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The Influence of Managerial Roles and Empowerment on Innovations with Competitive Implications

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Abstract

Breakthrough innovations in service organizations can be realized through the development of new business models, new services, new customer interfaces, and administrative innovations involving managerial roles and empowerment, all of which will influence competitiveness. This study aimed to determine and analyze the influence of managerial roles on open innovation and its implications for competitiveness. Purposive sampling of around 200 people was used to determine the population, which consisted of structural officials at universities in West Java. Path analysis was used as the analytical method. The findings of this study revealed that managerial roles and empowerment had a favorable and significant impact on innovation, either partially or simultaneously. Furthermore, innovation had a beneficial and considerable impact on competitiveness.

Keywords
managerial roles; empowerment; innovation; competitiveness

I. Introduction

Students are one of the most important aspects of a private university's survival. Private universities require substantial funds in carrying out their education, service, and research. Education is a very important human need because education has a duty to prepare Human Resources (HR) for the development of the nation and state (Pradana et al, 2020). According to Astuti et al (2019) Education is an obligation of every human being that must be pursued to hold responsibilities and try to produce progress in knowledge and experience for the lives of every individual. Education is one of the efforts to improve the ability of human intelligence, thus he is able to improve the quality of his life (Saleh and Mujahiddin, 2020). For a private university, recruiting students with intellectual and financial abilities is a challenge within itself. Private universities must constantly deliver value in the form of educational services that are innovative. Consumers typically choose the products and services that provide the greatest value, that are the main keys to establishing competitiveness. As a result, the key to winning and maintaining customers is to better understand their demands and the purchase process than competitors do, as well as to deliver greater value. (Kotler et al., 2009). Customer focus, quality performance, integrity and responsibility, innovation, and special niches are all sources of competitive advantage that organizations can use to compete and succeed. (Longennecker, Justin G. Moore & Petty, 2006). Innovation is regarded as one of the most successful features in organizations which is a necessary component for achieving consumer satisfaction and realizing their desires. The intention is to find new ideas that will be applied to realize a competitive advantage for the organization by providing more value to customers (Reguia, 2014). Innovation is increasingly a necessity for success in the world of business. It has established itself as a new need for innovation management. (Bogers et al., 2019). The major factors for innovation are human resources who are constantly improving and

gaining knowledge. Individuals who acquire information become tools for the development of new ideas. (Sivam et al., 2019). Current management is scientific-based management, which is only temporary, hence innovation is required to gain a competitive advantage for the firm. Breakthrough innovations in service organizations can be realized through the development of new business models, new services, new customer interfaces, and administrative innovations. Innovation is realized if it is supported by creativity, knowledge, competence, community needs (Nurjanah, 2013). The creativity, knowledge, and competence needed by employees will develop if there is a managerial role and empowerment from the leadership in an organization. A manager does not only do administrative work or *decision making*, but he must do more creative work. On this basis, it is appropriate to integrate creativity and innovation in one component of the management process. (Purhantara, 2012). The purpose of this study was to look at the impact of managerial roles and empowerment on innovation, as well as the impact of innovation on competitiveness. The object of this study was the structural officials in private universities in West Java.

II. Review of Literature

2.1 Managerial Roles

The managerial role is a set of behaviors that a person is required to perform based on his or her position as a leader or manager. (Kurniawan et al., 2015). A leader or manager, according to H. Mintzberg, is someone who leads (or is accountable for) an organization or one of its sub-units. As a result of the elevated prestige and formal power that comes with being a leader, a variety of roles emerge. (Kurniawan et al., 2015). The ten roles are outlined separately, yet they work together to make a whole. The ten roles according to H. Mintzberg in (Pardeep, 2015).

a. Interpersonal Roles consists of:

1. As the leader of an organizational unit, the elder (*Figurehead role*) is required to perform ceremonial activities.
2. A leader's position (*Leader role*) entails being in charge of the work of the individuals in the organizational unit the leads.
3. The leader's role as a liaison (*Laision role*) entails making contacts outside of the vertical chain of command. Leaders build and maintain relationships in order to collect information.

