Measuring Community Satisfaction Through Smart Government and Quality of Service in Mal Pelayanan Publik

Annisa Citra Triyandra^{1*}, Raudhah Mutiara Riyandra², Muhammad David Hendra³, Sri Oktika Amran⁴, Ayu Adriyani⁵ ^{1,3,4,5}Universitas Negeri Padang ²Universitas Indonesia *Corresponding author, e-mail: annisatriyandra@fis.unp.ac.id.

Abstrak

The implementation of smart government and improving the quality of service at the Pekanbaru City Public Service Mall is a form of implementing the smart city program carried out by the Pekanbaru City government for the community. This realization is evidenced by faster, more effective, and economical services. The efforts made by the government aim to make it easier for the public to carry out government bureaucratic affairs, which are sometimes still considered complicated. Smart government and improving the quality of services that have been carried out are expected to satisfy the community in terms of service. In this study, the author uses the S-O-R theory to make it easier for researchers to analyze existing problems. This S-O-R theory is used as a basis by researchers to see the communication process that takes place in public services where the stimulus conveyed by the message source can be received and interpreted by the target of communication or the recipient of the message in the form of perception or attitude. This study aims to determine the effect of smart government and service quality simultaneously on community satisfaction at the Pekanbaru City Public Service Mall. The research method used is quantitative, with data collection techniques using a questionnaire with a total sample of 100 respondents taken based on a random sampling technique for data processing in this study using SPSS with multiple regression analysis techniques. Based on the results of this study, it was found that there was an influence between smart government and service quality on community satisfaction at the Pekanbaru City Public Service Mall, partially or simultaneously. The coefficient of determination test shows that the contribution of smart government influence and service quality to community satisfaction at the Pekanbaru City Public Service Mall is 0.411, which means that the smart government variable influences the community satisfaction variable and also service rate of 41.1% and the rest is influenced by other factors that are not present in this research.

Kata Kunci: Community Satisfaction; Mal Pelayanan Publik; Service quality; Smart Government

How to Cite: Triyandra, A.C. et al. (2024). Measuring Community Satisfaction Through Smart Government and Quality of Service in Mal Pelayanan Publik. *Jurnal Perspektif: Jurnal Kajian Sosiologi dan Pendidikan*, 7(1), 94-101.

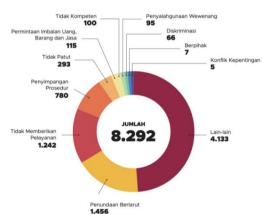
This is an open access article distributed under the Creative Commons 4.0 Share-Alike 4.0 International License. If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. ©2024 by author.

Introduction

The concept of a smart city with a smart government program as its main focus in realizing a smart city. A smart city begins with a smart government and excellent services (Triyandra, 2017). Smart government shows how local governments become the driving force that carries out government processes and services to the community. The City of Pekanbaru, in making this happen, implements effective, efficient, transparent, and accountable governance by utilizing technology as a tool for carrying out government functions properly (Firdaus, 2018).

Pekanbaru City Government is oriented toward public services to improve smart government. One of the efforts to realize smart government in the service sector that the Pekanbaru City government has made is the "Mal Pelayanan Publik" (MPP). MPP are places where activities for the implementation of public services for goods, services, and administrative services take place, which are an expansion of integrated service functions both central and regional, as well as services for State-Owned Enterprises or Regional/Private Owned Enterprises to provide fast service, accessible, affordable, safe, and comfortable (Riaupos, 2017). Simplifying procedures and integrating services at Public Service Malls will facilitate public access to various types of services and increase public trust in public service providers. Pekanbaru's MPP was inaugurated on March 6, 2019 and is managed by the Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu Kota (DPMPTSP). MPP of Pekanbaru city serves 175 permits and non-licenses comprising government agencies, institutions, banks, and regionally owned enterprises. MPP of Pekanbaru City proved itself as a role model for the National Strategic Program; in July 2019, Pekanbaru City won the 2019 Platinum Indonesia Attractiveness Award (IAA) in the Public Service Category (Sindonews, 2019). In the first year of its operation, Pekanbaru's Mal Pelayanan Publik received an excellent service award from MenPan-RB (Pekanbaru.go.id., 2022). This is a good sign for a program that had just been unveiled a few months earlier. But whether the success achieved directly impacts the people of Pekanbaru City? Because it is not uncommon for attempts to appear as a smart city to be limited to jargon.

