendjaya, Hirst, and Cooper (2014) show that Servant leadership behaviour has a positive effect on team creativity in an organisation. This multilevel study explored the role of a mediator to foster creativity. They concluded with a suggestion for further research in the mediation effect on Servant Leadership behaviour. Based on these previous researches, we propose specific leadership concepts of Servant Leadership and Transformational Leadership behaviour to foster creativity.

Therefore, several research questions are identified to explore:

1. Does Servant Leadership Behaviour have a positive effect on creativity?
2. Does Transformational Leadership Behaviour have a positive effect on creativity?
3. Does Ambidexterity have a positive effect on creativity?
4. Does Servant Leadership Behaviour have a positive effect on Ambidexterity?
5. Does Transformational Leadership Behaviour have a positive effect on Ambidexterity?

## Literature Review

### *Creativity*

Early research on creativity shows that (1) creativity is always associated with idea generation, which is useful and novel (Amabile, 1988, p. 126); and (2) creativity must

happen in specific periods. Woodman, Sawyer, and Griffin (YEAR?) developed the interactionist theory of creativity that focuses on the interaction between individuals and their work situation. The interaction occurs at different levels of an organisation. At the individual level, creativity and innovation result from several conditions such as biographical, cognitive, personality, social, and contextual influence. At the team level, the creativity is a result of several aspects such as individual creative behaviour, team composition, team norm, team size, team processes, and other contextual influences (Woodman et al., 1993).

Anderson and West (2004) studied the similarities and differences of creativity in a different culture. At the personal level, it focuses on how culture influences the assessment of creativity. In contrast, at the team level, it conceptualises how different forms of paternalistic control may impinge upon creativity produced by teams.

Amabile (1983) develop Componential Theory on Creativity with three components: (1) domain-relevant skills and expertise; (2) creativity-related thinking relating to cognitive and personality processes conducive to novel thinking; and (3) task motivation and intrinsic motivation to engage. Creativity can arise when all the components are present.

### ***Transformational Leadership***

Although Amabile's theory focuses on creativity as a process originating from a person's pre-disposition without outside forces but a combined interaction among single persons' creativity in a group/organisation to form collective creativity to maximise all possible potential for Creativity (Humala, 2015). Humala argued that proper leadership behaviour could enhance the process of fostering creativity within a group/organisation. She suggested several leadership types should be taken into consideration such as transformational leadership, servant leadership, complex leadership, and other value-based leadership styles

Chen et al. (2009) studied the effect of transformational leader to creativity and found that transformational leadership can be the antecedent of creative thinking and intrinsic motivation, which will further lead to the cultivation of Creativity (Chen et al., 2009).

Previous research showed that Transformational Leadership enhances followers' creativity (Hermann & Felfe, 2014; Chen et al., 2009; Humala, 2009). Hermann and Felfe mentioned that Transformational Leadership develops an environment or eco-system in such a way that creativity may emerge. Judge and Piccolo (2004) argued that transformational leadership is more strongly associated with qualitative Creativity than Transactional Leadership and is characterised as more interpersonal, and cross-situational (Herold, Fedor, & Caldwell, 2007). A transformational leader can become a creative stimulator.

### ***Servant Leadership***

Different models of Servant Leadership had been developed for various purposes. Spears proposes the first model of Servant Leadership. His work is based on the servant Leadership concept developed by Greenleaf, the father of Servant Leadership. The ten characteristics of Spears' model are: Listening, Empathy, Healing, Awareness, Persuasion, Conceptualisation, Foresight, Stewardship, Commitment, and Building community (Spears, 1996). Laub develops a conceptual model of six clusters of Servant Leadership characteristics: Personal Development, Valuing People, Building Community, Displaying Authenticity, Providing Leadership, Shared Leadership (Laub, 2010). Laub believes that the characteristics of Servant Leadership could be identified to develop creativity.

Wong and Page defined another set of Servant Leadership characteristics, which differs from Spears's and Laub's. It covers ten characteristics with servanthood as the heart of the model (Page & Wong, 2000). A shorter version of Wong and Page's model was developed by Wong and Davey (2007), which covers five dimensions: a servant's heart, serving and developing others, consulting and involving others, inspiring influencing others, and modelling through integrity, and authenticity. This model is mostly applied for social purposes.

Barbuto and Wheeler proposed a model called Servant Leadership Questionnaire (SLQ). The model applies a questionnaire that identifies five dimensions of Servant Leadership. It widely uses for educational study (Barbuto and Wheeler, 2006). Liden constructed 28 characteristics of the servant Leadership model. The characteristics are categorised into seven dimensions. It is a multidimensional model with a multilevel of assessment (Liden et al., 2008).

Sendjaya proposed six dimensions Servant Leadership model: Voluntary Subordination, Authentic Self, Covenantal Relationship, Responsible Morality, Transcendental Spirituality and, Transforming Influence (Sendjaya et al., 2003, 2008). Voluntary Subordination is defined as a leader's behaviour that constructs the attitude of being and the intention of doing a servant leader. An authentic self is defined as a leader's behaviour that indicates the authentic self-positioning concerning others. It is characterised by humility, security, integrity, vulnerability, and accountability (Autry, 2001). The covenantal relationship is defined as a leader's behaviour that rests on mutual intimacy among people and shares commitment to values, ideals, and goals, which enable work to be meaningful and fulfilling. Responsible Morality is defined as a leader's behaviour that elevates the moral conviction and the action of leader and follower (Sendjaya, 2003). Transcendent Spirituality is defined as a leader's behaviour that manifests the inner conviction of existence beyond the self and the material world. It is needed for a leader or follower to pursue a complete and meaningful

life. Transforming influence is defined as a leader's behaviour that inspires and assists the employees in being what they could be. The three Servant Leadership models discussed above indicate that servant leadership is a potential leadership style to embrace creativity.