b. Informational Roles consists of:

1. The role as a monitor (*Monitor role*), as a monitor, a leader continuously monitors his environment to collect information.
2. Role as a disseminator (*Disseminator role*), most of the information obtained by the leader must be shared and distributed to subordinates in need. Furthermore, when subordinates are unable to communicate with others, the leader is sometimes forced to relay information.
3. As a spokesman (*Spokesman Role*), a leader has the authority to communicate information to persons outside of his organizational unit.

c. Decisional Roles consists of:

1. As an entrepreneur (*Entrepreneur Role*), the leader must constantly strive to improve his unit's performance and adapt to changes in the environment in which the organization exists.
2. As a *disturbance handler*, the leader must be willing to volunteer as a renewal agent. The function of controlling distraction, on the other hand, represents the leader's desire to respond to the difficulties that his organization is facing.
3. The leader's function as a *resource allocator* also includes developing the organizational structure, formal relationship patterns, division of labor, and coordination within the unit they manage.
4. Negotiation is a vital component of the leader's duty, because only he has the ability to devote organizational resources. As a negotiator (*Negotiator role*), negotiation is a leader's obligation, sometimes regular.

2.2 Empowerment

Decision making, professional advancement, status, self-efficacy, autonomy, and influence are six elements of empowerment identified by Bogler and Somech (2004). (Sahoo et al., 2010). Empowerment is a management style that emphasizes employee autonomy, initiative, decentralization of power, and accountability. (BERRAIES et al., 2014)

2.3 Open Innovation

According to (Öberg & Alexander, 2019) open innovation has several dimensions, including *breadth*, *depth*, *freedom* (lack of information), *number of phases* (number of changes/developments), and *number of actors*.

Breadth means that the more diverse the competencies of people in the organization, the more open innovation, the more diverse skills (heterogeneity in skills) the more it contributes to open innovation. *Depth* is the depth of knowledge possessed by people in the organization, the more open innovation, the higher the contribution of expertise. *Freedom, lack of information* means that the more free to collaborate, the fewer formalities, the more open innovation. The number of phases (number of changes/developments) is related to the amount of open innovation. The more changes/developments included, the more open innovation. *Number of Actors* means that the more parties involved, the more open innovation will be.

As stated by (Sivam et al., 2019) the dimensions of innovation are:

a. Conditions consisting of culture, leadership and strategy.
b. Resources consisting of human resources, competencies, external relations and organizational structure.
c. The process consists of research and development management activities, learning and improvement systems, protection, and assessment.

2.4 Competitiveness

The majority of the literature on competitive advantage identifies multiple different aspects of competitiveness, but the four dimensions used by researchers in this study can be summarized as follows: Cost, flexibility, delivery, and quality (Diab, 2013). The advantage of competitive dimensions according to (Downing, 2018) are; forms of capital, politics, price elasticity, information asymmetry, value creation, value allocation, and forms of competitive advantage.

Hypothesis
H1: There is a partial influence of the managerial role on open innovation
H2: There is a partial empowerment influence on open innovation
H3: There is a simultaneous influence of managerial and empowerment roles on open innovation
H4: There is an influence of open innovation on competitiveness

III. Research Methods

This study aimed to determine and analyze the influence of managerial roles on open innovation and its implications for competitiveness. This study was part of a descriptive analysis study that focused on the examination and interpretation of research findings with the goal of determining whether there was a relationship between variables. Hypothesis testing is used in *explanatory research* to explain the causal relationship between variables. (Singarimbun & Efendy, 2008). This study used *path analysis* to analyze research data.

This research was conducted with a population of structural officials at universities in West Java. *Purposive sampling* of around 200 people was used to determine the population, which consisted of structural officials at universities in West Java. The sampling technique was *accidental sampling*.