From a societal perspective, there is always a perception that when dealing with government services, negative perceptions often emerge. Starting from convoluted bureaucracy, slow service, people's expectations that are often ignored, as well as various information that should be conveyed to the public; slowly or not reaching the community, and various other connotations that are already embedded in the minds of the community. This is not unreasonable; from the 2022 Indonesian Ombudsman Report, there are still allegations of maladministration in public services. Based on Ombudsman data, in 2022, 8,292 reports were received with ten types of maladministration complaints. The three highest rankings are protracted delays, with 1,456 reports, 1,242 reports of not providing services, and 4,133 other reports of maladministration (Ombudsman Republik Indonesia, 2022).



Picture 1. Alleged maladministration (Source: Indonesian Ombudsman Report 2022)

When we look further at the 2022 Ombudsman Report, the Regional Government outperformed the reported institutions with 4,008 reports, followed by the National Land Agency in second place with 878 reports and third place by the Police with 683 reports.



Picture 2. Graph of the Reported Agency (Source: Indonesian Ombudsman Report 2022) Pekanbaru City is included in the regional government, where there are still reports of maladministration in public services. This is based on the information of the Indonesian Ombudsman Representative for Riau Province, which has received complaints from the public regarding maladministration cases reaching 1,424 cases during the 2015-2020 period (Frislidia, 2021). The Pekanbaru City people submitted most of these complaints (Riaupos, 2019). The most commonly reported maladministration by the public is related to complaints in services in education, the area of population administration, and the land sector (Frislidia, 2021).

This frequent maladministration shows that the quality of government services is still in the poor category. One effort to improve service quality requires the Communication aspect. Hardiyansyah (2011) concluded that communication has a significant effect on the quality of public services. One of the reasons why communication is important in public services is that it can show the government's credibility. This is an effort that government officials must make to serve the communication will also provide a good image of the government itself.

Smart government is a form of government communication that ensures the running of government functions through communication skills, related to the interests of the community to achieve the best level of welfare in life without harming any party (Hasan, 2005). By running a smart government program, the Pekanbaru City Government acts as a communicator while the community as its communicant. To achieve the best level of welfare in life, the government must provide the best service to the community.

In Law Number 25 of 2009 concerning Public Services, it is explained that the public has the right to receive quality services in accordance with the principles and objectives of service. Public services are often referred to as constitutional services. This statement is caused by the constitutional clauses of all countries which state states that the state must provide various facilities to citizens (Nurmandi, 2010). As a service provider, the government must understand the community's needs and desires in receiving services. Public services done previously need to be improved by building communication intensity. So that later the public services provided will be by the mandate stated in Law Number 25 of 2009 concerning public services. Therefore it is essential for the government as a service provider to know how to communicate well in public services. In this case, is the smart government used as a solution in providing services?

Public services by the public bureaucracy are intended to improve the welfare of the people of a country and can also be interpreted as providing services or serving the needs of people or communities who have an interest in the organization with the main rules and procedures that have been determined (Hardiansyah, 2015). From this explanation, it can be said that the main function of government is to provide services, organize development and organize government to regulate and take care of its people by creating comfort and order that protects and prospers its people. The low quality of public services will have an impact on lower public trust in public service providers will have an impact on weakening citizens' support for the government. About this function, the Pekanbaru City government implements closer, faster, more precise, cheaper, and better public services to its people (Firdaus, 2018).

Regarding this research, the S-O-R theory is a reference for researchers to see how government communication in smart government and the quality of services provided influence public satisfaction. This theory explains the influence on the recipient as a result of communication (McQuail, 2011). The relationship between the S-O-R theory in this research is: (a) The stimulus in question is smart government and service quality; (b) The organism in question is the community receiving services at the MPP; (c) The response in question is community satisfaction in receiving services at the MPP.

The presence of this MPP is the spearhead that the government hopes for in implementing smart government and improving service quality in Pekanbaru City. This is an interesting topic to learn more about. On the other hand, no research on the MPP Pekanbaru has been linked to the Smart Government variable. For example, research still discusses the service innovation variable. Likewise, other research still discusses service innovation with MPP Pekanbaru (Wisanta & Marlim, 2021; Sari, 2021; Sartibi, 2022; Renata 2021, Trifira et al., 2022). It is necessary to know the public's response to the presence of MPP in Pekanbaru City. With a large number of services, with a big vision, of course looking at the performance of this Public Service Mall can provide further input to create a smart city to answer the unavoidable challenges of progress. Therefore, the aim of this research is that the author wants to see how smart government and service quality influence community satisfaction in Mal Pelayanan Publik Pekanbaru.