### ***Ambidexterity***

Ambidexterity refers to *"the ability of a complex and adaptive system to manage and meet conflicting demands by engaging in fundamentally different activities"* (Bledow et al., 2009, p. 31). Generally, Ambidexterity represents the successful management of both explorations (e.g., creating new products) and exploitation (e.g., production and implementation of products).

The term ambidexterity came from the Latin word 'ambos' (both) and dexter (right) which means "right in both sides" and describes human's ability to use both hands on the same skill. The concept of Ambidexterity is first introduced to the organisational context by Duncan in 1976. This illustrates an organisation that is harmonious and efficient in managing the demands of the current business. Simultaneously, they are quite adaptive to the changes in the environment that will still be present tomorrow. Gibson and Birkinshaw (2004) defined Ambidexterity as a capacity to show harmony and adapt. March (1991) theorised that Ambidexterity is the main factor for the viability and prosperity of a system in an organisation. He based on the premise that "the ability of a company to both exploit current competency as well as exploring new opportunities is the essence of organisational learning" (Bonesso, Gerli & Scapolan, 2014, p. 392). Previous studies showed that Ambidexterity makes a positive contribution toward creating new product development (Carmeli & Halevi, 2009; Katila & Ahujia, 2002), increase sales performance (He & Wong, 2004).

Organisations typically support existing activity and upgrade management competence rather than exploring something new (Venkataraman et al., 2007). Without exploitation and exploration of creativity, the existing company will not adapt to changes in the environment (Edmonson, 2002; March, 1991). On the other hand, solely focusing on exploration will lead to "too many ideas that are not well developed that lacks unique competencies " (Sinek, 2009, p. 603).

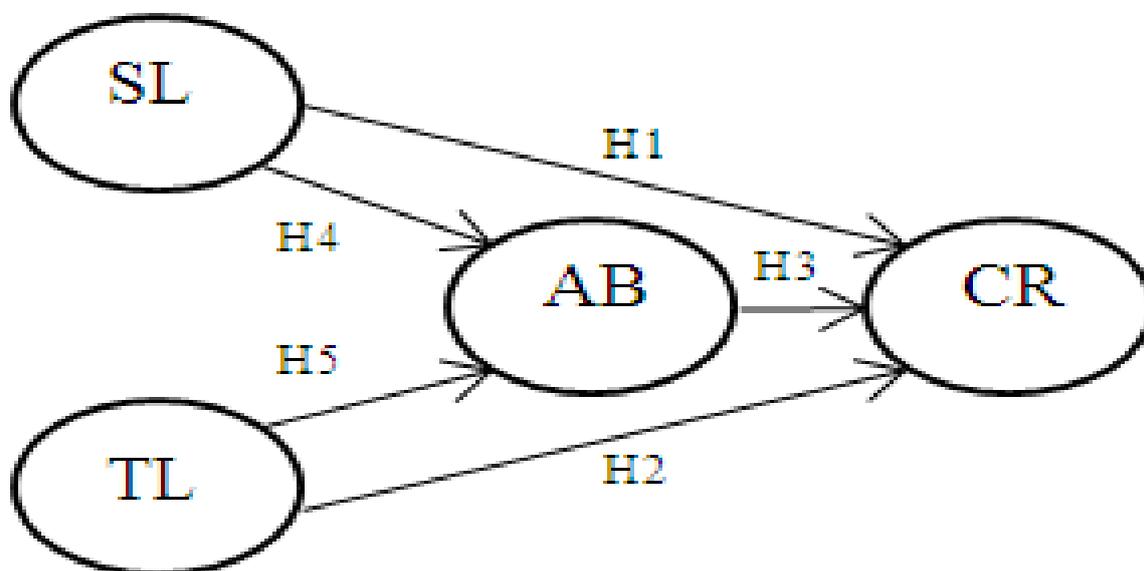
The issue with Ambidexterity is not only how to balance and synchronise the exploration and the exploitation process. Both activities need resources and direction to execute. To do exploitation, we have to be sure there are enough resources within the organisation. The limitation of resources will limit the time of exploitation and exploration. As part of Creativity, Ambidexterity does not follow a linear journey. It will take a complex and complicated interaction along the way. A proper leadership type is needed to direct and to

keep the balance.

## Research Model

Based on the theoretical review, a research model is built, as illustrated in Figure 1. It has four variables: Creativity (CR) as the independent variable, Ambidexterity (AB) which consists of exploitation and exploration as the mediator variable, Servant Leadership Behavior (SL), and Transformational Leadership (TL) as the independent variables. The model has five hypotheses, H-1 to H-5.

**Figure 1.** Research Model



## Research Hypothesis

### *Creativity and Servant Leadership Behaviour*

Transformational leaders inspire and motivate their followers to achieve organisational goals rather than followers' development. On the contrary, servant leaders are genuinely focused above the corporate interests and concern for the development of the followers (Van Dierendonck et al., 2011; Liden et al., 2014). Servant leadership directly influences affect-based trust rather than cognitive-based within the team (Yoshida et al., 2014). Yoshida proposed servant leadership as an alternative leadership style to foster creativity and innovation in an organisation (Yoshida et al., 2014).

**Hypothesis 1:** *Servant Leadership behaviour gives a positive effect on creativity.*

The early concept of Transformational Leadership is comprised of four components: (1) inspirational motivation; (2) idealised influence; (3) individualised consideration; and (4) intellectual stimulation (Bass, 1985). The relationship between the components of Transformational Leadership and Creativity may be explained as follow.

