

# The Effectiveness of the National Digital Samsat Application (SIGNAL) on Reducing Queues and Increasing Compliance of Motor Vehicle Taxpayers in Tanjungpinang

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**Abstract:** This study examines the effectiveness of the SIGNAL (Samsat Digital Nasional) application in reducing queues and increasing compliance among motor vehicle taxpayers in Tanjungpinang. The background of the research is rooted in persistent low tax compliance and administrative inefficiencies, particularly long queues at the Samsat office. The study aims to evaluate whether the SIGNAL application enhances the efficiency of public services and improves taxpayer behavior. Using a quantitative research method with a survey approach and random sampling, the research collects and analyzes data statistically to identify the relationship between digital tax services and taxpayer compliance. The findings suggest that the SIGNAL application contributes positively by streamlining tax payment procedures, minimizing in-person interactions, and offering timely access to tax information, which collectively foster better compliance. However, challenges remain, including limited infrastructure and digital literacy among segments of the population. The study concludes that while SIGNAL improves service delivery and compliance, its full potential can only be realized with enhanced public outreach and inter-agency collaboration. These results have implications for digital governance and suggest that integrating technology into public administration can effectively support tax compliance and reduce service bottlenecks.

**Keywords:** SIGNAL application; motor vehicle tax; taxpayer compliance; e-government;

## 1. Introduction

The Indonesian National Police (Polri) plays a vital role in maintaining security, order, and law enforcement throughout Indonesia. Polri's main function is not only limited to community security, but also includes supporting the government in increasing state revenue through taxes, particularly Motor Vehicle Tax (PKB). PKB itself is one of the main sources of regional revenue, which is used to finance the development of public infrastructure, community services, and various government programs aimed at improving the welfare of the community at large.

Polri has a great responsibility in carrying out law enforcement, maintaining public order, and preventing and taking action against various forms of crime, including violations related to financial and taxation aspects. With their expertise in investigation and prosecution as well as their authority in law enforcement, the National Police act as a strategic partner for local governments to encourage increased taxpayer compliance. This role is very important so that tax revenue, especially PKB, can be optimized and support sustainable regional development.

Motor vehicle tax is a significant source of local revenue and plays an important role in financing various development projects. Funds obtained from PKB are used to finance road construction, improvement of public transportation facilities, and provision of other public services that directly impact the quality of life of the community. Therefore, the management and optimization of PKB revenue is crucial for the progress of the region and the improvement of the welfare of the people living in the area.

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However, the public still faces various obstacles in fulfilling the obligation to pay Motor Vehicle Tax. Many vehicle owners lack discipline or even deliberately avoid paying the tax. The low level of public awareness about the importance of taxes, difficulties in accessing payment facilities, and weak law enforcement are the main factors that cause the low level of compliance. These obstacles are serious challenges that must be overcome so that tax revenue can increase and optimally support regional development.

In carrying out their duties, Polri have the authority to enforce laws related to various traffic violations, including violations related to PKB payments. Through routine operations and law enforcement, Polri can provide a deterrent effect to violators of the rules, as well as increase public awareness of the importance of paying vehicle taxes on time. Thus, the repressive actions taken by the Police are not only punitive in nature, but also as an effort to educate and socialize the public to be more compliant with tax obligations.

In addition, Polri also contributes to improving the effectiveness of Motor Vehicle Tax administration management. Polri works closely with relevant agencies such as the Regional Revenue Agency (Bapenda) and the Transportation Agency (Dishub) in accelerating the process of identifying vehicles that have not made tax payments. This cooperation also makes it easier for the public to access information related to PKB and strengthens inter-agency coordination in implementing programs to improve tax compliance. The synergy between institutions is very important to create a more transparent, efficient, and effective tax collection system.

The development of information and communication technology has brought about major changes in the way public services are delivered, including in the field of taxation. The government is trying to utilize these technological advances to improve efficiency and quality of service to taxpayers. One of the latest innovations developed is the SIGNAL (National Digital Samsat) Application, which is specifically designed to simplify the administration process of motor vehicle taxation. This application allows the public to register, report, and pay taxes more easily and quickly, so it is expected to increase taxpayer compliance and convenience in fulfilling their obligations.

In Tanjungpinang, a frequent problem is the long queues and backlog of taxpayers, especially as the filing deadline approaches. This situation not only makes people feel uncomfortable, but can also lower compliance rates as many taxpayers are reluctant to face complicated and time-consuming procedures. In addition, tax administration management that is still done manually often leads to errors and is less efficient.

