



LAST-MILE DELIVERY INNOVATION IN PUBLIC SERVICE: EVALUATION OF THE PAK LEMAN DELIVERY SERVICE AT SAMSAT MANYAR, SURABAYA

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Abstract :

The limited time available to urban communities in accessing motor vehicle tax services has prompted UPTD SAMSAT Manyar, Surabaya, to develop a Last-mile delivery innovation called PAK LEMAN (Pelayanan Antar Ke Layanan Mandiri / Home-Delivery Tax Service). This study aims to evaluate the implementation of this service, encompassing its operational coordination mechanisms, service quality, and the factors influencing community adoption of the innovation. A descriptive qualitative approach was employed, with data collected through in-depth interviews, field observation, and document analysis, subsequently analyzed using the interactive model of Miles and Huberman (1994). The findings reveal that the PAK LEMAN service grew by 246.7 percent over two years of operation (2023–2024), with a total of 2,580 vehicles served, supported by an effective multi-layered coordination system and community trust-based organic diffusion. A SERVQUAL evaluation indicates that the assurance dimension constitutes the primary strength of the service, while the responsiveness and tangibles dimensions still require improvement. Based on Rogers' (2003) innovation diffusion attributes, PAK LEMAN demonstrates high relative advantage, compatibility, trialability, and observability, although the minimum requirement of five vehicles per visit remains a barrier for individual taxpayers. This study recommends reviewing the vehicle threshold requirement, expanding service coverage areas, and encouraging replication of the PAK LEMAN model at other SAMSAT units as an effort to enhance Last-mile delivery-based public service accessibility in Indonesia.

Keywords : Last-mile delivery, Public service innovation, PAK LEMAN

INTRODUCTION

The era of digital transformation has fundamentally altered the paradigm regarding how services are delivered to the public. On a global scale, the concept of citizen-centric government governance that places citizens at the center of service orientation has become the mainstream of bureaucratic reform across various countries. The United Nations, through the United Nations E-Government Survey 2024, recorded that Indonesia ranks 64th globally in the e-government index, an achievement that places Indonesia in the category of developing nations with progressive public service trends. At the national level, Presidential Regulation Number 12 of 2025 concerning Digital Government affirms Indonesia's commitment to transitioning from conventional bureaucratic models toward an integrated digital service ecosystem oriented to citizens' needs (Komdigi, 2024).



Public service reform in Indonesia possesses a strong legal foundation through Law Number 25 of 2009 concerning Public Services, which mandates every public service provider to deliver services that are fast, accessible, affordable, and measurable. The New Public Service paradigm developed by Denhardt and Denhardt (2003), as referenced in studies by Almahbuby Mahfudzy (2021), Nauli Manurung (2022), and Sabrina & Fanida (2025), shifts the government's role from merely a "steerer" to an active "server" that proactively fulfills citizens' needs. This paradigm shift has driven the emergence of various innovations in the public sector that no longer wait for citizens to come to government offices but proactively "approach" them with services. Bureaucratic reform mandated through the Minister of Administrative and Bureaucratic Reform Regulation Number 30 of 2014 concerning Guidelines for Public Service Innovation provides the regulatory framework for state apparatus to innovate in enhancing public service quality.

One of the public service sectors most directly connected to citizens' daily lives is the management of Motor Vehicle Tax (*Pajak Kendaraan Bermotor/PKB*) through the SAMSAT (*Sistem Administrasi Manunggal Satu Atap / One-Roof Administration System*) institution. SAMSAT is a joint service institution involving three main entities: the Indonesian National Police (Traffic Corps), the Regional Revenue Agency (*Bapenda*), and PT Jasa Raharja Insurance. The urgency of SAMSAT services has intensified in tandem with the continuously accelerating growth in the number of motor vehicles in Indonesia. Data from the Traffic Corps (*Korlantas*) of the Indonesian National Police, as presented in Figure 1, records that the national motor vehicle population experienced consistent growth from approximately 136.0 million units in 2020 to 164.1 million units in 2024, with an average growth rate of 4.7 percent per year.

