



## APPARATUS PERFORMANCE AS MEDIATION OF CREATIVITY AND INNOVATION TOWARDS THE SUCCESSFUL APPLICATION OF E-KELURAHAN

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### Abstract:

E-Government is the use of information and communication technology in government processes to improve efficiency, effectiveness, transparency, and accountability in governance. The focus of the research presents the influence of creativity and innovation on the application of e-Kelurahan Gunung Panjang through the apparatus performance. To find out the effect, the Path Analysis method is used. The type of data is primary with interview techniques to 91 participants. Empirical findings prove that creativity and innovation directly have a significant influence on the performance apparatus. Creativity and innovation directly have a significant positive effect on the application of e-Kelurahan. The apparatus performance directly has a positive influence on the application of e-Kelurahan. On the other hand, creativity and innovation indirectly have

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a positive influence on the application of e-Kelurahan. Training is needed for employees to improve their ability to manage the program.

**Keywords:** creativity, innovation, apparatus performance, application of e-Kelurahan

## 1. Introduction

Indonesia is a developing country with very stable economic growth (Anggadwita et al., 2017). Innovation is the key to success for organizations to survive and win competition not only in the business sector but also in the public sector. In the business sector, innovation means the development of new products or services that directly impact on increasing market share and enhancing stakeholder values. Meanwhile, in the public sector, innovation is an effort to find new ways that will simplify complexity in the field of service delivery, process improvement, regulation and policy implementation (Ernst & Young, 2017). Therefore, innovation in the public sector plays a role and has a large potential contribution to economic growth (Anggadwita & Dhewanto, 2013).

In recent years, political leaders and managers have emphasized the importance of innovation to meet public needs (Palm et al., 2015). This is also an important issue on the agenda at the Indonesian Government Agency considering the effectiveness score of the Government of Indonesia because the index in 2014 was only 0.01. The index represents people's perceptions about the quality of public services. Among ASEAN countries, Indonesia is ranked sixth after the Philippines, while Singapore has the highest score reaching 2.19 (Kaufmann & Kray, 2016).

The term for e-Government refers to quite a number of definitions. In general, the term beginning with "e" usually has the nuances of using internet technology as the main means of replacing conventional media. Given that the essence of the government's task is to provide services to the public by using various media technologies, especially the internet to provide the best service to the public as "customers". Based on the Republic of Indonesia's Presidential Decree No. 20 of 2006, e-Government is the use of information and communication technology in government processes to improve the efficiency, effectiveness, transparency and accountability of governance.

Gunung Panjang Village, which is a division of Keledang River Village (Samarinda Seberang District) through Regional Regulation No. 06 of 2014 concerning the division of Kelurahan in Samarinda City, has an innovation that was displayed during the innovation exhibition organized by the Samarinda City Government on 11 and 12 November 2016 at Samarinda's Big Mall. The innovation is in the form of e-Kelurahan which is part of e-Government. This electronic village has been running since February 2015, where the application of this service is automated with an accurate, fast and easy process of administration of community services covering several types of services. This application can be accessed easily by users using an online computer network with the intention of being accessed anytime and anywhere.

Gunung Panjang Village in carrying out its duties and functions needs to optimize the performance of the government apparatus. Apparatus performance is defined as work results in quality and quantity achieved by an employee in carrying out their duties, in accordance with the responsibilities given to him (Mangkunegara, 2007).

To develop public services, creativity and innovation are needed because creativity and innovation are present as a new product and are replacing the old ways. This means that every public service in principle must contain new creativity and innovation.

Knowledge of innovation has been running for a long time, but it is not in line with research that is felt to be minimal regarding the importance of implementing innovation (Beyer & Trice, 1978; Hage, 1980; Roberts-Gray & Gray, 1983; Tornatzky & Klein, 1982). Although some previous studies discuss the determinants of the adoption of innovations that exist, but not necessarily an organization that continues (Damanpour, 1991; Tornatzky & Klein, 1982). Cross-organization in the study of the implementation of innovation is a rare thing. In general, a qualitative case study that features an innovation implementation site. Each of these studies explains the flowcharts of how the implementation works. However, most will lose the integrative model that captures and clarifies various multilevel phenomena from the implementation of innovation (Nord & Tucker, 1987).