Leader applying intellectual stimulation will motivate their followers to think out of the box and challenge the status quo. On the other hand, it may affect cognitive conflict and stimulate qualitative Creativity (De Dreu, 2006). Individualised consideration is associated with creativity because a transformational leader can recognise the follower's individuality and encourage the process of creativity. At the same time, inspirational motivation and idealised influence provide followers with a higher goal that is energising, exciting, and intrinsically motivating (Shamir, House, & Arthur, 1993).

**Hypothesis 2:** *Transformational Leadership gives a positive effect on creativity.*

### ***Creativity and Ambidexterity***

Idea generation requires exploring diverse options based on the existing knowledge we have. On the other hand, idea implementation requires more goal-directed activities. The two processes follow a complex and non-linear pattern which intertwined each other (Bledow et al., 2009). Rosing et al. (2011) adapted this process as exploitation and exploration of Ambidexterity and suggested that the specific leadership behaviour is needed to manage the ambidexterity process of creativity and innovation.

**Hypothesis 3:** *Ambidexterity gives a positive effect on creativity.*

### ***Ambidexterity and Leadership***

Ambidexterity approach to leadership or ambidextrous leadership is a term mentioned by Vera and Crossan in 2004. They argue that a mixed leadership style is needed to accommodate the organisation's learning process (Vera & Crossan, 2004, p. 226). They based the argument with the contingent theory of leadership. A mixed leadership style that can explore and exploit at the same time while facing various conditions as the consequences of speed and complexity of the current competitive environment. Acting ambidextrously implies that they need the capacity to implement multiple actions at the same time and must be able to manage vibrant combinations from the multilevel learning process to support exploration and exploitation (Jansen et al., 2009). Leaders must stimulate their followers' creativity and trim their business at the same time (Bledow et al., 2011).

Rosing et al. (2011) argued that the existing leadership style unable to integrate controversial behaviour that is needed by the exploitation and exploration. An alternative approach to

leadership is needed to lead innovation effectively (Anderson et al., 2004). Building on the theoretical framework by Bledow et al. (2009), Rosing et al. (2011) showed that the leaders of creativity must support their subordinates in their effort to act ambidextrously in an ambidextrous leadership. The most important leadership feature for creativity is the development of exploration by increasing the variant of each follower's behaviour (Gupta et al., 2004). Ambidexterity need leadership behaviour as antecedents to foster creativity

**Hypothesis 4:** Servant Leadership behaviour gives a positive effect on Ambidexterity.

**Hypothesis 5:** Transformational Leadership gives a positive effect on Ambidexterity.

### **Research Methodology**

The research design is non-experimental, namely, cross-sectional design. The research model consists of 4 variables: Creativity (CR), Ambidexterity (AB), Servant Leadership (SL), and Transformational Leadership (TL). The model has five hypotheses: (1) Servant Leadership has a positive effect to creativity; (2) Transformational Leadership has a positive effect to creativity; (3) Ambidexterity has a positive effect to creativity; (4) Servant Leadership has a positive effect to Ambidexterity; and (5) Transformational Leadership has a positive effect to Ambidexterity.

The research subject is obtained by selecting elements of a defined population. The population of this study is business school students in Indonesia. The unit analysis is a final year student in a prominent business school in Indonesia. The students had experienced how to deal with creativity during their business studies or business project. Student creativity is surveyed using the creativity scale measurement developed by Zhou and George (2001). The Zhou measurement scale has 12 questions to answer. Servant Leadership is surveyed using the SLBS (Servant Leadership Behaviour Scale) developed by Sen Sendjaya (Sendjaya et al., 2019), which has six questions that represent six dimensions of Servant Leadership. Transformational Leadership Behaviour is measured using the MLQ (Multifactor Leadership Questionnaire) developed by Bass and Avolio (1995). The Ambidexterity is measured using an eight indicator scale developed by Rosing (Rosing et al., 2011).

All variables are rated on a five-point scale ranging from 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for strongly agree. All the questionnaire is translated into Bahasa Indonesia. The full item of the measurement scale is attached in the appendix.

## Result

The data comprised of survey data that examined the influence of leadership behaviour on student creativity with Ambidexterity as the mediator variable. Two types of leadership behaviour are surveyed Servant Leadership Behaviour and Transformational Leadership.

There are 102 Business School's student became the research participant: 85, 3 % of them are 20 years old, while 14.7 % are older than 20; 56% of them have been involved in the organisation activities but all of them already done business projects. The questionnaire is given directly (printed) to the student. The result is analysed using Smart PLS v 3.0 (Partial Least Square). It follows the procedure proposed by Hair (Hair et al., 2019). The result of data presented as an empirical model in Figure 2, while the result of the variables' measurement is attached in the appendix (Table A to Table D). The analysis of reliability, validity and the path coefficient is presented as follow.

### *Indicator Loading*

The data analysis using smart PLS (v 3.2.9) shows each variable's indicators loading (see Table A to D at the attachment). All the loading factors are larger than 0,5. The value of loading factor  $> 0.7$  is said to be ideal, while in empirical research experience, the value of loading factor  $> 0.5$  is still acceptable. The result shows that the indicator is valid measuring its construction.