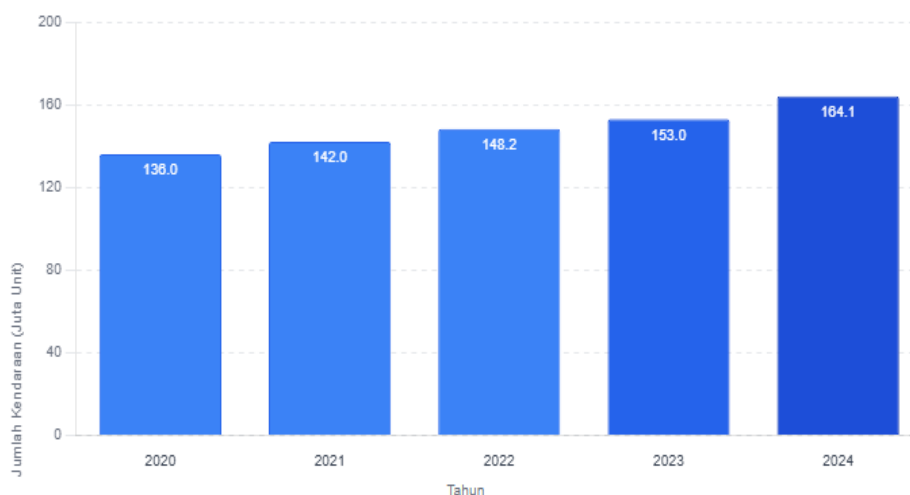


Figure 1. Development of Motor Vehicle Numbers in Indonesia, 2020–2024

Source: Traffic Corps of the Indonesian National Police and BPS, processed, 2024

The growth in vehicle numbers as shown in Figure 1 carries dual implications for SAMSAT institutions throughout Indonesia. On one hand, the increasing motor vehicle population indicates greater tax revenue potential. On the other hand, such growth also means an ever-growing number of taxpayers

who must be reached and served effectively. This situation positions the innovation capacity of SAMSAT services as a critical variable determining taxpayer compliance levels and ultimately contributing to Regional Own-Source Revenue (*Pendapatan Asli Daerah/PAD*). The strategic role of PKB toward PAD is particularly evident in East Java Province. Data from the East Java Provincial Revenue Agency (*Bapenda*), as displayed in Table 1, shows that PKB revenue realization in East Java continued to grow positively, from IDR 6.57 trillion in 2020 to IDR 8.26 trillion in 2024, with an average PKB contribution to total PAD reaching 43.8 percent during that period.

Table 1. PKB Revenue Realization and Its Contribution to East Java Provincial PAD, 2020–2024

Year	PAD Realization (IDR Trillion)	PKB Realization (IDR Trillion)	PKB Contribution to PAD (%)
2020	14.44	6.57	45.5
2021	15.43	6.87	44.6
2022	17.60	7.62	43.3
2023	18.39	7.78	42.3
2024	19.13	8.26	43.2

Source: East Java Provincial Revenue Agency (dipendajetim.go.id), processed, 2025

Based on the data in Table 1, it is evident that PKB is not merely an administrative instrument but rather a vital fiscal backbone of the region. The consistency of PKB contributions above 42 percent toward East Java Provincial PAD over five consecutive years (2020–2024) affirms that the effectiveness of SAMSAT services directly impacts the regional government’s capacity to finance development and public services. The PKB taxpayer compliance rate in East Java over the past five years averaged 85 percent, with PKB revenue target achievement reaching 100 percent in 2023 (Muzdalifah, 2025). This achievement is inseparable from the various service innovations continuously developed by SAMSAT offices throughout East Java.

The City of Surabaya, as the economic and governmental center of East Java, faces the challenge of managing motor vehicle taxes on a very large scale. Based on recorded data, the number of motor vehicles in Surabaya reached approximately 3.81 million units in 2025, making it one of the cities with the highest vehicle concentrations in Indonesia. This high vehicle volume is directly proportional to the potential and complexity of vehicle tax administration management that must be served by SAMSAT offices in the Surabaya area. As an illustration, SAMSAT West Surabaya in 2024 exceeded the PKB revenue target with a realization of 111.01 percent, equivalent to IDR 488.9 billion. This achievement reinforces that service innovation is an imperative for SAMSAT to effectively and efficiently reach all taxpayers.