Klein & Sorra (1996) in their study model established several results of implementation (including rejection, avoidance, compliance, and commitment). Meanwhile, highlighting the equality of organizational climate for implementation can illustrate differences within and between organizations, whether the value of innovation is suitable, suggesting topics, and new strategies for implementation in the future.

A study by Susanty et al. (2018) found that Information Technology (IT) practices and work organizations are positively and significantly related to innovation performance. This explains that the implementation of information and technology will better encourage innovation performance. In addition, the practice of knowledge-based compensation is a variable of Knowledge Management (KM) practices that negatively and significantly affects innovation performance. The conclusion was obtained that with the performance of innovation, it would be reduced by compensating for increased knowledge.

Referring to some of the phonemes, the range of this study aims to analyze the extent of the influence of creativity and innovation on the application of e-Kelurahan Gunung Panjang (Samarinda City) through the apparatus performance.

## **2. Review of Literature**

### **2.1. Human Resource Management**

Human Resource Management (HRM) is a substitute science for the term personnel management in organizations. HRM is likened to 'old wine in a new bottle. HRM is not a substitute but is different from personnel management (Armstrong, 1987; Guest, 1987).

Practically, this shows that HRM is related to administrative activities such as recruitment, reward systems, promotions, and so on (Osibanjo & Adeniji, 2012)

HRM is considered less attention to the impact of the context. There are good reasons for this and also obvious weaknesses as a result, so it is necessary to take into account the right context (Mayrhofer et al., 2019). The study of HRM, began in the United States in the mid-1970s, due to reaping responses to increased professionalism, HRM specialists, and growing recognition of the importance of this for corporate sustainability (Schuler & Jackson, 2005).

HRM as a special approach to labour-management that seeks to achieve competitive advantage through the strategic deployment of a highly committed and capable workforce. Also, HRM uses a series of integrated cultural, structural and personnel techniques. HRM as an activity designed to provide and coordinate people in an organization (Storey, 1995; Rue & Byars, 2004).

## **2.2. Creativity**

There is an understanding of the definition of creativity because this is something new and following developments (Barron, 1955; Hennessey & Amabile, 2010; Simonton, 2012). There are many additional components in this definition, such as high quality, surprise, aesthetics, authenticity, and product creation (Sternberg, 1999; Bruner, 1962; Boden, 2004; Simonton, 2012; Kharkhurin, 2014; Plucker et al., 2004).

However, from this basic definition, it is very complex. Creativity can mean so many different things that only catalogue the most quoted theories. Therefore, Kaufman & Glăveanu (2019) have conducted a little experiment by discussing fewer theories and trying to decipher some of the key questions from his research.

Any effort to put the term, some understanding of creativity is needed theoretically. The idea of creativity tends to develop repeatedly, but never identically repeated. Certain ideas reappear but in different forms and effects. Creativity is the creation of art that emphasizes respect for works that have been completed and not an understanding of the work that will be compositions, modes of transmission, or reproduction (Pope, 2005).

Some theories focus on the elements needed to bring out creativity. Attributes, abilities, and circumstances become part of the urge to create creativity. One approach used in this case is the Component Creativity Model (Amabile, 1983, 1996; Amabile & Pratt, 2016). From this model, there are three interrelated variables as the key to individual creativity and organizational creativity (Amabile, 1988). The main thing is skills that are relevant to one's expertise because it involves technical skills, talents, and special knowledge. The process that is relevant to creativity is very broad.

## **2.3. Innovation**

In the diffusion of innovation theory, five attributes have an impact on the level of adoption, namely relative excellence, compatibility, complexity, trial ability, and observation ability. In diffusion theory, innovation describes a process, where innovation

can spread through community groups and focus on the decision-making process that leads to the adoption of new products or services (Rogers, 1995; 2003).

There are five types of innovation, namely new products, new methods of production, new sources of supply, exploration of new markets, and new ways to manage business. Theory and definition of innovation is very important to embrace complexity or find a reasonable way to simplify the problem (Schumpeter, 1934).

Innovation theory faces challenges to its creators, because as a result of recent developments related to the tendency of social and strategic innovation in society. Innovation is introduced as a concept for understanding change which is seen as an exception to stability and balance (Sundbo et al., 2015). With this ability, one can control the entire process of innovation, thereby greatly reducing the risk of managing a work process (Yezerky, 2007).