### *Internal Consistent Reliability Assessment*

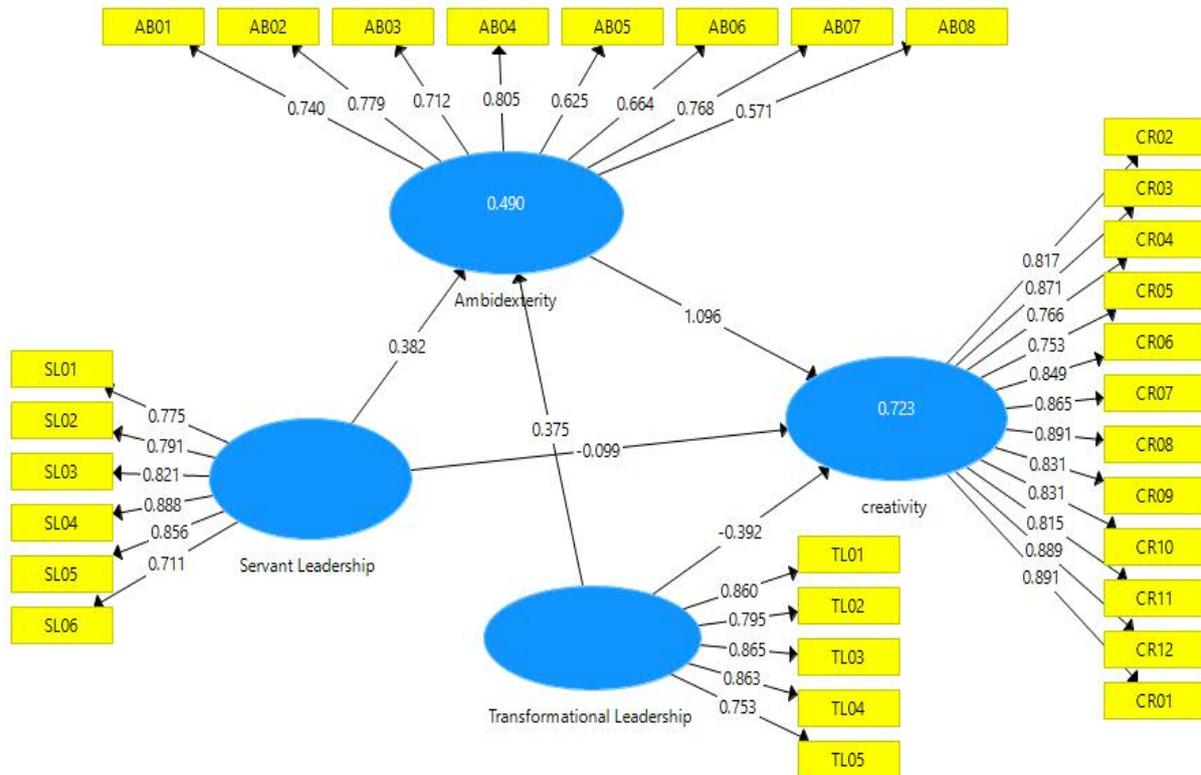
The internal consistency reliability can be assessed by evaluating the Cronbach's alpha and composite reliability. The indicator is reliable if it meets Cronbach's alpha  $\geq 0.7$  and composite Reliability  $\geq 0.7$ . Table 1 shows the result of Cronbach's Alpha and composite reliability. All of Cronbach's alpha is  $\geq 0.7$ . All of the composite reliability is  $\geq 0.7$ . Therefore, the assessment of the Internal Consistent reliability is reliable.

**Table 1:** Measurement Model Assessment result

	Cronbach's Alpha.	Rho_A	Composite Reliability	AVE
Ambidexterity	0,860	0,869	0,891	0,507
Servant Leadership	0,893	0,900	0,919	0,655
Transformational Leadership	0,885	0,886	0,916	0,686
Creativity	0,962	0,965	0,966	0,706

*(Data Processed)*

Figure 2. Research Empirical Model



### ***Convergent Validity***

The convergent validity is assessed by investigating the AVE value (Average Variance Extracted) to see the construct's convergent validity. The AVE value describes the magnitude of the variant that the latent construct can possess. An acceptable AVE is 0.50 or higher, indicating that the construct explains at least 50 per cent of the variance of its items (Hair et al., 2019). That is, the latent variable can explain the average of more than half the variants of the indicators. The AVE value is shown in Table 1.

### ***Discriminant Validity***

The Fornell-Larcker criteria are used to convince discriminant validity, the AVE for each latent variable must be higher than that of  $R^2$  with all other latent variables. Thus, each latent variable shares more variants with each indicator block than with other latent variables representing one block of different indicators. Cross-loadings is used to check the validity of discrimination in addition to the above criteria. If an indicator has a higher correlation with other latent variables than its own, then the matching model should be reconsidered.

**Table 2:** Discriminant Validity (Fornell-Larcker criteria)

	Ambidexterity	Servant Leadership	Transformational Leadership	Creativity
Ambidexterity	0,712			
Servant Leadership	0,649	0,809		
Transformational Leadership	0,647	0,712	0,828	
Creativity	0,778	0,332	0,246	0,840

### ***Structure Model Assessment (Inner Model)***

The assessment covers the influence of exogenous latent variables against endogenous latent variables by evaluating the R square and f square value, predictive relevance assessment and, significance of the relationship between variables by examining the path coefficient (hypothesis test). The result of data analysis by smart PLS gives the R<sup>2</sup> for Ambidexterity = 0.480 and Creativity = 0.723. Both R<sup>2</sup> are considered moderate.

According to Cohen (1988), the recommended Effect Size f<sup>2</sup> are 0.02, 0.15, and 0.35, with exogenous latent variables having small, moderate, and large influences at structural levels. The value of f<sup>2</sup> (Ambidexterity to Creativity) is 2.208 is categorised as a strong influence of Ambidexterity to Creativity. At the same time, both of leadership behaviour give moderate influence to Ambidexterity. The table also shows that the direct influence of leadership on creativity is weak.

