

THE IMPACT OF SMART CITY INITIATIVES ON PUBLIC ADMINISTRATION EFFICIENCY IN MEDAN: A QUANTITATIVE ANALYSIS USING SEM-PLS

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DOI: [10.5281/zenodo.13832610](https://doi.org/10.5281/zenodo.13832610)

Abstract

The purpose of this study is to find out and analyze the extent to which the variables of creativity and work culture affect the efficiency of public administration through the initiative to implement public administration as an intervening variable. The subject of this study is the population of Medan City, where the variables in this study are independent variables, namely creativity and work culture, dependent variables, namely public administration efficiency variables and intervening variables are the variables of public administration implementation initiatives. The results of data analysis were carried out by SEM analysis using SMART PLS 4.0 software. The data collection technique is by observation and documentation studies. The research method uses a quantitative descriptive method of data analysis using *the structural equation model* (SEM) method, where the results of data processing using the SEM method are carried out with the PLS 4.0 application. From the results of the study, the existing conclusions are that the variables of creativity and work culture partially affect the efficiency of public administration and affect the initiative to implement public administration. Simultaneously, creativity and work culture affect the efficiency of public administration through the variable of public administration implementation initiatives as intervening variables. The better the existing creativity will give rise to a culture of service and a work culture that always raises the initiative to continue to serve with qualified administrative services in order to increase the effectiveness and efficiency of public administration services in the city of Medan.

Keywords: Public Administration Implementation Initiatives, Creativity, Work Culture, Public Administration Efficiency.

1. INTRODUCTION

Qualified service will always be the starting point for the Government to present good, meticulous service and always have a culture of serving well, where the culture of serving is an obligation that must be carried out by the Government without a convoluted affair, so that it tends to harm the community (Huovila, Aapo, Bosch & and Airaksinen, 2019). Public services that are fast, responsive, meticulous and always prioritize a culture of serving tend to always be carried out by today's Government apparatus, because of strong leadership, efficient and effective bureaucracy (Ubowska, Agnieszka and Królikowski, 2022).

One of the things that tends to hinder public services is the administration that is complicated, long and detrimental to the community, where this convoluted administration is an old work culture since the colonial period that is still adopted by some government apparatus (Monarcha-Matlak, 2021). These government apparatus individuals tend to harm the community and tend to harm the image of the Government, in addition to harming it also reducing the efficiency of existing work (Kirimtat, Ayca, 2020).

The work efficiency of this public administration will present excellent service from the Government's creative activities, as well as present information that is open, and can be absorbed by the public in order to create a maximum and valuable service atmosphere in order to raise the image (Chernyakhovich, 2022).

Increasing work efficiency is based on the Government's creativity in designing work procedures without having to harm the community and bump into procedures and without deviating from existing standards (Basheka, Benon C and Uwizeyimana, 2021).

The more creative the Government is in developing work procedures in serving the community, it will tend to increase the efficiency of the existing public administration system, where this creativity makes the work results less complicated and long, and can be done and completed on time without waiting for days, weeks and months, so that the existing work is ineffective, and tends to harm people who want quick and effective services, as well as harming the good name and image of the Government in the eyes of the public, as a result of which the Government's performance will be disrupted and considered to be declining (Everyday, 2021).

Effectiveness in public administration refers to the extent to which a desired goal or outcome is achieved. Effective public administration means that the programs and policies that are implemented succeed in meeting the needs of the community and achieving the goals that have been set.

Efficiency, on the other hand, refers to the minimal use of resources (time, effort, money) to achieve a specific result or goal. Efficient public administration means that services and programs are run at low cost, short time, and little effort, without compromising the quality of the results achieved (van Noordt, Colin and Tangi, 2023).

Ideally, public administration should seek a balance between effectiveness and efficiency. A program may be very effective in achieving its goals, but if it consumes too many resources, then its efficiency is low. In contrast, a program that is highly efficient in the use of resources may not be effective if it does not achieve the desired goals.

Effectiveness and efficiency often go hand in hand. For example, an efficient process can allow civil servants to focus on more strategic and important tasks, which in turn can increase effectiveness (Ribeiro, Diamantino, Jesus-Silva, Natacha and Ribeiro, 2021). With the increase in creativity in serving, it will have an impact on increasing initiatives from the Government in implementing effective public administration, so that it will have an impact on the creation of efficiency for public administration services.

The effectiveness and efficiency of public services, especially those related to the implementation of public administration, will provide hope and also qualified services so that there are no difficulties experienced by the public when the public administration service process is enforced (Pedro, E., Leitão & and Alves, 2020).