Research Method

This research uses quantitative methods. Quantitative research is research that explains social problems based on theory testing consisting of variables that are measured with numbers and analyzed using

statistical procedures to find out whether the generalization of the theory's predictions is correct (Creswell, 2017). In this research, quantitative data was obtained, from The results of distributing questionnaires given to respondents were measured using statistical theory as a tool to solve the problems faced. This method will provide certainty in decision-making. This research aims to examine the influence of smart government and service quality on satisfaction. The subjects of this research were Pekanbaru City residents who visited the Public Service Mall to carry out administrative matters.

In taking samples, the researcher decided to use an accidental sampling technique. The sample in this study was 100 people who were obtained by chance from anyone who had received services at the Pekanbaru Public Service Mall, and these people were suitable as data sources. Researchers use this technique, among other things, because they feel that the respondents to be studied are too broad and therefore there are no specifications.

The data collection technique in this research is by distributing research questionnaires online, using Google Forms, to people who have visited and provided services at the Pekanbaru Public Service Mall. Apart from that, research data is also obtained through observation and documentation. The data obtained from the research results will be analyzed through several stages, including validity testing, reliability testing, normality testing, multiple linear regression testing, and hypothesis testing.

Result and Discussion

Based on the research results that the authors have obtained from the regression tests that have been carried out, it is found that smart government and service quality significantly affect community satisfaction at the Mal Pelayanan Publik Pekanbaru. This is because the various types of services carried out at the Mal Pelayanan Publik Pekanbaru have fulfilled what the community wants and needs in receiving services.

Before services were centralized in the Public Service Mall, people complained that the services provided were still many administrative obstacles, such as convoluted requirements, frequent illegal levies, and service personnel who lacked service (Dedek, 2020). The Pekanbaru City Government seeks to change this by implementing the concept of smart Government. A big challenge, of course, considering that the public service system is usually entrenched and ingrained in a government. However, now the government can overcome these challenges by implementing smart governance and improving the quality of services government officials provide.

The optimization of services that have been carried out in the Public Service Mall by the Pekanbaru City government can be said to have gone well. With the existence of the Public Service Mall, now people no longer feel complicated and protracted bureaucratic affairs. This is because the officers serving at the Public Service Mall are competent and also interconnected and integrated so that the services received by the community have been felt faster and more efficiently. In addition, officers at the Public Service Mall serve the community professionally, this can be seen from the results of observations made by researchers, where officers do not discriminate between people who receive services. Obviously what has been given is the answer to what the community wants in receiving services from the government. This is to the smart government objectives of the Pekanbaru City Public Service Mall: to provide faster, more effective, and economical services to the community.

The Pekanbaru City Government not only made changes in the service bureaucracy but also upgraded the elements of the services carried out to improve service quality. Based on the results of research that has been done, the quality of service provided by MPP Pekanbaru City is satisfactory. This can be seen from the community's response to the service quality variable, which can be categorized as good.

Varia	ibel Independen	Variabel Dependen	R Square	F hitung	F tabel	Sig.
1.	Smart Government (X1)	Community Satisfaction	0,411	33,863	3,09	0.000
2.	Service Quality (X2)					

Source: Researcher's Processed Results, 2023

From the table above, it can be seen the results of statistical data analysis using the SPSS program, obtained a calculated F value of 33, 863 where this value is greater than the table t value of 3.09. Based on these results, it can be concluded that smart government variables and service quality variables simultaneously have a significant influence on community satisfaction in Mal Pelayanan Publik Pekanbaru. Based on the table above, it can also be seen that the coefficient of determination is 0.411. This value gives

an understanding that the influence of Smart Government variables (X1) and Service Quality (X2) on community satisfaction (Y) in the Pekanbaru City Public Service Mall is 41.1%. Thus, 41.1% of community satisfaction that occurs can be explained by smart government variables and service quality, while the remaining 58.9% is influenced by other variables or factors that exist outside this study. From the results of statistical data analysis of the t-test using the SPSS program, the value of the regression equation can be obtained, namely Y = 8.122 + 0.368X1 + 0.235X2. From the regression equation, it can be seen that the overall value of multiple linear regression coefficients is positive, it means that if the values of independent variables in the form of smart government and service quality increase or are improved, it will encourage increasing community satisfaction in the Pekanbaru City Public Service Mall.