### ***Predictive Relevance Assessment***

The Q-Square Predictive Relevance (Q<sup>2</sup>) value is used to validate the predictive capability of the model. This measurement is suitable if the endogenous variable has a reflective measuring model. If Q<sup>2</sup> close to the value of 1, it can be said that the structural model has a prediction of relevance. The formula Q<sup>2</sup> is as follows

$$Q^2 = 1 - (1 - R_1^2)(1 - R_2^2)$$

Substituting the value of R<sub>1</sub><sup>2</sup> and R<sub>2</sub><sup>2</sup> to the equation will give a Q<sup>2</sup> value of 82.96%. This value is more than 0, which means that the modelling result with PLS has high relevance predictive, which indicates a good exogenous latent variable (corresponding) as an explanatory variable and predicts its endogenic variables.

Table 3: The  $F^2$  value of the variables

	Ambidexterity	Servant Leadership Behavior	Transformational Leadership	Creativity
Ambidexterity				2,208
Servant Leadership Behavior	0,141			0,015
Transformational Leadership	0,136			0,240
Creativity				

(Data Processed)

### ***Significance Relationship between Variable Assessment***

The significance of the inner model parameters can be evaluated through the bootstrap resampling procedures. Table 4 is the result of testing the T-statistics on the structural model (inner model). The significance level used is 5%, so the T-stat must > than 1.96. The following is the result of *T-statistics* and p-value. As shown in the tables above, some of the relationships do not meet the criteria the p-value of servant leadership and Transformational leadership is higher than 0.05.

**Table 4:** T-statistics and p-value of variables

	T Statistics	P Values
Servant Leadership -- Ambidexterity	2,601	0,010
Servant Leadership -- Creativity	1,710	0,088
Ambidexterity -- Creativity	12,465	0,000
Transformational Leadership -- Ambidexterity	2,672	0,008
Transformational Leadership -- Creativity	0,118	0,906

(Data Processed)

### ***Hypothesis Evaluation***

Table 4 and Table 5 shows that not all hypothesis is supported.

Hypothesis 1, servant Leadership behaviour give positive effect to creativity is not supported since the p-value is higher than 0.05 and the path coefficient is -0.099

Hypothesis 2, Transformational Leadership give positive effect to creativity is not supported since the p-value is higher than 0.05 and the path coefficient is – 0.392

Hypothesis 3, Ambidexterity give a positive effect on creativity is supported. Both p-value and path coefficient meet the criteria.

Hypothesis 4, servant Leadership behavior give a positive effect on Ambidexterity is supported. Both p-value and path coefficient meet the criteria.

Hypothesis 5, Transformational Leadership give a positive effect on Ambidexterity is supported. Both p-value and path coefficient meet the criteria.

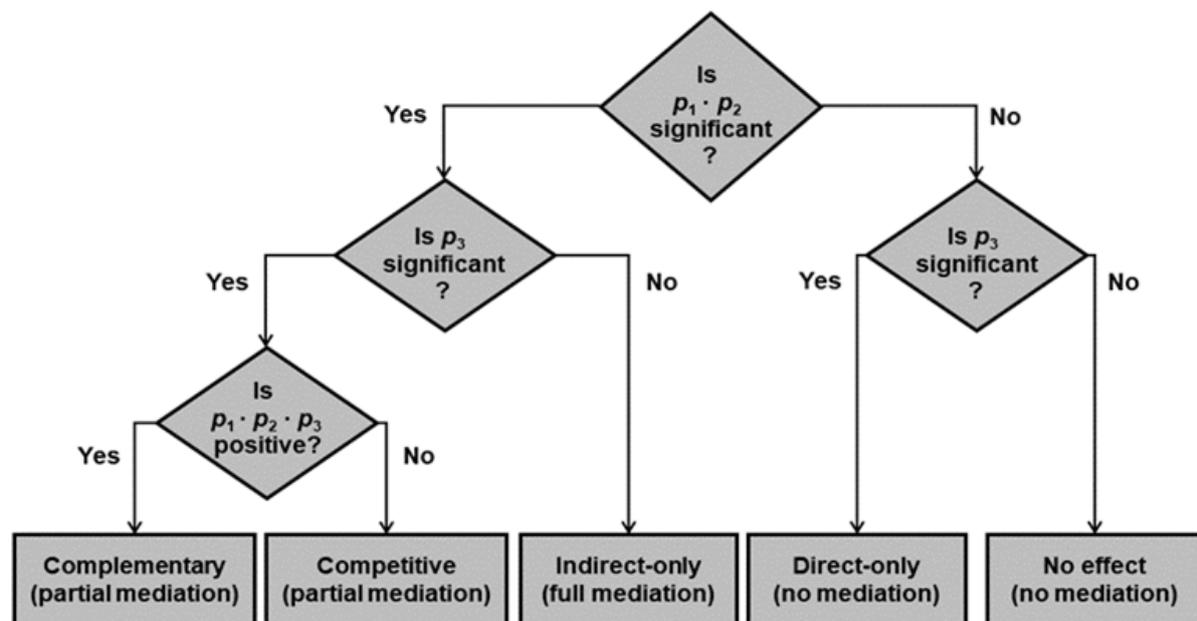
**Table 5:** Path Coefficient

	Path	Coefficient
H-1	Ambidexterity - Creativity	1,096
H-2	Servant Leadership – Ambidexterity	0,382
H-3	Transformational Leadership - Ambidexterity	0,375
H-4	Servant Leadership - Creativity	-0,099
H-5	Transformational Leadership - Creativity	-0,392

### Mediation Effect

Zhao et al. (2010) has conceptualised these five types of mediation and simplified the procedure into a flowchart or a decision tree, as shown in Figure 3.