IV. Results and Discussion

4.1 Descriptive Analysis

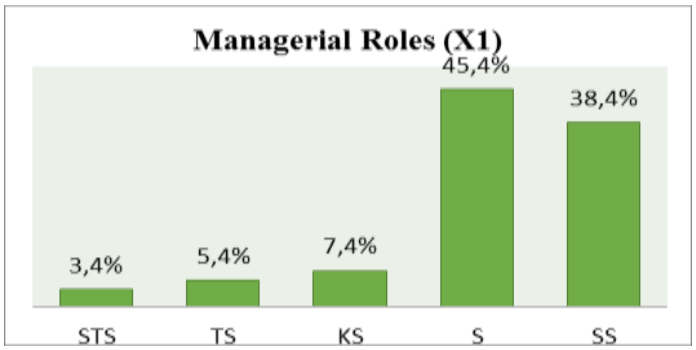

Figure 1. *Distribution of Answers to Managerial Role Variables (X1)*

The results of the distribution of Managerial Role answers (X1) on the agree answer were 45.4 percent, and the lowest result on the answer strongly disagrees was 3.4 percent, as shown in the diagram above. This indicates that the managerial position is a suitable fit.

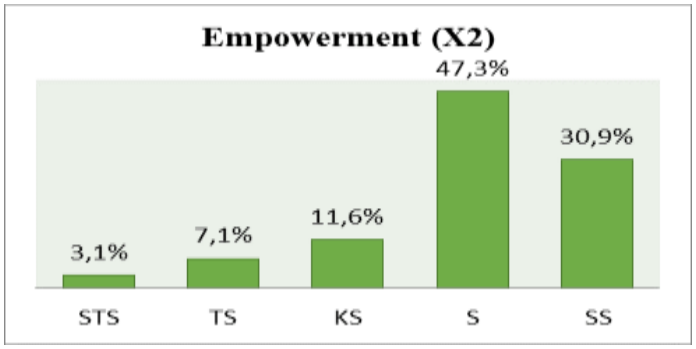

Figure 2. *Distribution of Answers to Empowerment Variables (X2)*

The results of the distribution of Empowerment answers (X2) on the agreed answers were 47.3 percent, while the lowest results in the strongly disagree answers were 3.1 percent, as shown in the diagram above. This places empowerment in a positive light.

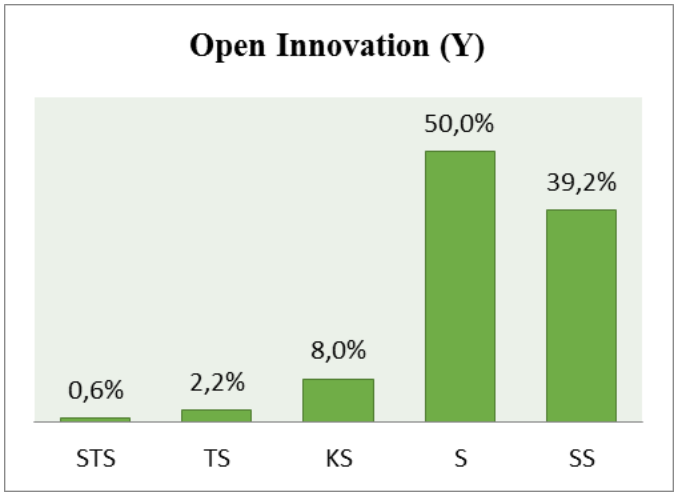

Figure 3. *Distribution of Answers to Open Innovation Variables (Y)*

The results of the distribution of Open Innovation answers (Y) in the agreed answers were 50.0 percent, while the lowest results in the strongly disagree answers were 0.6 percent, as shown in the diagram above. This places open innovation in a favorable category.