The services provided by MPP have met service standards in line with PERMen PAN Number 15 of 2014. Communities can feel the benefits obtained according to their needs. Based on the responses received, the people of Pekanbaru City think that the services provided at the Public Service Mall are more precise and focused; besides that, the community also feels comfortable carrying out administrative arrangements. This is because the existing facilities and infrastructure at the Public Service Mall are very supportive. In addition, the community also gets clear information and a more precise flow of services. This is also supported by the behavior of officers who serve politely, and friendly.

The quality of service that has been provided by the Pekanbaru City Public Service Mall itself based on the results of research that has been done, can be said to be satisfactory. This can be seen from the community's response to service quality variables that can be categorized as good. The services provided by the Pekanbaru City Public Service Mall have met the service standards set by the Ministry as described. People can feel the services they get according to what they need. Based on the response obtained, the people of Pekanbaru City feel that the services provided at the Public Service Mall are clearer and more directed, besides that the community also feels comfortable when carrying out administrative management. Based on the response obtained, the people of Pekanbaru City feel that the services provided at the Public Service Mall are clearer and more directed, besides that the community also feels comfortable when carrying out administrative management. This is because the facilities and infrastructure in the Public Service Mall are very supportive. In addition, the community also gets clear information and clearer service flows. This is also supported by the behavior of officers who serve with courtesy, courtesy, and friendliness.

Judging from the responses to community satisfaction from the research conducted, the community's emotional reactions to the services provided at MPP in the context of competent governance and quality of service obtained satisfactory results. The community has felt the suitability of their expectations in receiving services at the Pekanbaru City MPP. In addition, based on the results obtained, it is known that the public wants to visit again to carry out other administrative arrangements and is willing to recommend the services provided by the Pekanbaru Mall Public Service to their closest friends or relatives.

If related to the S-O-R Theory used in this study, there is a process of government communication in smart government and also the implementation of public services, where the communicator conveys messages to the communicants that occur during the service. This is in line with the results of research from Hardiansyah (2011), which says that communication significantly affects public services. The communication process in public services is influenced by a stimulus given to the organism to be processed into a response. The communication process occurs in the form of messages in verbal and non-verbal forms issued by the service provider apparatus as communicators to the community, which are then interpreted and perceived to provide satisfaction to the service recipient community.

In this study, the government apparatus is tasked with providing stimulus to the community as its communicator. Government officials, as communicators, must be able to communicate well with the public as service users. The excellent value of a service can be seen from how the service provider shares with the community who uses the service. Service providers in serving the community are not just carrying out their duties but also becoming an obligation to gain the community's trust and satisfaction. Confidence and community satisfaction are obtained because of the quality service providers provide to the community.

The stimulus provided in the form of smart government is focused on government apparatus. The stimulus is in the form of verbal and nonverbal messages during the service. In this case, the government of Pekanbaru City, through the MPP, carried out this stimulus to provide the best quality of service. Based on the research results, the community's response to the smart government variable is the most dominant. From these results, it is known that smart government has a significant effect on community satisfaction. From these results, it can be concluded that the communication of service providers who act as communicators at MPP Pekanbaru City is excellent. This also shows that the implementation of smart government run by officials has given people trust and satisfaction in receiving services.

Apart from the smart government, the stimulus provided by the government, in this case, is also in the form of an increase in service quality. This explains all messages in the form of information and the media used to convey messages related to public services. The message is communicated regarding service

requirements, service flow, time and implementation, and service rates. Based on the research results obtained, there is an influence of service quality on community satisfaction. Community response to the information submitted has also shown a positive response. Communities who have received services say that the information conveyed at the MPP Pekanbaru City is clear and appropriate as it should be.

Utilization of communication media in public service activities is also one of the stimuli provided. It aims to realize fast, easy, and efficient service. In this case, the media of communication in public services are all media that can be utilized and used in public services. Media here includes facilities and infrastructure in MPP. Based on the results of the research and observations that have been made, the facilities and infrastructure available at MPP are complete and of good quality, like a machine that is used to take queue numbers so that people no longer need to wait in long queues to register and take cues. In addition, there are also comfortable waiting room facilities, wifi facilities, to self-service facilities. The completeness of the supporting suggestions and infrastructure has given a positive response from the community towards the Pekanbaru City MPP.