**Figure 3.** Decision tree of analysing the mediation effect (Zhao et al., 2010)



P1 and p2 are the indirect coefficient path from the independent variable to the mediator and from mediator to the dependent variable, while p3 is the direct path. For the mediating effect between Servant leadership and creativity, p1 (SL-AB) is 0.382 and p2 (AB-CR) = 1.096 and p3 (SL-CR) is -0,099, while the mediating effect between transformational leadership and creativity, p1 (TL-AB) is 0.375 and p2 (AB-CR) = 1.096 and p3 (SL-CR) is -0,392. Refer to the decision tree, we will have a result that Ambidexterity is partial mediation both for Servant Leadership and Transformational behaviour. The mediation effect is partly

complementary and consistent with the hypothesised framework but considers an omitted mediator's likelihood in the "direct" path (Zhao et al., 2010).

Indirect path of Servant Leadership to creativity is  $p1 \times p2 = (0,382) \times (1.096) = 0.418$  which much greater compare to the direct path  $p3 (-0.999)$  while the indirect of Transformational Leadership to creativity is  $p1 \times p2 = (0,375) \times (1.096) = 0.411$  which much greater compare to the direct path  $p3 (-0.999)$ . The mediation effect of Ambidexterity is significant.

## Discussion

### *Hypothesis 4 and 5 as the Research Novelty*

The path calculation and the mediation effect analysis show that Ambidexterity enhances the mediation effect of Servant Leadership and Transformational Leadership on Creativity. In other words, Servant Leadership and Transformational Leadership are good antecedents to Ambidexterity to foster creativity. In short, embracing leadership behaviour to Ambidexterity will foster creativity, which acts as the research novelty as supported by Hypothesis 4 and 5.

The partial mediation and the  $R^2$  of Ambidexterity (0.490) lead us to see other potential variables that can be the antecedent to Ambidexterity, and the additional 51% shows us that there still another variable or variables that can enhance the Ambidexterity process. As such, another theoretical framework should be built to investigate the possibility, and this could serve as possible future research.

The calculation of direct and indirect paths of SL and TL provides us to another finding. There is only a slight difference between Servant Leadership and Transformational Leadership as the antecedent to Ambidexterity, which means both leadership styles are applicable to foster creativity. A deeper look at the indicators of the variables we will have certain leadership behaviour that will enhance the exploitation and exploration activity of Ambidexterity to foster creativity. Three significant behaviours of servant leadership are: (1) improve the capacity for the followers; (2) increase sense of the meaning of what they are doing; and (3) respect, while three behaviour of Transformational Leadership is: (1) provide new ways of thinking; (2) provide necessary effort; and (3) respect. University leaders may apply and practice these significant behaviour to increase the Ambidexterity process, which will foster creativity.

### *Hypothesis 1 and Hypothesis 2*

Hypothesis 1 and hypothesis 2 are not supported since there is no direct effect between leadership behaviour to creativity.

### ***Hypothesis 3***

Ambidexterity gives a positive effect on creativity. Hypothesis 3 is supported.

The impact on creativity not only comes from the leadership style but also from the leaders' behaviour. All the behaviour of a servant leader influences creativity with some having more impact than others. This hypothesis is supported by the work of Yoshida et al. (2014) where servant leadership behaviour gives a positive effect on creativity and innovation and also by Amabile et al. (2004) which mentioned that leaders' behaviour plays a great role on creativity. Both Yoshida and Amabile studied creativity at a team/organisation level, as this study is applied personally.

This supported hypothesis leads us to the understanding that creativity can be boosted by applying some proper leadership behaviour. Since many start-ups struggle with creativity issue, this outcome will help a lot of leaders adapt to the precise behaviour to enhance the creative process. Behaviour study and leadership research could benefit from this outcome. Research on servant leadership and servant Leadership behaviour is still young and has a lot of room to investigate. A deeper look at the sample where most of the start-up members are between 20 to 30 years old will give some insight into how to deal with the millennial generation in the educational institution and the workplace.

Ambidexterity consists of exploitation and exploration. Exploitation is to optimise all the member's known potential, while the exploration aspect tries to dig the unseen potential of the member. These two aspects are needed to support the creative process. The data analysis shows that the dominant indicator of Ambidexterity is A-1, AB-2, and AB-3. Those indicators represent the exploration process in Ambidexterity. We argue that exploration is needed more to foster Creativity compare to exploitation. Leaders can give more attention to exploring their followers' hidden talent rather than build visible competencies only.

### **Conclusion**

The research confirmed that Servant Leadership and Transformational Behavior are good antecedents to foster creativity as both leadership styles share a very similar effect.

Ambidexterity has a strong effect on creativity. The sample data indicates that the exploration aspects of Ambidexterity play a more significant role than the exploitation one in giving effect to the innovation. This indication can sign that exploring the lower part of the iceberg of people's talent is as essential as the exploitation of their competencies. The study of Ambidexterity is essential in optimising the human capital of a team.



### ***Practical Benefit***

The study's result also leads to a combination of the leader's behaviour and the leader's skill to support creativity. It will give new insight for the leader to equip their leadership skill to lead the millennials. This combination of behaviour and leadership studies opens a wider horizon for leadership training.

### ***Research Limitation and Further Study***

As with all studies, this investigation did have limitations. The study incorporated results focusing solely on the business school student, which means that other students or other communities may give a slightly different result due to the various social contexts. The different contexts will give different creativity issues. The other limitation is the sample's age, as this study focused on people between 20 to 30 years old. Older people will have a different Creativity challenge, either harder or easier, depending on their maturity.

This result leaves much room for further study in Servant Leadership behaviour to foster other performance of people's work, such as innovation, conflict resolution, and team anxiety. Furthermore, Ambidexterity, as a mediator opens many opportunities to see the role of behaviour studies such as innovation or passion either in cross-section or longitudinal research (Uy et al., 2020).