In this context, the concept of Last-mile delivery traditionally known in the domain of commercial logistics becomes relevant for application in public

service discourse. Last-mile delivery refers to the final segment of the distribution chain, where products or services are delivered from the distribution point to the end consumer's location (Rosadi et al., 2025). In the world of commercial logistics, this segment is recognized as the most critical and most expensive, accounting for up to 53 percent of total distribution chain costs, as it represents the direct point of contact between the service provider and the beneficiary. Adapting this concept to the public service context presents an intriguing new perspective: the government no longer functions merely as a static service provider in offices but assumes the role of an active "courier" delivering its service "products" in this case, official vehicle registration documents directly to citizens (Alya et al., 2025).

The comparison between PAK LEMAN and various other SAMSAT innovations, as presented in Table 2, demonstrates that PAK LEMAN occupies the most progressive position in terms of service accessibility, as taxpayers are not required to be physically present at any service point.

Table 2. Comparison of SAMSAT Service Innovations in Surabaya

Service Innovation	Service Nature	Taxpayer Physical Presence Required?	Service Coverage
SAMSAT Drive Thru	Semi-mobile	Yes (to drive-thru post)	Limited (specific locations)
SAMSAT Keliling (Mobile)	Mobile	Yes (to mobile bus location)	Moderate (rotating areas)
E-SAMSAT / SIGNAL	Digital online	No (fully online)	Extensive (entire region)
PAK LEMAN	Door-to-door	No	Directly to taxpayer's location

Source: Compiled from Bapenda East Java (dipendajatim.go.id) and various sources, 2025

As illustrated in Table 2, the uniqueness of PAK LEMAN compared to other SAMSAT innovations lies in its door-to-door and personal service character. While SAMSAT Keliling still requires taxpayers to approach the mobile fleet, and E-SAMSAT/SIGNAL operates entirely online, PAK LEMAN presents a solution for taxpayers who have time constraints, are unfamiliar with digital services, or require direct assistance in the vehicle registration validation process. From a Last-mile delivery perspective, PAK LEMAN effectively fills the gap unreachable by either digital channels or conventional physical services (Yusuf Hariyoko & Indah Murti, 2025; Yuvina et al., 2021).

From an academic perspective, studies on Last-mile delivery innovation in the context of public services remain very limited. The majority of research on Last-mile delivery focuses on the private sector, particularly e-commerce and commercial logistics industries (Hariwibowo et al., 2025; Purba & Hutabarat, 2025; Rizaldi et al., 2025). Conversely, evaluation studies of SAMSAT innovations in Indonesia generally focus on user satisfaction and tax administration effectiveness (Patria Negara et al., 2025), while aspects of internal coordination processes in delivering valuable documents to taxpayers have not been a primary

concern in the existing literature. This academic gap opens significant, relevant, and urgent research space for in-depth exploration through a qualitative approach.

Therefore, this study endeavors to fill this gap by conducting a comprehensive evaluation of the PAK LEMAN service implementation at SAMSAT Manyar, Surabaya. The evaluation focuses on two primary dimensions: first, how the internal coordination mechanism between SAMSAT Manyar officers and delivery partners ensures the security and accuracy of STNK document delivery to taxpayers; and second, to what extent the quality of PAK LEMAN service meets taxpayers' expectations as the ultimate beneficiaries of this "public service logistics" innovation. By adopting an in-depth qualitative approach, this study is expected to produce a comprehensive picture of Last-mile delivery innovation anatomy in the Indonesian public service context, as well as provide conceptual and practical contributions for the development of similar innovations in other government institutions.

RESEARCH METHOD

This study employs a qualitative approach to analyze the Last-mile delivery innovation of the PAK LEMAN service at SAMSAT Manyar, Surabaya, aiming to gain an in-depth understanding of the STNK document delivery coordination mechanism, service quality based on the SERVQUAL model (Zeithaml, Parasuraman & Berry, 1988), and its relevance to the responsiveness and effectiveness criteria according to Dunn (2012). Data were collected through in-depth interviews with purposively selected informants, including the Head of UPTD SAMSAT Manyar, coordinator, field officers, delivery partners, and taxpayers, complemented by direct observation of operational processes and document analysis comprising SOPs, performance reports, and service user data. Data analysis employed the interactive model of Miles, Huberman & Saldaña (2014) through stages of condensation, data display, and conclusion drawing, with data validity ensured through source and technique triangulation.