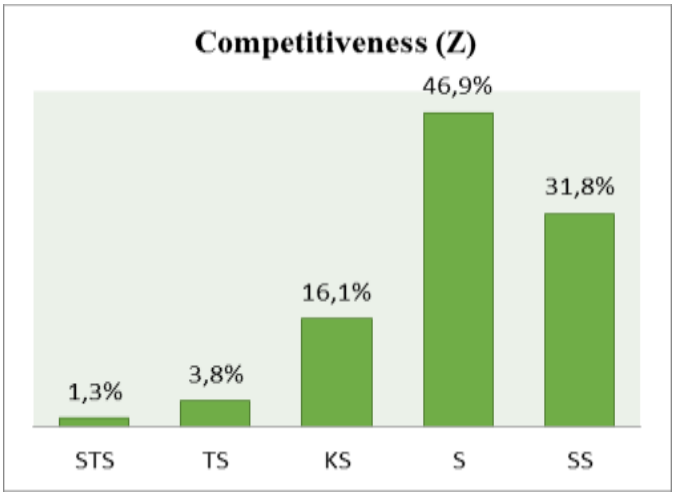

Figure 4. *Distribution of Answers to Competitiveness Variables (Z)*

The results of the distribution of Competitiveness answers (Z) in the agree answers were 46.9%, while the lowest results in the strongly disagree answers were 1.3 percent, as shown in the diagram above. This indicates that competitiveness is of high quality.

4.2 Path Analysis

Before conducting path analysis, the data is first transformed from ordinal data to intervals to identify the influence of Managerial Roles and Empowerment on Open Innovation and the influence of Open Innovation on Competitiveness (transformation data is listed in the appendix).

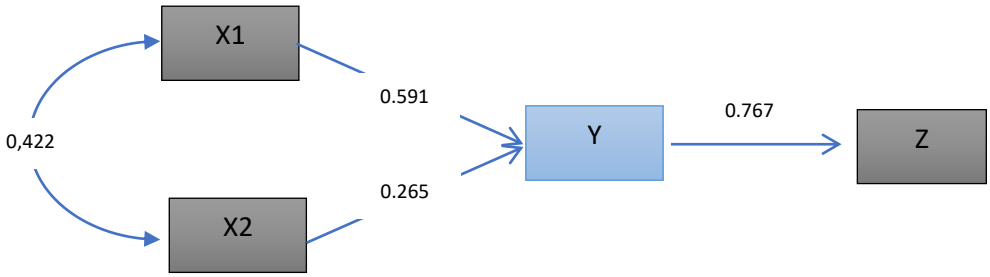

Figure 5. *Path Chart*

Figure 6. *The Influence of Open Innovation (Y) on Competitiveness (Z)*

4.3 Normality Test

The data was examined through a normality test to see if it originated from a normally distributed population. A decent regression model is normally or almost normally distribute. A biased estimate will be obtained if the data does not fit the normal distribution pattern. The Kolmogorov-Smirnov test was used to determine normality. The following results were obtained using the SPSS 26 software:

Table 1. Normality Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual	Unstandardized Residual
N		100	100
Normal Parameters[a,b]	Mean	.0000000	.0000000
	Std. Deviation	.39035898	.38183158
Most Extreme Differences	Absolute	.096	.090
	Positive	.073	.046
	Negative	-.096	-.090
Test Statistic		.096	.090
Asymp. Sig. (2-tailed)		.023[c]	.044[c]
Exact Sig. (2-tailed)		.294	.369

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Source : Primary Data Processing Results, 2021

A normal curve of the Asymp value was required for normality analysis using the Kolmogorov-Smirnov method. The above data was regularly distributed if Sig. (0.052) was greater than the maximum error limit, which was 0.05 in substructure and substructure 2.

4.4 Hypothesis Testing

a. Simultaneous Testing Path Coefficient

The main hypothesis of this research is the Managerial Role satisfaction (X1) and Empowerment (X2) influence Open Innovation (Y). The research hypothesis is stated in the following statistical hypothesis:

H_0: $\rho_{yx1} = \rho_{yx2} = 0$

H_1: there is at least one $P_{yxi} \neq 0$, i = 1and 2

The test statistics used is :

$$F = \frac{(n-k-1)\sum_{i=1}^{k} p_{yxi} r_{yxi}}{k(1-\sum_{i=1}^{k} p_{yxi} r_{yxi})}$$

Test criteria, reject Ho if F count ≥ F table, accept Ho in other cases. Where F table is obtained from F distribution table with α = 5 % and degrees of freedom db_1 = k, and db_2 = n-k-1

Table 2. Simultaneous Testing

Alternative hypothesis	F count	db	F table	Decision	Conclusion
X1 and X2 simultaneously influence Y	59,780	$db_1 = 2$ $db_2 = 97$	3.090	H_0 rejected	Significant

In the table above, we can see that the test results show the value of F count (59.780) > F table (3.090), which means that Managerial Roles (X1) and Empowerment (X2) simultaneously had a significant influence on Open Innovation (Y).

b. Partial Path Coefficient Test

Because the overall test findings were significant, partial testing can be used to determine whether independent variables have a substantial influence on Y to some extent.