## REFERENCES

- Autry, J.A., Spears, L.C. and Noble, J., (2001). *Love and Work: A Conversation with James Autry*, Greenleaf Center for Servant-Leadership.
- Amabile, T.M., (1996). *Creativity in Context*, Boulder, CO, Westview Press.
- Amabile, T.M., (1983). The social psychology of Creativity: A componential conceptualization. *Journal of Personality and Social Psychology*, 45(2), p.357.
- Amabile, T.M., (1988). A model of creativity and innovation in organizations. *Research in organizational behavior*, 10(1), pp.123-167.
- Anderson, N., Potočnik, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management*, 40(5), 1297-1333.
- Barbuto Jr, J.E. and Wheeler, D.W., (2006). Scale development and construct clarification of servant leadership. *Group & Organization Management*, 31(3), pp.300-326.
- Bass, B.M., (1985). *Leadership and performance beyond expectations*. Collier Macmillan.
- Bass, B. M., & Avolio, B. J. (1995). Multifactor Leadership Questionnaire (MLQ) [Database record]. APA PsycTests. <https://doi.org/10.1037/t03624-000>
- Bledow, R., Frese, M., Anderson, N., Erez, M. and Farr, J., (2009). A Dialectic Perspective on Innovation: Conflicting Demands, Multiple Pathways, and Ambidexterity, *Industrial and Organizational Psychology*, **2(3)**: 305-337.
- Bledow, R., Frese, M. and Mueller, V., (2011). Ambidextrous Leadership for Innovation: The Influence of Culture, *Advances in Global Leadership*, **6(1)**:41-49.
- Bonesso, S., Gerli, F., and Scapolan, A., (2014). The individual side of Ambidexterity: Do individuals' perceptions match actual behaviors in reconciling the exploration and exploitation trade-off?. *European Management Journal*, 32(3), pp.392-405.
- Carmeli, A., and Halevi, M.Y., (2009). How top management team behavioral integration and behavioral complexity enable organizational Ambidexterity: The moderating role of contextual Ambidexterity. *The leadership quarterly*, 20(2), pp.207-218.
- Chen, C.H.V., Li, H.H., and Tang, Y.Y., (2009). Transformational leadership and Creativity: Exploring the mediating effects of creative thinking and intrinsic motivation. *International Journal of Management and Enterprise Development*, 6(2), pp.198-211



- Cheung, C. K., Rudowicz, E., Yue, X., & Kwan, A. S. (2003). The creativity of university students: What is the impact of field and year of study? *The Journal of Creative Behavior*, 37(1), 42-63.
- De Dreu, C.K., (2006). When Too Little or Too Much Hurts: Evidence for a Curvilinear Relationship between Task Conflict and Innovation in Teams, *Journal of Management*, 32(1): 83-107
- Duncan, R. B. (1976). The ambidextrous organization: Designing dual structures for innovation. *The Management of Organization*, 1(1), 167-188.
- Gupta, V., MacMillan, I.C. and Surie, G., (2004). Entrepreneurial Leadership: Developing and Measuring a Cross-Cultural Construct, *Journal of Business Venturing*, 19(2):241-260.
- Hair, J.F., Risher, J.J., Sarstedt, M., and Ringle, C.M., (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24.
- He, Z.L. and Wong, P.K., (2004). Exploration vs. Exploitation: An Empirical Test of The Ambidexterity Hypothesis, *Organization Science*, 15(4):481-494.
- Herold, D.M., Fedor, D.B., and Caldwell, S.D., (2007). Beyond change management: A multilevel investigation of contextual and personal influences on employees' commitment to change. *Journal of Applied Psychology*, 92(4), p.942.
- Herrmann, D., and Felfe, J., (2014). Effects of leadership style, creativity technique, and personal initiative on employee creativity. *British Journal of Management*, 25(2), pp.209-227.
- Hu, J. and Liden, R.C., (2011). Antecedents of Team Potency and Team Effectiveness: An Examination of Goal and Process Clarity and Servant Leadership, *Journal of Applied Psychology*, 96(4): 851.
- Humala, I.A., (2015). Leadership toward creativity in virtual work in a start-up context. *Journal of Workplace Learning*, 27(6), 426-441.
- Jansen, J.J., George, G., Van den Bosch, F.A. and Volberda, H.W., (2008). Senior Team Attributes and Organizational Ambidexterity: The moderating Role of Transformational Leadership, *Journal of Management Studies*, 45(5):982-1007.
- Judge, T.A., and Piccolo, R.F., (2004). Transformational and transactional leadership: a meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89(5), p.755.



- Katila, R. and Ahuja, G., (2002). Something Old, Something New: A Longitudinal Study of Search Behavior and New Product Introduction, *Academy of Management Journal*, 45(6): 1183-1194.
- March, J.G., (1991). Exploration and Exploitation in Organizational Learning, *Organization Science*, 2(1):71-87.
- Page, D., and Wong, T.P., (2000). A Conceptual Framework for Measuring Servant Leadership, *The Human Factor in Shaping The Course Of History And Development*, pp.69-110.
- Rosing, K., Frese, M., and Bausch, A., (2011). Explaining The Heterogeneity of The Leadership-Innovation Relationship: Ambidextrous Leadership, *The Leadership Quarterly*, 22(5):956-974.
- Sendjaya, S. and Cooper, B., (2011). Servant Leadership Behaviour Scale: A Hierarchical Model and Test of Construct Validity, *European Journal of Work and Organizational Psychology*, 20(3):416-436.
- Sendjaya, S., Eva, N., and Butar Butar, I. et al. (2019). SLBS-6: Validation of a Short Form of the Servant Leadership Behavior Scale. *J Bus Ethics* 156, 941–956 (2019). <https://doi.org/10.1007/s10551-017-3594-3>
- Shamir, B., House, R.J., and Arthur, M.B., (1993). The motivational effects of charismatic leadership: A self-concept based theory. *Organization Science*, 4(4), pp.577-594.
- Sinek, S., (2009). *Start with Why: How great leaders inspire everyone to take action*. Penguin.
- Sternberg, R.J., and Lubart, T.I., (1999). The concept of Creativity: Prospects and paradigms. *Handbook of Creativity*, 1, pp.3-15.
- Uy, M.A., Jacob, G.H., Gielnik, M.M., Frese, M., Antonio, T. and Wonohadidjojo, D.M., (2020). When passions collide: Passion convergence in entrepreneurial teams. *The Journal of Applied Psychology*.
- Van Dierendonck, D., (2011). Servant Leadership: A Review and Synthesis, *Journal of Management*, 37(4): 1228-1261.
- Van de Ven, A.H., (1986). Central Problems in The Management of Innovation, *Management Science*, 32(5):590-607.