The stimulus given at MPP Pekanbaru City is aimed at people who are. "Organisms" or communicants who receive the message or stimulus. As citizens, people have high hopes for getting the best service from the government. Community skepticism about public services is the starting point. Public services are often full of convoluted bureaucracy, levies wild, and take a long time. Therefore, competent government and quality service are critical as a stimulus that can change people's perceptions.

The community response that is of concern to this research is the communication effect manifested as community satisfaction. The intended communication effect is cognitive, affective, and conative. The conformity of the expectations of the people who visited MPP showed satisfaction as a mental effect. While the interest to look back is an affective effect that arises from this stimulus, the community not only knows but also wants to return to Pekanbaru City MPP. Willingness to recommend public services is a conative effect because there has been a change in attitudes and behavior from the community. The results of this study indicate the level of community satisfaction in the extraordinary category. This can be interpreted as a positive response or effect from smart government and the quality of service that the government has provided through the Pekanbaru City MPP as a stimulus for better services.

The role of MPP Pekanbaru City as an institutional messenger or communicator places it in a central position. And with smart government, the government's efforts to provide good service quality can be realized. Simultaneously, smart government and service quality affect community satisfaction at the Pekanbaru City Public Service Mall. The community level can be used as evaluation material for Pekanbaru City Mall Public Services to improve their services; even though it is in the appropriate category, it still needs to be evaluated to improve it.

The results of this study corroborate the research of Suryawan & Sukarsa (2015) which analyzed the significant influence between servqual factors, namely tangibles, reliability, responsiveness, assurance, and empathy factors on improving the quality of public services in Denpasar City. The first factor is the facility factor formed from variables, namely (a) a comfortable waiting room, clean space, and good room circulation; (b) an independent consultation room with a sufficient number; (c) ample parking space; (d) clean toilet facilities; (e) have a place of worship; (f) the officers are dressed neatly and cleanly. The second factor is an apparatus factor formed from variables, namely (a) having a suggestion/complaint box that is easily visible; (b) human resources officers have capabilities by the field of education; and (c) the officer has capabilities that meet the standards.

Furthermore, the results of this research in the context of the quality of service at the Pekanbaru Public Service Mall are also accompanied by the implementation of public service innovations such as being new, effective, useful, replicable and sustainable. As stated by Dedek (2020) in his research, Pekanbaru City's public services have new, effective innovations, innovations are beneficial for society, the private sector and other governments so that they can be replicated and sustainable. This is supported by a budget, trained and educated human resources and community participation. The smart city socialization carried out by the Dinas Komunikasi, Informatika, Statistik dan Persandian (Diskominfo) of Pekanbaru City can be declared successful with public satisfaction with the Public Service Mall in this research. Triyandra (2017) emphasized that the socialization of this smart city cannot be separated from the Diskominfo communication strategy, namely planning targets, objectives, messages, communication media and evaluating communication planning. This Smart City is identified on six subs, namely Smart Government, Smart Economy, Smart Live, Smart Living, Smart People and Smart Mobility.

From this research, it can be explained that if the government runs smart government well, the quality of service will be good, affecting the satisfaction of the people who get public assistance. Human Resources (HR) is the main factor in public services; Even though everything is in digital form in a smart government format, the apparatus as communicators still plays a vital role in providing the best quality of service so that people can be satisfied in receiving public benefits.

Conclusion

Based on the results of research based on regression tests that have been carried out, competent government influences community satisfaction at the Pekanbaru City Public Service Mall with a positive coefficient. This is because, with the existence of smart government, people no longer need to experience complicated bureaucratic matters. Service officers who serve the community are connected and integrated in providing services. This is the answer to what the community wants in receiving benefits from the government. People can feel that the services they get are what they need.

From the research results, there is also an influence of service quality on community satisfaction at the Pekanbaru City Public Service Mall. Based on the response received, the people of Pekanbaru City feel faster and more comfortable service when carrying out administrative arrangements at the Pekanbaru City Public Service Mall. This is because the Public Service Mall facilities and infrastructure are very supportive. Apart from that, the public also gets more precise information and a transparent service flow. This is also supported by the behavior of officers who serve politely, courteously, and friendly.