#### **2.4. Performance**

Performance can be measured through the procurement process setting criteria, based on strategic planning objectives, to determine the results and the quality of its activities. It involves creating a simple and effective system for determining in meeting its objectives. Performance measures are needed to determine how effective procurement policies and practices contribute to meeting organizational goals (Vaidya et al., 2003; Wittig, 2003).

Performance is a multi-dimensional concept. At the most basic level, task performance refers to the ability of individuals and colleagues to carry out activities to contribute to the organization (Borman & Motowidlo, 1993). Performance in contextual means 'stabilizing' behaviour, including behaviour in the organization with its five components (awareness, civil virtue, politeness, and sportsmanship). There are aspects of spontaneity in organizations (eg helping colleagues and protecting organizations) and prosocial organizational behaviour (Organ, 1988; George & Brief, 1992; Brief & Motowidlo, 1986; Sonnentag & Frese, 2002).

Performance theory has been used in several learning contexts since achievement is produced at a high level. Performance theory in traditional contexts informs learning in classrooms, workshops, and other places related to learning. In a nontraditional context, this theory informs learning that is conceptualized as a learning environment (Amaratunga & Baldry, 2000; Nyanza et al., 2015).

#### **2.5. Application of Technology**

Information and communication technology can be integrated and developed, for example, computer media. Computers are applications of information and communication-based technology that are used as the main device to process data into information to be useful by processing, presenting and managing information (Munir, 2008).

Technology can provide users to be an active part of the communication process that compares the passive role in traditional communication. With social media platforms, two-way communication between consumers and brands has evolved

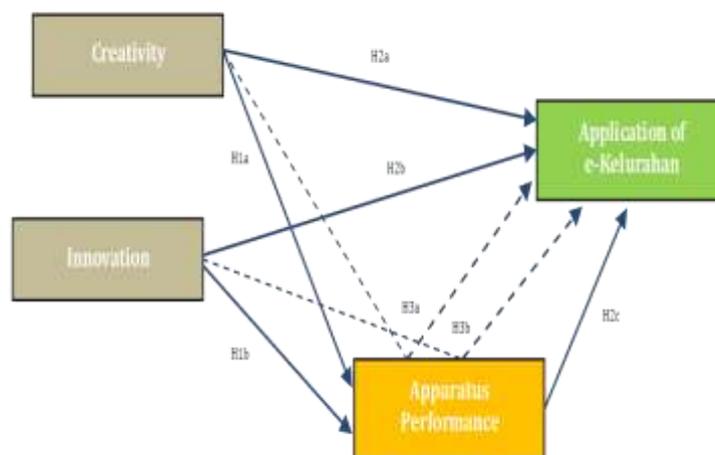
(Berthon et al., 2008). The use of social networking sites today has become a necessity as a marketing tool for companies to capture communities in cyberspace and widely used by the public. Social networking sites are used because they have extraordinary connectivity between the communities that have formed in them (Assael, 2001; Maria et al., 2019a).

Revitalization of corporate human resources can be driven through human values taught by the role of social humanities. When exact science plays a role in technological development, science still plays a role in maintaining the quality of humans (users) with software (Maria et al., 2019b). Based on its main function, technology has a vital role as innovation in its use for the needs of society, for example, employees (Darma et al., 2020).

## 2.6. Hypothesis Development

The purpose of the theoretical framework is to support and explain a theory with the research problem under study (Swanson, 2013). Based on the research questions and objectives, a theoretical framework has been built to develop models for this study (see Figure 1).

**Figure 1: Theoretical Framework**



(Note: Direct effect  $\longrightarrow$ , Indirect effect  $\dashrightarrow$  )

Hypotheses are propositions in a form that can be tested and predicted (specifically the relationship between two or more variables). From this definition, we can see that hypotheses are based on tentative propositions and their validity is unknown (Bailey, 1978; Grinnell, 1988; Kabir, 2016). Thus, a hypothesis can come from various sources, in isolation, and combination with the following formula:

**Hypothesis 1a:** There is an influence between creativity and apparatus performance.

**Hypothesis 1b:** There is an influence between innovation and apparatus performance.

**Hypothesis 2a:** There is an influence between creativity and the application of e-Kelurahan.

**Hypothesis 2b:** There is an influence between innovation and the application of e-Kelurahan.

**Hypothesis 2c:** There is an influence between apparatus performance and the application of e-Kelurahan.

**Hypothesis 3a:** There is an influence between creativity and application of e-Kelurahan through the apparatus performance.