The effectiveness and efficiency of public administration are adjusted to the existing work culture, where on the one hand there are government agencies that tend to be rigid in implementing public administration services, so that the services provided do not provide benefits to increase public satisfaction, so that the efficiency proclaimed by the agency is not in accordance with the vision carried.

Bureaucracy that tends to be rigid is not able to follow the rhythm of a bureaucracy that works flexibly. This indicates a lack of major initiative towards public administration services in the agency (Antonyan, Elena and Polyakov, 2022).

A positive and supportive work culture can increase employee motivation. Motivated employees tend to work more efficiently and productively. A good work culture

increases job satisfaction. Employees who are satisfied with their work will have higher commitment and strive to work as efficiently as possible. A work culture that encourages cooperation and collaboration between teams can reduce silos and increase efficiency. Good collaboration allows for a more efficient exchange of information and resources (Marišová, Eleonora, Lichnerová, Ivana and Machyniak, 2021).

A work culture that encourages innovation allows employees to find new and better ways to do their jobs. This innovation can lead to a more efficient process. A work culture that supports continuous improvement ensures that there is a continuous effort to improve efficiency through the evaluation and adjustment of work processes. A work culture that emphasizes accountability ensures that every employee is accountable for their work. It reduces waste and increases efficiency (Kumar, Harish, 2020).

A work culture that supports professional development through regular training helps employees improve their skills, so they can work more efficiently. A flexible and adaptive work culture allows organizations to respond to changes quickly and efficiently. This is important in a dynamic public administration environment (Marques, Isabel, 2021).

Flexibility in working hours and the workplace can increase efficiency by allowing employees to work in the conditions that are most productive for them. A good work culture will have a positive impact on improving the efficiency of public administration work, where work that is not convoluted and tends to be slow will hinder efficiency. Initiatives carried out in serving the community through a public administration system that is cheap, fast and precise, and does not harm the community will have an impact on increasing efficiency in public administration services (Ismagilova, Elvira, 2019).

The population of Medan City is 2,494,512 people who need fast, friendly and effective public administration services. However, there are still many Medan City Government apparatus who have not been able to create their own creativity in serving, because they still apply the culture of "if it can be made difficult, why is it simplified", so that with these principles and slogans, the Government apparatus does not create a work culture that serves and increases initiatives at work, thus making the existing work inefficient and making public administration services to the community not run optimally.

2. MATERIAL AND METHODS

This research method was carried out using a quantitative descriptive method using method analysis *structural equation model* (SEM), where according to (Burlacu et al., 2021) SEM analysis is a data analysis method intended to find the influence on existing construction variables.

The population in this study is 2,494,512 residents of Medan City in 2023, where the sampling method is carried out using the *accidental sampling*, which according to (Burlacu et al., 2021) sampling method using *accidental sampling* is a sampling method in which the samples are grouped according to the samples in the research object.

The number of samples taken can be done using the slovin formula as follows:

$n = N / (1 + Ne^2) = 2,494,512 / (1 + 2,494,512 \times 0.1^2) = 99.99 = 100$ people of Medan City consume renewable energy products.

3. RESULTS AND DISCUSSION

Research Results

The output of the SEM test can be described through the following *Bootstrapping* diagram:

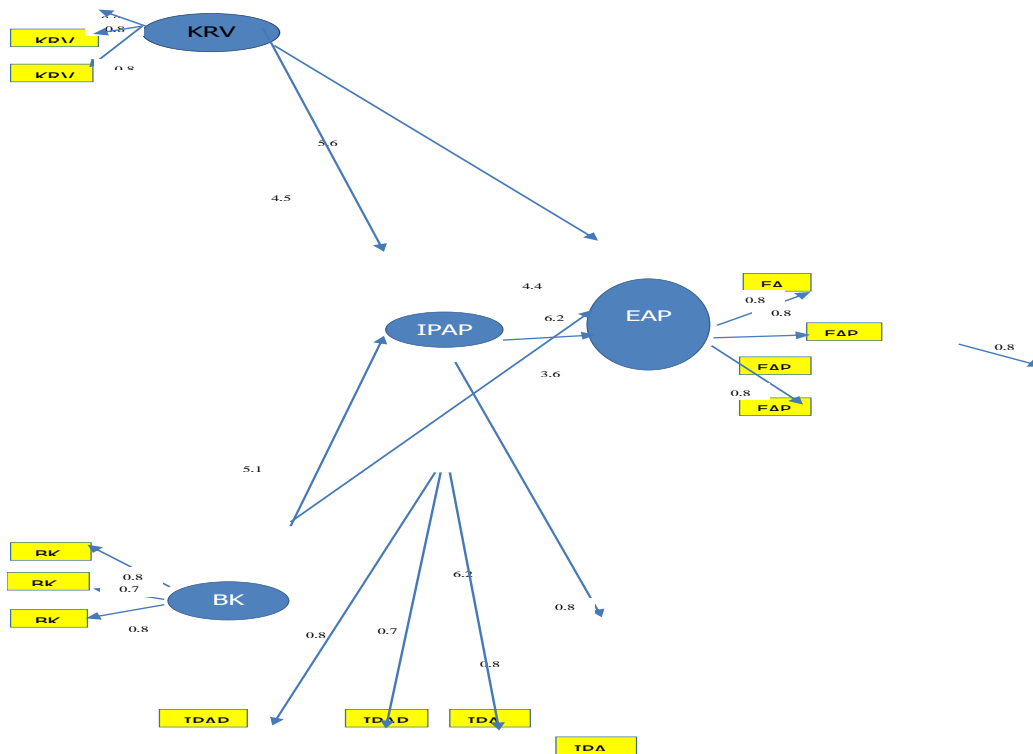


Figure 2: Bootstrapping Diagram

Analisa Convergent Validity

(Burlacu et al., 2021) states that the analysis *convergent validity* is wrong to describe how valid the construct variable data is. The test results *convergent validity* in this study, it is as follows:

Table 1: Uji *Convergent Validity*

Variable	Indicator	Outer Loading
Creativity (X ₁)	BLOOD 1	0,856
	BLOOD 2	0,866
	BLOOD 3	0,886
Work Culture (X ₂)	BK 1	0,867
	BK 2	0,757
	BK 3	0,837
Public Administration Efficiency (Y)	EAP 1	0,847
	EAP 2	0,855
	EAP 3	0,870
	EAP 4	0,864
Public Administration Implementation Initiative (Z)	IPAP 1	0,881
	IPAP 2	0,768
	IPAP 3	0,825
	IPAP 4	0,833

Source: Results of Data Processing with PLS 3.0, 2024

The table above states that the data of each variable is valid and appropriate for further research.

Analisa Average Variant Extracted (AVE)

(Burlacu et al., 2021) stated that the AVE test is one of the tests intended to find out whether the existing data is valid or not. The test results *Average Variant Extracted* (AVE) is in the following table:

Table 2: AVE Test

Variable	AVE
Creativity (X ₁)	0,834
Work Culture (X ₂)	0,875
Public Administration Efficiency (Y)	0,844
Public Administration Implementation Initiative (Z)	0,865

Source: Data Processing Results with PLS 4.0, 2024

The table above describes the *Average Variant Extracted* (AVE) value greater than 0.5 which means that the notarable data distribution is valid and feasible.

Analisa Composite Reliability

According to (Burlacu et al., 2021) Testing *Composite Reliability* It is an analysis to explain whether the existing data is reliable or suitable. This can be seen in the following table:

Table 3: Uji Composite Reliability

Variable	Composite Reliability
Creativity (X ₁)	0,887
Work Culture (X ₂)	0,827
Public Administration Efficiency (Y)	0,871
Public Administration Implementation Initiative (Z)	0,855

Source: Data Processing Results with PLS 4.0, 2024

The table above states that the *composite reliability* value is greater than 0.6, where the existing data can be said to be reliable or feasible.

Analisis Discriminant Validity

In confirmatory factor analysis (CFA) or structural equation modeling (SEM), the analysis of the validity of discrimination is how much the relationship between construct variables occurs. The results of *the Discriminant Validity* analysis can be seen in the following Table 5:

Table 5: Discriminant Validity Analysis

	Public Administration Efficiency Moderating Effect 1	Public Administration Efficiency Moderating Effect 2	Public Administration Efficiency Moderating Effect 3	Public Administration Efficiency Moderating Effect 4
Creativeness	.758	1.000	.758	.626
Work Culture	.666	.737	1.000	.727
Public Administration Efficiency	.758	.786	.836	1.000
Public Administration Implementation Initiatives	1.000	.747	.666	.636

Source: PLS Data Processing Results, 2023

Based on the table above, it can be seen that the existing AVE value is already in full of the *Discriminant Validity assumptions* comprehensively and comprehensively.