Based on the research analysis that the author has conducted, smart government and service quality together significantly influence public satisfaction at the Pekanbaru City Public Service Mall. From this research, we can explain that if the smart government program is carried out well by the government, it will simultaneously have good service quality, affecting community satisfaction. This is because the services at the Pekanbaru City Public Service Mall are appropriate and have fulfilled what the community wants and what the community needs in fulfilling the services provided.

To develop Communication Science related to this research theme, it is hoped that future researchers interested in researching the same object, namely the influence of smart government and service quality on community satisfaction, can conduct research outside the existing factors. presented in this research, can be in the form of different research subjects or different indicators for each variable so that the research results will be more complementary and diverse.

Daftar Pustaka

- Dedek, H. (2020). Inovasi Pelayanan Publik Pada Mal Pelayanan Publik Kota Pekanbaru. UIN Sultas Syarif Kasim Riau.
- Fadli, F. (2018). Pekanbaru Madani: Dari Metropolitan Menjadi Smartcity Menuju Masyarakat Madani. Pekanbaru: PT Elex Media Komputindo.
- Frislidia, F. (2021). Ombudsman Riau Terima Laporan Pengaduan 1.424 Kasus, Ini Yang Dominan. https://riau.antaranews.com/berita/208286/ombudsman-riau-terima-laporan-pengaduan-1424kasus-ini-yang-dominan
- Hardiyansyah, H. (2018). Kualitas Pelayanan Publik: Konsep, Dimensi, Indikator dan Implementasinya. Jakarta: Gava Media.
- Hasan, E. (2005). Komunikasi Pemerintahan. Bandung: Rafika aditama.
- Mc Quail, D. (2011). Teori Komunikasi Massa, Edisi 6 Buku 1. Jakarta: Salemba Humanika.
- Nurmandi, A. (2010). Manajemen Pelayanan Publik. Jakarta: PT. Sinergi Visi Utama.
- Ombudsman Republik Indonesia. (2022). Laporan Tahunan 2022: Mengawasi Pelayanan Publik Bagi Pemulihan yang Lebih Kuat. Jakarta: Ombudsman RI
- Peraturan Menteri Pendayagunaan Aparatur Negara Dan Reformasi Birokrasi Republik Indonesia Nomor 23 Tahun 2017.
- Pekanbaru.go.id. (2022). MPP Pekanbaru Raih Penghargaan 3 Kali Berturut-turut dari Men-PAN RB. pekanbaru.go.id.
- Riaupos. (2019). Warga Pekanbaru Paling Banyak Melapor. https://riaupos.jawapos.com/politik/2253413130/kuansing-dan-pekanbaru-terbanyak-melaporkan
- Renata, M. S. (2021). Implementasi Pelayanan Publik di Mall Pelayanan Publik Kota Pekanbaru. Universitas Islam Riau.
- Sindonews. (2019). Pekanbaru Menang Platinum Indonesia Attractiveness Awards 2019. https://daerah.sindonews.com/berita/1418298/174/pekanbaru-menang-platinum-indonesiaattractiveness-awards-2019.
- Sari, Y. P. (2021). Inovasi Pelayanan Sektor Publik di Mall Pelayanan Publik Kota Pekanbaru. Universitas Islam Riau.
- Sartibi, M. (2022). Inovasi Pelayanan di Mall Pelayanan Publik Kota Pekanbaru. Universitas Islam Riau.
- Suryawan, G., & Sukarsa, I.M. (2015). Analisis Kepuasan Masyarakat Terhadap Pelayanan Publik di Kota Denpasar. *E-Jurnal Ekonomi Pembangunan Universitas Udayana*, 4(12), 1462–1488.

- Trifira, S. et al. (2022). Kualitas Pelayanan Publik Bagi Penyandang Disabilitas di Mal Pelayanan Publik Kota Pekanbaru. *Journal of Social and Policy Issues, 2(2), 108-112.*
- Triyandra, A. C. (2017). Perencanaan Komunikasi Dinas Komunikasi, Informatika, Statistik Dan Persandian Kota Pekanbaru Dalam Mensosialisasikan Program Smart City. Jurnal Online Mahasiswa Fakultas Ilmu Sosial Dan Ilmu Politik Universitas Riau, 4(1).
- Wisanta, E. H & Marlim, Y. N. (2021). Analisis Algoritma K-Means untuk Clustering Kepuasan Pelayanan: Mall Pelayanan Publik Pekanbaru. Prosiding SENATIKA 2021, 223-228.