**Hypothesis 3b:** There is an influence between innovation and the application of e-Kelurahan through the apparatus performance.

### 3. Material and Methods

Operational research variables or concepts that can be measured with a variety of values to provide a real picture of the phenomenon under study. There are three types of variables, i.e: independent variables (exogenous), dependent variables (endogenous), and mediator variables.

Endogenous variables are variables that are affected by exogenous variables. Meanwhile, exogenous variables are variables that affect exogenous variables and mediator variables. Mediation variables themselves are variables that theoretically affect the relationship between the independent variable and the dependent variable into an indirect relationship that cannot be observed and measured. This variable is the interrupting variable between the two relations of the variable so that the independent variable does not directly affect the change or the appearance of the dependent variable (Sugiyono, 2011).

The scope of the study is in the scope of the Gunung Panjang Village Office (Samarinda City). This study uses a quantitative approach that is carried out to analyze the Apparatus Performance variable as a mediator in Creativity and Innovation on the Application of e-Kelurahan Gunung Panjang. To find out these effects, the Path Analysis is used. The types of data are primary or directly through interview techniques and field observations through questionnaires in which the details of the statements are available and carried out during August-November 2019.

The population in this study was determined to be the entire community in Gunung Panjang Village with data collection during the observation period that had been aged 18 years and over, or the community that was in the process of taking care of e-Kelurahan amounted to 964 inhabitants.

Because the number of samples taken from each population is assumed to have a studied probability of 90% with an error rate of 10%, so determining the number of samples to be taken in each population is calculated by the Slovin formula (Kuncoro, 2008). From these calculations, it can be seen that the number of samples that can be taken is 91 families in Gunung Panjang.

A good instrument must meet two important requirements, namely validity and reliability. Said to be valid means that the instrument can be used to measure what should be measured. A valid instrument means that the measuring instrument used to obtain (measure) is valid. Meanwhile, a reliable instrument is an instrument that is used several times to measure the same object, which will produce similar data (Arikunto, 1996; Sugiyono, 2007).

#### 4. Results

In this regard, this study is important to test the content validity and the validity of the construction carried out using item analysis, which is to calculate the correlation coefficient between item scores and total scores using a significance level of 0.1 (10%). Table 1 shows that the r-value for 12 indicators (all variables) is greater than the statistic provisions (0.206). It can be interpreted that all indicators are valid. The highest r-value in the variable Creativity (X1.3) and the lowest in Apparatus Performance (Y.2).

**Table 1:** Test Validity for Variable Components

Indicators	r-value	r-table	Explanation
X1.1	.707		Valid
X1.2	.736		Valid
X1.3	.789		Valid
X2.1	.761		Valid
X2.2	.735		Valid
X2.3	.695	.206	Valid
Y.1	.666		Valid
Y.2	.599		Valid
Y.3	.662		Valid
Z.1	.618		Valid
Z.2	.618		Valid
Z.3	.654		Valid

**Source:** Own tabulation.

The problem of choosing criteria size in the selection of variables must be considered by reviewing the principles related to reliability analysis (Kroll, 2013). Apart from research studies on reliability theory for storage devices, many attempts to ensure data reliability have been made in the aspect of statistical devices (Li et al., 2015). The results of calculations about the reliability test in this study are listed in Table 2.

**Table 2:** Test Reliability of Variables

Variables	Symbol	Boundary Value	Composite Reability	Cronbach Alpha	Explanation
Creativity	X1		.763	.611	Reliable
Innovation	X2		.851	.839	Reliable
Apparatus Performance	Y	.60	.892	.750	Reliable
Application of e-Kelurahan	Z		.747	.862	Reliable

**Source:** Own tabulation

It appears that all variables used have a Cronbach Alpha (CA) value > 0.60. Innovation as a variable with the largest CA compared to others, which is 0.839. Meanwhile, the Creativity variable can be explained with the lowest value (0.611). When compared with the magnitude of Composite Reliability, the highest gain is the Apparatus Performance variable (0.892) compared to the Application of e-Kelurahan with the achievement of 0.747. Referring to the empirical findings, it has shown each variable influence (directly and indirectly) as follows:

**Table 3:** Highlights Relationships between Variables

	Hypothesis	Coef.	Std. Error	t-value	Prob.	Explanation
Direct effect	H1a	.438	.029	15.038	.000	Supported
	H1b	.517	.032	16.207	.002	Supported
	H2a	.289	.043	6.643	.024	Supported
	H2b	.449	.050	8.935	.011	Supported
	H2c	.256	.084	3.036	.007	Supported
Indirect effect	H3a	.112	.135	7.147	.049	Supported
	H3b	.131	.099	4.246	.031	Supported

**Source:** Own tabulation.

Based on Table 3, the path equation model for Creativity (X1) and Innovation (X2) for Apparatus Performance (Y) and Application of e-Kelurahan (Z) can be made, i.e:

$$Y = 1.513 \alpha + 0.438 X1 + 0.517 X2 \quad (1)$$

$$Z = 0.424 \alpha + 0.289 X1 + 0.449 X2 + 0.256 Y \quad (2)$$

$$X1 \rightarrow Y \rightarrow Z = 0.438 X1 * 0.256 Y = 0.112 \quad (3)$$

$$X2 \rightarrow Y \rightarrow Z = 0.517 X2 * 0.256 Y = 0.131 \quad (4)$$

The first equation function shows that the magnitude of the coefficient value of each variable of Creativity is 0.438 and Innovation is 0.517. Obtained the level of probability used in partial testing for Creativity and Innovation are 0.000 and 0.002 or greater than the statistic provisions ( $n < 0.05$ ). Thus, it can be interpreted if these two variables have a significant influence on the Apparatus Performance. In the other hand, the second equation function presents the value of the regression coefficient in structure-

2, Creativity, Innovation, and Apparatus Performance on the Application of e-Kelurahan is 0.289, 0.449, and 0.256.

Table 3 also explains the achievement of significance for the variables of Creativity, Innovation, and Apparatus Performance respectively 0.024, 0.011, and 0.007 ( $n < 0.05$ ). So, it is known that these three relationships have a significant influence.

Creativity indirectly has a positive (0.112) and significant (0.049) effect on the Application of e-Kelurahan through Apparatus Performance. As additional information, Innovation also indirectly has a positive influence (0.132) on the Application of e-Kelurahan through Apparatus Performance with a probability at a level of 0.031.

## 5. Discussion

Creativity and innovation have a significant influence on the performance of the apparatus of Gunung Panjang Village. The results of the statistical analysis also show the direct effect of creativity variables on apparatus performance by 0.438 (positive) and the direct effect of innovation variables on apparatus performance by 0.517 (positive). This illustrates that creativity and innovation have had a great influence on the performance of the apparatus of Gunung Panjang Village.

This finding is relevant to the study of Hill & Amabile (1993) if creativity is a function of expertise, creative thinking ability, and motivation possessed by someone. Expertise is defined as mastery of technique, procedural, and intellectual skills possessed by individuals. The ability to think creatively is how flexible and imaginative a person uses approaches to problem-solving. Motivation is the determination and the innermost part of each person to solve problems to be more creative than external incentives (such as material problems and others). In addition, intrinsic motivation is also important and highly influenced by work environment factors (Pusriadi & Darma, 2020).

The quality of the performance of the apparatus is very dependent on the creativity and innovation possessed by the apparatus. If creativity and innovation are high, then it produces optimal work. But on the contrary, if the creativity is low, the productivity level is less than optimal. The same is true of the use of information technology (Maria et al., 2020). To be able to use it as expected. Of course, we need continuous creativity and innovation.

Influence of Creativity and Innovation has a significant influence on the Application of e-Kelurahan Gunung Panjang. Statistical analysis also shows the direct effect of the Creativity variable on the Application of e-Kelurahan by 0.289 (positive) and the direct effect of the Innovation variable on the Application of e-Kelurahan by 0.449 (positive). This illustrates that Creativity and Innovation have had a great influence on the Application of e-Kelurahan Gunung Panjang.

Technological advances have become the main thing to encourage every learning activity (Sianipar & Yudoko, 2014). Such progress must be integrated as a centre for systems and processes in all organizations (Bennett & O'Brien, 1994; Dahiyat, 2015; Dhewanto et al., 2015; Johnson, 2002; Santa, 2015; Sianipar & Yudoko, 2012). The broad

development of IT has penetrated all aspects of human activity and made the use of information technology an enablers part of management knowledge (Susanty et al., 2016). Through the development of IT, allowing more and more processes or activities to be automated.