The SIGNAL application is expected to be an effective solution to overcome various obstacles that have been faced in the process of registering, reporting and paying motor vehicle taxes. By providing a digital platform that can be accessed online, this application allows the public to carry out various tax transactions without having to come directly to the Samsat office. This can significantly reduce face-to-face interactions, speed up the service process so that long queues can be minimized, and improve the accuracy of data recorded in the system. In addition, SIGNAL is also designed to increase taxpayer awareness and compliance by providing easy access to relevant information and full transparency at every stage of the tax payment process, so that taxpayers feel more comfortable and motivated to fulfill their obligations on time.

Data shows that taxpayer reporting decreases every year. The UPTD Samsat Tanjungpinang's target for 2023 was Rp75.2 billion, but by the end of the second quarter it had only reached around 50%. In 2024, PKB revenue only reached 36% of the target of Rp52.5 billion.

This indicates that taxpayer compliance in Tanjungpinang has not been maximized. Many payments are still made directly at the Samsat office, while public understanding of the SIGNAL application is still low. Lack of socialization, especially for those who are less familiar with technology, is a major obstacle.

Based on the background of the problem, this research takes the research title Effectiveness of the SIGNAL Application (National Digital Samsat) on Decreasing Queues and Increasing Compliance of Motor Vehicle Taxpayers in Tanjungpinang. the formulation of this research is whether the SIGNAL application is effective on reducing queues and increasing compliance of motor vehicle taxpayers in Tanjungpinang. What are the obstacles in the implementation of the SIGNAL Application to Decrease Queues and Increase Compliance of Motor Vehicle Taxpayers in Tanjungpinang.

The purpose of research is to gain new knowledge, develop science, and solve problems. The following are the research objectives in this study: This study aims to examine the extent to which the SIGNAL Application has succeeded in reducing queues and increasing compliance of Motor Vehicle Taxpayers. To find out the obstacles in the implementation of the SIGNAL Application to Decrease Queues and Increase Compliance of Motor Vehicle Taxpayers in Tanjungpinang.

## 2. Proposed Method

Research designs that use quantitative approaches, where quantitative research must be structured, standardized, formal and designed as carefully as possible beforehand. The design is specific and detailed because the design is a research design that will actually be carried out. The research design used in this study is an associative research strategy, which is a research strategy used to determine the effect of two or more independent variables on the dependent variable.

The approach in this research refers to quantitative data. Quantitative research is one of the most specific types of research because it is systematic, focused, and well structured from the beginning to the end of the research process. Another definition mentions quantitative research as research that involves the use of data, such as data collection, analysis, and evaluation. Similarly, at the end of the research, photos, tables, graphs, or other displays should be included. This quantitative research is presented numerically. This is in accordance with the opinion (Arikunto, 2006: 12) which states that quantitative research is a research approach that is generally required to use numbers, starting from data collection, data interpretation, to the presentation of results. This research uses a survey approach, which is a research method that uses a questionnaire as a data collection tool with the aim of obtaining information about a group of respondents who are considered to represent certain demographics.

According to Sugiyo (2016: 7) quantitative research methods can be interpreted as research methods based on the philosophy of positivism, used to research on certain populations or samples. Sampling procedures are usually used randomly, data is collected using research instruments, and data is analyzed quantitatively / statistically with the aim of testing the hypothesis set. Sampling techniques are the ways taken in sampling, in order to obtain a sample that is truly in accordance with the overall research subject. The sampling technique used in this study is random sampling technique. random sampling is a type of probability sampling in which everyone in the entire target population has the same opportunity to be selected.

## 3. Results and Discussion

In the digital era, application-based public services are a key requirement to improve efficiency and service quality, including in motor vehicle taxation. In Tanjungpinang, the level of compliance of motor vehicle taxpayers is still relatively low, which has an impact on local tax revenue and public services in general. One of the government's efforts is to present the SIGNAL (National Digital Samsat) application to facilitate online payment and administration of vehicle taxes, with the hope of reducing queues at the Samsat office and increasing taxpayer compliance. The existence of the SIGNAL application is expected to optimize tax revenue with effective services. Effectiveness can be defined as the extent to which an organization, individual, or group succeeds in achieving its previously planned goals.

The measure of effectiveness is not only seen from the achievement of targets, but also how close the results obtained are to the goals that have been set. The smaller the gap between actual results and desired goals, the higher the level of effectiveness achieved. In this context, effectiveness involves the utilization of various resources, such as infrastructure, facilities, and manpower, which have been systematically organized and directed to produce outputs in accordance with predetermined schedules and standards. In addition, effectiveness is also closely related to the implementation of key tasks, achievement of targets, timeliness of implementation, and active involvement of all members in the work process.