FINDINGS AND DISCUSSION

General Overview of SAMSAT Manyar and PAK LEMAN Service

SAMSAT Manyar Joint Office, also known as SAMSAT East Surabaya, is located at Jalan Manyar Kertoarjo No. 1, Surabaya. As a regional technical implementing unit (UPTD) under the East Java Provincial Revenue Agency (*Bapenda*), SAMSAT Manyar serves the East Surabaya administrative area covering six sub-districts: Rungkut, Tambaksari, Sukolilo, Gubeng, Mulyorejo, and Gunung Anyar. The primary services provided include annual Motor Vehicle Tax (PKB) payment, Vehicle Registration Certificate (STNK) validation, Mandatory Road Accident Fund Contributions (SWDKLLJ) payment, and various other motor vehicle administrative services. In an effort to enhance taxpayer accessibility and satisfaction, SAMSAT Manyar developed a service innovation called PAK LEMAN (*Pelayanan Antar Ke Layanan Mandiri / Home-Delivery Tax Service*). This innovation is accessible through SAMSAT East

Surabaya's official website (samsatsurabayatimur.dipendajetim.go.id), a dedicated QR code, or the office's official WhatsApp channel. The PAK LEMAN service operates on working days from 09:00 to 12:00 Western Indonesian Time (WIB) with a minimum requirement of five vehicles per visit, enabling groups of residents, communities, offices, or housing complexes to submit applications collectively.

Growth in Number of Visits and Vehicles Served

Since its official launch in early 2023, the PAK LEMAN service has demonstrated a consistent and significant growth trend. The recapitulation data of visits and the number of vehicles served per semester, as presented in Table 3, reflects increasing interest and trust among taxpayers toward this service innovation.

Table 3. Development of Visit Numbers and Vehicles Served by PAK LEMAN Service at SAMSAT Manyar, 2023–2024

Period	Number of Visits	Vehicles Served	Average Vehicles/Visit	Visit Growth (%)
Semester I 2023	45	287	6.4	–
Semester II 2023	78	512	6.6	+73.3%
Semester I 2024	112	743	6.6	+43.6%
Semester II 2024	156	1,038	6.7	+39.3%
Total	391	2,580	6.6	–

Source: UPTD SAMSAT Manyar, processed, 2025

Based on the data in Table 3, it is evident that the number of PAK LEMAN service visits experienced very rapid growth during its first semester of operation (Semester II 2023), with a surge of 73.3 percent compared to Semester I 2023. Although the growth rate decelerated in subsequent periods, growth figures remained above 39 percent per semester. Cumulatively, over two years of operation (2023–2024), the PAK LEMAN service successfully served 391 visits with a total of 2,580 vehicles. The growth trend indicates that the PAK LEMAN service has successfully passed the initial innovation adoption stage (early adoption) toward a stable growth stage. This aligns with Rogers' (2003) innovation diffusion theory, which describes that an innovation possessing high relative advantage and simple procedures will experience exponential adoption acceleration after surpassing the critical threshold of initial users.

Distribution of PAK LEMAN Service Users by Sub-district

The geographical distribution of PAK LEMAN service users in the East Surabaya area reveals an uneven distribution across sub-districts. User

distribution data by sub-district during the 2023–2024 period is presented in Table 4.

Table 4. Distribution of PAK LEMAN Service Users by Sub-district, 2023–2024

Sub-district	Number of Visits	Percentage (%)	Area Characteristics
Rungkut	112	28.6	Industrial zone and dense residential area
Sukolilo	86	22.0	Educational and residential area
Tambaksari	71	18.2	Commercial and residential area
Gubeng	58	14.8	Business and office district
Mulyorejo	45	11.5	Elite residential area
Gunung Anyar	19	4.9	Residential area distant from city center
Total	391	100	-

Source: UPTD SAMSAT Manyar, processed, 2025

The data in Table 4 shows that Rungkut Sub-district constituted the highest user of PAK LEMAN services (28.6%), followed by Sukolilo (22.0%) and Tambaksari (18.2%). The high usage in Rungkut is consistent with the area's characteristics as an industrial zone and densely populated residential area whose residents have limited time to visit the SAMSAT office. Conversely, Gunung Anyar Sub-district recorded the lowest figure (4.9%), which, according to Mr. Agus Widodo (I-1), relates to the greater distance from the SAMSAT Manyar office and minimal outreach to that area:

"Gunung Anyar indeed still requires enhanced outreach from our end. The area is quite far, and the community has not fully learned about PAK LEMAN. This year, we plan a roadshow there." Mr. Agus Widodo, S.STP., M.Si., Head of UPTD SAMSAT Manyar

Based on the interview response above, it can be observed that the disparity in PAK LEMAN user distribution across sub-districts is not solely caused by geographical distance factors but also by the uneven intensity of outreach. This indicates that the observability attribute in Rogers' (2003) theory has not functioned optimally in areas distant from the city's activity center. This finding aligns with Borins' (2001) research, which affirms that the success of innovation diffusion in the public sector is highly dependent on communication strategies that are continuous and reach all segments of society not only those already connected to digital information.

Internal Coordination Mechanism of PAK LEMAN Service

Operational Workflow of PAK LEMAN Service

Based on field observation and in-depth interview results, the PAK LEMAN service undergoes four structured operational stages: (1) registration

and schedule confirmation by the taxpayer; (2) data verification and document preparation by administrative staff; (3) visit execution and payment processing at the taxpayer's location; and (4) STNK validation and document handover to the taxpayer.

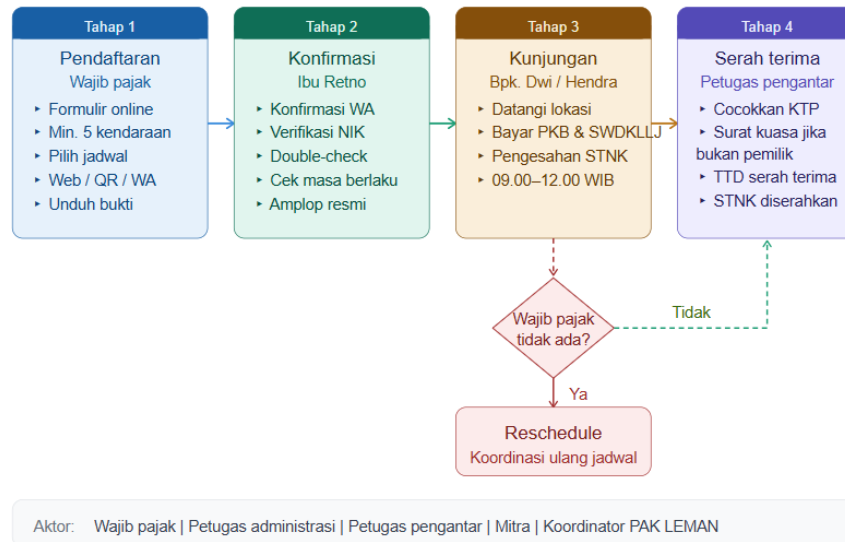


Figure 2. Operational Workflow of PAK LEMAN Service at SAMSAT Manyar

Source: Primary data from observation and interviews, processed, 2025

The Head of UPTD SAMSAT Manyar, Mr. Agus Widodo, conveyed the background behind the emergence of PAK LEMAN innovation:

"PAK LEMAN was born from our concern upon observing taxpayers queuing for extended periods, particularly office workers and mothers who could not find time to come here. We thought, if delivery companies can ship goods to homes, why can't the government deliver tax services to taxpayers' homes? From there, we began designing the mechanism gradually." Mr. Agus Widodo, S.STP., M.Si., Head of UPTD SAMSAT Manyar

Based on the interview response above, it can be understood that the emergence of PAK LEMAN innovation was grounded in leadership awareness of the gap between government service capability and continuously rising public expectations. The innovation motivation sourced from proactive leadership initiative aligns with Borins' (2001) public sector innovation typology, namely innovation driven by apparatus initiative oriented toward service improvement (proactive innovation). Furthermore, the analogy used by the informant comparing SAMSAT's work pattern with commercial delivery services reflects bureaucratic openness in adopting the Last-mile delivery approach from the private sector into the public service context, as argued by Gevaers et al. (2011).