Pengujian Path Coefficient

As for the *path coefficient test*, it can be found through the following table:

Table 6: R Square Test

Variable	R Square
Creativity (X ₁)	0,887
Work Culture (X ₂)	0,854
Public Administration Efficiency (Y)	0,865
Public Administration Implementation Initiative (Z)	0,852

Source: Data Processing Results with PLS 3.0, 2023

From the existing table, the R Square variable of increasing the efficiency of public administration can be explained by the variables of creativity, work culture and initiative in the implementation of public administration by 86.5%, while the remaining 13.5% can be explained by other variables that are not in the study.

Uji Hipotesis

The results of hypothesis testing can be seen through the following table:

Table 7: Hypothesis Test

Hypothesis	Influence	T-Statistics	P-Value	Result
H1	Creativity towards the efficiency of public administration	5,623	0,000	Accepted
H2	Information work culture on the efficiency of public administration	6,245	0,004	Accepted
H3	Creativity towards public administration service initiatives	4,542	0,002	Accepted
H4	Work culture towards initiatives to implement public administration	5.134	0,000	Accepted
H5	Initiatives for the implementation of public administration on the efficiency of public administration	6,220	0,000	Accepted
H9	Creativity towards the efficiency of public administration through the initiative to implement public administration as an intervening variable	4,442	0,002	Accepted
H10	Work culture on the efficiency of public administration through the Initiative to implement public administration as an intervening variable	3,617	0,000	Accepted

Source: Data Processing Results with PLS 3.0, 2023

According to the table above, it can be concluded that partially, the variables of creativity and work culture affect the efficiency of public administration and affect the initiative to implement public administration. Simultaneously, creativity and work culture affect the efficiency of public administration through the variable of public administration implementation initiatives as intervening variables.

Discussion

Creativity Affects the Efficiency of Public Administration

The results of the study stated that creativity has an effect on the efficiency of public administration. This is in accordance with research (Benedito Durà, Vicent, 2023) which states that every creative public administration service program will be able to create efficient work for public administration activities in a country or region.

Work Culture Affects the Efficiency of Public Administration

According to the results of existing research, work culture variables affect the efficiency of public administration. This is in accordance with research (Fernandez-Anez, Victoria, Fernández-Güell & and Giffinger, 2019) which states that the better the culture of government entrepreneurship, the more efficient and effective public administration services will be carried out to the community.

Creativity Affects Public Administration Implementation Initiatives

According to the results of existing research, the creativity variable affects the initiative to implement public administration. This is in accordance with research (Caldeirinha, Vítor, 2020) who stated that creativity carried out through public administration services will tend to discourage government apparatus from taking the initiative to serve well.

Work Culture Affects Public Administration Implementation Initiatives

According to the results of existing research, work culture variables affect the implementation of public administration initiatives. This is in line with research (Cabello, Juan and Arenas, 2021) which states that a good Ekrja culture will always create its own initiative to serve the community well.

Public Administration Implementation Initiatives Affect Public Administration Efficiency

The results of the study stated that the initiative to implement public administration had an effect on the efficiency of public administration. This is in accordance with research (Zhang, Yichi, 2022) which explains that the more initiative in serving through the implementation of easy public administration, it will tend to increase the efficiency of public administration, so that the cost can be reduced.

Creativity Affects the Efficiency of Public Administration through Public Administration Implementation Initiatives as an Intervening Variable

The results of the study explain that the creativity variable affects the efficiency of public administration through the initiative to implement public administration as an intervening variable. This is in accordance with research (Sukhina, Yulia V., 2020) who explained that the more creative the service to the community will make the efficiency of public administration increase and the Government apparatus can increase the initiative in serving through good service administration.

Work Culture Affects the Efficiency of Public Administration through Public Administration Implementation Initiatives as an Intervening Variable

The results of the study explain that the work culture variable affects the efficiency of public administration through the initiative to implement public administration as an intervening variable. This is in accordance with research (Iran, Zahir, 2023) which

states that the better the culture of Ekra that serves, it will be able to increase the number of customers by a large amount, and will create service efficiency through public administration service initiatives that are always carried out by the private sector, the Civil Servants.

Implementation

The better the existing creativity will give rise to a culture of service and a work culture that always raises the initiative to continue to serve with qualified administrative services in order to increase the effectiveness and efficiency of public administration services in the city of Medan.

4. CONCLUSION

From the results of the study, the existing conclusions are that the variables of creativity and work culture partially affect the efficiency of public administration and affect the initiative to implement public administration. Simultaneously, creativity and work culture affect the efficiency of public administration through the variable of public administration implementation initiatives as intervening variables.

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