Effectiveness can be understood as the relationship between the goals that have been set and the results achieved, so that it can describe the level of fit or suitability between the two. In the world of management, effectiveness and efficiency are two main concepts used

to assess the performance of both managers and organizations as a whole (Stoner, 2012). Effectiveness emphasizes the ability to choose the right goals and determine the appropriate steps or tools to achieve these goals. Meanwhile, efficiency highlights the ability to carry out tasks in the right way, by minimizing the waste of resources and time. Referring to Peter Drucker's thinking, effectiveness means doing the right things, while efficiency means doing things right (Stoner, 2012). Thus, an effective organization is one that is able to determine and achieve the right goals, while an efficient organization is one that is able to optimally utilize resources in the process of achieving those goals.

The SIGNAL application allows taxpayers to check and pay motor vehicle taxes online, without the need to attend the Samsat office directly. With this feature, administrative processes that previously took a long time and had to queue, can now be done anywhere and anytime using a smartphone or computer device. With more and more taxpayers utilizing online applications, the queue load at the Samsat payment counter is significantly reduced. This not only speeds up service, but also reduces the potential for crowds and minimizes the risk of excessive face-to-face service, especially during times of social distancing.

Although specific data on the number of queues before and after the implementation of the SIGNAL application in Tanjungpinang is not yet available in the source, experience from the implementation of a similar application (E-Samsat Kepri) shows a decrease in the need for physical presence at the Samsat office and an increase in online transactions. This is in line with findings from other online licensing services in Tanjungpinang where responsiveness and reliability of officers have increased with the digitization of services.

The SIGNAL application provides clear information on tax amounts, due dates, and penalties in real time. This helps taxpayers to avoid late payments due to forgetfulness or lack of information, which has been one of the main causes of low compliance. In addition to digitization, the tax bleaching program also plays a role in increasing compliance, with the elimination of fines and tax deductions for those in arrears. Data shows an increase in the number of taxpayers taking advantage of this program, although nominal tax revenue has fluctuated slightly. Digitalization through the SIGNAL application supports this program by facilitating access and payment processes. Some obstacles are still found, such as limited facilities and infrastructure, and uneven digital literacy of the community. However, service dimensions such as reliability, responsiveness, assurance, and empathy from online service officers in Tanjungpinang have been rated well by the community, providing confidence and trust in using online services.

Research by Riksfardini et al. (2023) discusses e-Government-based tax service innovation through the use of e-Filing to improve service quality. The results showed that the e-Filing application was designed as an innovation that makes it easier for taxpayers to submit Annual Tax Returns (SPT) electronically because it has relative advantages. However, there are still many taxpayers who do not understand how to use e-Filing. Over time, more and more people recognize and try this innovation, so the technology adoption rate increases. Factors that influence individual taxpayer compliance in using e-Filing include time efficiency, perceived convenience, service effectiveness, complexity, and confidentiality and security aspects, all of which contribute to the level of compliance. On the other hand, barriers such as perceptions of usefulness, convenience, voluntariness

#### 4. Conclusions

The effectiveness of the SIGNAL (Samsat Digital Nasional) application in reducing queues and increasing compliance of motor vehicle taxpayers in Tanjungpinang can be analyzed through several dimensions: An integrated online process allows taxpayers to access services without having to come to the Samsat office. Studies in Samarinda show that SIGNAL reduces physical queues with a 1:10 servant ratio between officers and applicants. The use of digital applications such as SIGNAL and SIGNAL (in Jakarta) proved a reduction in transaction time from 2-3 hours to 15-30 minutes through electronic payment features and automatic document verification. In Tanjungpinang, the synergy between the local government and UPT Samsat through the tax bleaching program and mobile services has further encouraged the transition to a digital system.

**Author Contributions:** A short paragraph specifying their individual contributions must be provided for research articles with several authors (**mandatory for more than 1 author**). The following statements should be used “Conceptualization: X.X. and Y.Y.; Methodology: X.X.; Software: X.X.; Validation: X.X., Y.Y. and Z.Z.; Formal analysis: X.X.; Investigation: X.X.; Resources: X.X.; Data curation: X.X.; Writing—original draft preparation: X.X.; Writing—review and editing: X.X.; Visualization: X.X.; Supervision: X.X.; Project administration: X.X.; Funding acquisition: Y.Y.”

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**Data Availability Statement:** We encourage all authors of articles published in FAITH journals to share their research data. This section provides details regarding where data supporting reported results can be found, including links to publicly archived datasets analyzed or generated during the study. Where no new data were created or data unavailable due to privacy or ethical restrictions, a statement is still required.

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