Coordination Mechanism between SAMSAT Officers and Delivery Partners

Internal coordination represents the most critical aspect of PAK LEMAN service operations, considering that the product being delivered is an official state document. PAK LEMAN Service Coordinator, Mrs. Sari Dewi Rahayu, explained the coordination procedures applied:

"Before officers depart, all documents have been checked twice license plate numbers, owner names, tax validity periods everything. Only after two

verification officers sign off are documents placed into sealed envelopes bearing the SAMSAT logo. In the field, officers may not hand over STNK documents before matching the taxpayer's ID card against our system data. If there is a discrepancy, the taxpayer must appear in person or additional procedures are required." Mrs. Sari Dewi Rahayu, S.AP., PAK LEMAN Service Coordinator

Based on the interview response above, it can be concluded that SAMSAT Manyar has implemented a multi-layer quality control system through pre-delivery double-check mechanisms and identity verification at the handover point. This procedure is equivalent to the chain of custody standards applied in high-value goods delivery within the commercial logistics sector (Gevaers et al., 2011). The existence of documented protocols also reflects the SERVQUAL reliability dimension the ability to provide services accurately and consistently as promised to users (Zeithaml et al., 1988). Delivery officer Mr. Dwi Prasetyo added a field-level perspective:

"I always carry a handover form that must be signed by the recipient. If the person receiving is not the vehicle owner, I first request a power of attorney and photograph the relevant ID card. There was once an incident where the taxpayer was not at the location; I immediately contacted the coordinator for further instructions. I would not dare entrust documents to someone else without my superior's authorization." Mr. Dwi Prasetyo, PAK LEMAN Delivery Officer

Based on the interview response above, it is evident that the delivery officer possesses high awareness of the legal responsibility attached to STNK documents. The cautiousness demonstrated including the reluctance to entrust documents to unauthorized parties represents a well-internalized form of assurance value from the implementer's perspective. According to Zeithaml et al. (1988), assurance is a dimension built upon the competence, courtesy, and integrity of officers in handling user interests. This condition also illustrates that SAMSAT Manyar has successfully built a work culture that prioritizes document security a critical aspect that frequently becomes a weak point in Last-mile delivery implementation in the public sector.

Administrative officer Mrs. Retno Wulandari explained the role of document verification as the first line of defense:

"The administrative section functions as quality control. Before documents proceed to the delivery officer, I ensure the STNK data matches the payment data in the system. There is a checklist that must be completed for every vehicle. If something doesn't match, we immediately hold the document and confirm with the respective taxpayer via WhatsApp or phone." Mrs. Retno Wulandari, SAMSAT Administrative Officer

Based on the interview response above, it can be understood that the administrative function in PAK LEMAN service is not merely procedural but strategically serves as a guarantor of accuracy before documents enter the distribution stage. The existence of a standardized checklist instrument constitutes evidence of effective coordination formalization. This aligns with Mintzberg's (1979) perspective that procedural formalization is the most reliable coordination mechanism in organizations handling routine work that carries high risk if errors occur.

SERVQUAL-Based Service Quality Evaluation of PAK LEMAN

The service quality evaluation of PAK LEMAN in this sub-section utilizes the SERVQUAL model (Zeithaml, Parasuraman & Berry, 1988) as a qualitative analytical framework. Assessment of each dimension is based on field data obtained through in-depth interviews with eight informants and direct observation of service operations. This approach does not employ numerical scores but rather interprets experiences, perceptions, and field facts per dimension, consistent with the descriptive qualitative research paradigm that emphasizes depth of understanding of the studied phenomena (Moleong, 2017).

Reliability

The reliability dimension refers to the service's ability to deliver promised services accurately and consistently (Zeithaml et al., 1988). Based on operational data obtained from the field, the PAK LEMAN service conducted 391 visits during the 2023–2024 period with a total of 2,580 vehicles successfully served (Table 3). No cases of mismatched STNK documents, wrong addresses, or delivery failures were recorded during that period based on UPTD SAMSAT Manyar reports. This demonstrates that the multi-layered verification system applied from double-checking at the office to identity confirmation at the taxpayer's location has functioned effectively in maintaining document handover accuracy.