- Venkatraman, N., Lee, C.H., and Iyer, B., (2007). Strategic Ambidexterity and sales growth: A longitudinal test in the software sector. In Unpublished Manuscript (earlier version presented at the Academy of Management Meetings, 2005).
- Vera, D. and Crossan, M., (2004). Strategic Leadership and Organizational Learning, *Academy of Management Review*, 29(2): 222-240.
- Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *Academy of Management Review*, 18(2), 293-321.
- Yoshida, D.T., Sendjaya, S., Hirst, G. and Cooper, B., (2014). Does Servant Leadership Foster Creativity and Innovation? A Multilevel Mediation Study of Identification and Prototypicality, *Journal of Business Research*, **67(7)**: 1395-1404.
- Zhou, J., & George, J. M. (2001). When job dissatisfaction leads to Creativity: Encouraging the expression of voice. *Academy of Management Journal*, 44(4), 682-696.

## APPENDIX

**Table A** Item Measuring Creativity

item	Indicator	Mean	Mode	Standard Deviation	Loading Factor
CR01	Comes up with new and practical ideas to improve performance	3,618	4,000	1,000	0,891
CR02	Searches out new technologies, processes, techniques, and/or product ideas	3,471	4,000	0,926	0,817
CR03	Suggests new ways to increase the quality	3,725	4,000	0,951	0,871
CR04	Is a good source of creative ideas	3,294	3,000	0,945	0,766
CR05	Is not afraid to take risks	3,451	4,000	0,956	0,753
CR06	Promotes and champions ideas to others	3,539	4,000	0,946	0,849
CR07	Exhibits creativity on the job when given the opportunity	3,755	4,000	0,964	0,865
CR08	Develops adequate plans and schedules for the implementation of new ideas	3,549	4,000	0,935	0,891
CR09	Often has new and innovative ideas	3,490	4,000	0,905	0,831
CR10	Comes up with creative solutions to problems	3,441	4,000	0,881	0,831
CR11	Often has a fresh approach to problems	3,480	4,000	0,926	0,815
CR12	Suggests new ways of performing work tasks	3,569	4,000	0,934	0,889

**Table B** Item Measuring Ambidexterity

item	Indicator	Mean	Mode	Standard Deviation	Loading Factor
AB01	Adopting some of the best practices quickly is how I add value to the company	3,637	4,000	0,838	0,740
AB02	I am looking for new ways to do things by learning this to succeed for me and others	3,765	4,000	0,992	0,779
AB03	When I share new ideas, my ideas get responses from the leadership	3,451	3,000	0,976	0,712
AB04	I am encouraged to experiment/try with	3,549	4,000	0,914	0,805

	new ways of completing work				
AB05	Promote efficient actions and stick to the rules	3,980	4,000	0,671	0,625
AB06	Meet the target and stick to the plan	3,980	4,000	0,686	0,664
AB07	Build a desire to experiment and encourage new ideas	3,873	4,000	0,723	0,768
AB08	Motivate employees to take risks, think outside the box, and break rules to find solutions	3,863	4,000	0,767	0,571

**Table 3** Item Measuring Servant Leadership Behaviour

item	Indicator	Mean	Mode	Standard Deviation	Loading Factor
SL01	Uses power in service to others, not for his or her ambition	3,931	4,000	0,963	0,775
SL02	Gives me the right to question his or her actions and decisions	3,971	4,000	0,845	0,791
SL03	Respects me for who I am, not how I make him or her feel	3,863	4,000	0,829	0,821
SL04	Enhances my capacity for moral actions	4,059	4,000	0,790	0,888
SL05	Helps me to generate a sense of meaning out of everyday life at work	3,882	4,000	0,844	0,856
SL06	Contributes to my personal and professional growth	3,843	4,000	0,751	0,711

**Table 4** Item Measuring Transformational Leadership Behaviour

item	Indicator	Mean	Mode	Standard Deviation	Loading Factor
TL01	The leader instil pride, faith, and respect has a gift for seeing what is important and transmits a sense of mission which is effectively articulated	3,814	4,000	0,789	<b>0,860</b>
TL02	The leader delegates projects to stimulate learning experiences provides coaching and teaching and treats each follower as a respected individual	4,069	4,000	0,675	<b>0,795</b>

TL03	The leader arouses followers to think in new ways and emphasizes problem-solving and the use of reasoning before acting.	3,931	4,000	0,731	<b>0,865</b>
TL04	The leader provides rewards if followers perform the following contracts or expend the necessary effort.	3,725	4,000	0,769	<b>0,863</b>
TL05	The leader avoids giving directions if the old ways are working and allow followers to continue doing their jobs as always if performance goals are met.	3,647	4,000	0,762	<b>0,753</b>