The hypothesis formulation for partially testing the route coefficient is as follows:

$H_0 : \rho_{yx_i} = 0$ There is no significant influence of the i-th independent variable (X_i) on Y

$H_1 : \rho_{yx_i} \neq 0$ There is a significant influence of the i-th independent variable (Xi) on Y

The test statistics used is:

$$t_i = \frac{\rho_{yxi}}{\sqrt{\frac{(1-R^2)CR_{ii}}{n-k-1}}} \qquad \text{i = 1 and 2}$$

Test criteria:

Reject Ho if t count > t table ($t_{\alpha;n-k-1}$)

The calculation results can be seen in the following table:

Table 3. Partial Testing of the Influence of Managerial Roles and Empowerment on Innovation

Hypothesis	t count	db	t table	Decision	Conclusion
$Pyx_1 = 0$	7,886	97	1.985	Ho was rejected	Significant
$Pyx_2 = 0$	3,542	97	1.985	Ho was rejected	Significant

Table 4. Partial Testing of the Influence of Managerial Roles and Empowerment on Innovation

Hypothesis	t count	db	t table	Decision	Conclusion
$P_{zy} = 0$	11,819	98	1.984	Ho was rejected	Significant

From the table above, we can see that the t value for the Open Innovation variable (Y) was greater than the t table value, which means that Open Innovation (Y) has a significant influence on Competitiveness (Z).

V. Conclusion

From the partial calculation results, it can be seen that the t value for each Managerial Role (X1) and Empowerment (X2) variable was greater than the t table value, which means that Managerial Role (X1) and Empowerment (X2) partially have a significant influence to Open Innovation (Y).

The value of Fcount (59.780) > Ftable (3.090) indicates that Managerial Roles (X1) and Empowerment (X2) had a considerable impact on Open Innovation when calculated together (Y).

According to Faisal Hoque (2014), management control is a must in an organization that practices a continuous innovation process. One view argues that the management control system must be in accordance with the company's strategy so that the strategy determines the design of the management control system. This occurs when the company operates in an industrial context where environmental changes are predictable. Companies that are determined to foster innovation are also expected to have an adequate management control system. This means that there is an influence of the managerial role on open innovation.

According to research Spreitzer conducted research on psychological empowerment in the workplace. This study aims to determine the factors that cause empowerment, namely locus of control, self-estem, access to information, rewards and the influence of empowerment on innovation and managerial effectiveness. The results of the study are that locus of control, self-estem, access to information and rewards have a positive effect on empowerment and empowerment has a positive effect on innovation and managerial effectiveness (Ari Fadzilah, 2006).

From the calculation of the influence of the Y variable on Z, it can be seen that the t value for the Open Innovation variable (Y) was greater than the t table value, which means that Open Innovation (Y) has had a significant influence on Competitiveness (Z).

According to Rangga Agus Wijaya et al. (2019), Open innovation, which allows innovation to be linked to external partners, enabling the optimization of innovation inputs from the company's external sources to be utilized in the sale of new products or services. Integrated companies can be more efficient in innovating, so that innovation can have a positive impact on company performance, this shows that companies that are more open to innovation are significantly less efficient in innovating than companies that are more

closed. Therefore, a company is required to be able to find the right level of openness to exploit external knowledge in practicing open innovation without reducing the efficiency of their innovation. Open innovation (open innovation) and integrated management system (integrated management system) are two managerial practices that are complementary and synergistic that involve various stakeholders and can increase the ability of innovation together with these stakeholders.

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