Technological developments (such as the internet with various applications in it) have become the main basis for managerial development. The basic purpose of using IT to build a management system is as a distribution of knowledge. The use of IT in that process also plays a role in carrying out various management processes or cycles, such as knowledge or acquisition acumen, knowledge codification, knowledge maintenance, knowledge security, and monitoring of the use of knowledge (Tobing, 2007). Organizational reputation is defined as a perception of the quality associated with the company's name. aims for a reputation that shows quality to the community, specifically the creativity and innovation of an employee to enhance the brand through technological agility (Aaker, 2011; Wijayanti et al., 2019).

Creativity is the potential that is possessed by every human being from birth and can be formed and trained. for example through information and communication technology for Gunung Panjang Village. Of course. innovations born from a level of creativity must also be observable, in terms of how innovation works and produces something better (Darma et al., 2020). Based on this, that the innovation of the apparatus of Gunung Panjang village apparatus is a new discovery that is different from the previous form of thoughts and ideas that can be developed also implemented so that the benefits are felt.

In terms of the empowerment of the apparatus of human resources in the village of Gunung Panjang, has increased the balance of power between groups, through ease, and access to government information. Purwadi et al. (2020) explained that the empowerment of apparatuses is now increasing through access to information needed by them in carrying out their duties and functions, empowering suppliers through access to information about the procurement of goods and services, empowering managers through access to their staff, and other resources for the application of e-Kelurahan.

Has a significant influence on the Application of e-Kelurahan Gunung Panjang. The results of the statistical analysis also show the direct influence of the Apparatus Performance variable on the Application of e-Kelurahan by 0.256 (positive). This illustrates that the performance of the apparatus has had a great influence on Application of e-Kelurahan.

Performance is basically what employees do or don't do. Employee performance is what influences how much they contribute to the organization. So, the performance of employees is the beginning of the success of the organization to achieve its goals. Likewise, the performance of the apparatus plays a very good role in the operation, success of the implementation of the e-Kelurahan, and providing services to the community.

Inkinen et al. (2015) presented practices related to the use of mediated information system technology which is another important means to increase the leverage of

knowledge in the company. Some IT practices are aimed at management and their effects on innovation performance (Gloet & Terziovski, 2004). IT enables better and faster access to large amounts of electronic information, including social media. This has opened up the possibility to use new sources of information for decision making. The role of IT also offers wider possibilities in modifying knowledge and transforming it slowly into explicit knowledge (Inkinen et al., 2015; Gloet & Terziovski, 2004). Furthermore, IT can provide users with tools (operators) to store new findings and knowledge, so that data can be stored safely and for longer. Of course, it is also beneficial for the interests of the organization, because it can be used again and at any time in the future (Inkinen et al., 2015; Huang et al., 2016).

Empirical findings are consistent with previous studies, that employee development and training variables, improvement of work quality, productivity, and building cooperation between work teams have a significant effect on employee performance. Meanwhile, employee involvement in problem-solving and good communication does not significantly influence employee performance (Wijayanti et al., 2020).

## **6. Recommendations**

In the application of e-Kelurahan, it has been running well but it is necessary to add an Android-based application so that people can access it through their own phones. Training is needed for Gunung Panjang Village staff to improve their ability to manage the program and the existence of integrated legal instruments. In addition, it needs additional telecommunications infrastructure (in this case computer equipment and internet quota), because it is still limited and can be replaced with unlimited ones.

## **7. Conclusion**

Creativity and Innovation directly have a significant positive effect on the apparatus performance (Gunung Panjang Village). It means that, if the variable of creativity and innovation increases, it has a real impact on the Apparatus Performance. Creativity and Innovation directly have a significant positive effect on the Application of e-Kelurahan. This means that, if the variable of Creativity and Innovation increases, it will have a real impact on the Application of e-Kelurahan during the study observation.

The Apparatus Performance directly has a significant positive effect on the Application of e-Kelurahan. This means that, if the Apparatus Performance variable increases, it will have a real impact on the Application of e-Kelurahan.

Creativity and Innovation indirectly have a positive influence on the Application of e-Kelurahan through the Apparatus Performance. If the variable of Creativity and Innovation increases, it will have a real impact on the Application of e-Kelurahan through the Apparatus Performance. In addition, the Apparatus Performance is considered as an

appropriate mediation in influencing the two relations of these variables on the Application of e-Kelurahan.

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### **Competing Interests**

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