In terms of timeliness, the PAK LEMAN service operates within the schedule communicated to taxpayers, namely from 09:00 to 12:00 WIB on working days. Mrs. Tri Wahyuni affirmed the service consistency she experienced:

"When I registered, I was given a schedule around ten in the morning. The officers arrived at half past ten, exactly as promised. The STNK was also handed over immediately no long waiting required. I have used PAK LEMAN twice, and both times there were no problems whatsoever." Mrs. Tri Wahyuni, Taxpayer

Based on the interview response above, it is evident that the reliability of PAK LEMAN service is manifested not only in the quantitative data of continuously increasing visit numbers but also in the consistency of positive experiences felt by users across visits. This consistency demonstrates that operational service procedures have been well-institutionalized. In public service quality studies, reliability is the most determinant dimension as it directly relates to user trust in the service promise stated by the service provider (Parasuraman et al., 1988).

Responsiveness

The responsiveness dimension measures the willingness and readiness of officers to provide services quickly and responsively to user needs (Zeithaml et al., 1988). Based on field data, the PAK LEMAN registration channel through SAMSAT Manyar's official WhatsApp recorded schedule confirmation responses provided within hours of receiving registrations significantly faster than the conventional queuing process at the office, which often consumed half to a full working day. Additionally, based on field observation, officers also actively used WhatsApp to notify taxpayers of any data issues requiring

resolution before the visit, enabling problems to be anticipated well before officers arrived at the location. Mr. Suryanto, a business owner, described his experience of service responsiveness comparatively:

"I registered via WhatsApp, and within hours received schedule confirmation from SAMSAT. When a vehicle's data needed updating first, the officers immediately informed me through chat and helped arrange a solution. The response was fast no need to wait days like when I handled things at the office in person." Mr. Suryanto, Taxpayer

Based on the interview response above, it can be concluded that the PAK LEMAN service response speed is significantly perceived by taxpayers as a tangible improvement over conventional services. Nevertheless, it should be noted that the perceived response speed was influenced by registration timing registrations submitted in the morning had a greater chance of receiving faster confirmation than those submitted toward midday. This indicates that service responsiveness still has potential for improvement through the addition of administrative personnel or the development of automated confirmation systems. According to Dunn (2012), optimal responsiveness must be able to satisfy the real needs of target groups equitably, not only for a portion of users fortunate enough to register earlier.

Assurance

The assurance dimension encompasses the knowledge, courtesy, and ability of officers to instill feelings of trust and security in service users (Zeithaml et al., 1988). From field data, several facts directly support the fulfillment of this dimension. First, all PAK LEMAN officers are required to wear official uniforms with clearly visible ID cards during visits. Second, every STNK document is dispatched in sealed envelopes bearing the official SAMSAT Manyar logo not plain, unidentified envelopes. Third, the recipient identity verification protocol (matching ID card against system data) is executed without exception before documents are handed over. Fourth, all external delivery partners are required to undergo specialized training and sign confidentiality agreements before being deployed. These four protocols collectively form structured layers of assurance. Mrs. Farida Hanum, who initially harbored doubts about service security, described her change in perception after using PAK LEMAN:

"Initially, I was somewhat hesitant about whether it was safe to simply hand over vehicle data. But when the officer arrived, he wore a complete uniform, had his ID card, and asked me to present my original ID card before handing over the STNK. I felt protected. The documents were also in an official SAMSAT envelope, not a plain one. The impression of professionalism was very strong." Mrs. Farida Hanum, S.E., Taxpayer

Based on the interview response above, it can be understood that the initial doubt experienced by Mrs. Farida represents a common psychological challenge faced by taxpayers when first encountering a door-to-door service involving documents of high legal value. The fact that such doubt was successfully eliminated through a single initial physical interaction with the officer demonstrates that the assurance protocols implemented by SAMSAT Manyar function effectively as a trust-building mechanism. This finding is

relevant to Hasenfeld (1992), who affirms that public trust in government services is built from physical interactions that can be directly observed, not merely from policy declarations.

Empathy

The empathy dimension refers to the genuine care of officers and the personal attention given to every service user (Zeithaml et al., 1988). Based on field observation, PAK LEMAN officers did not merely execute the core tasks of delivering and validating STNK documents but also provided additional explanations to taxpayers regarding tax information such as how to check tax status online, upcoming tax due dates, and procedures for vehicle data changes. This behavior occurred voluntarily, without taxpayer request, and was not stipulated in the formal PAK LEMAN service SOPs. Mrs. Tri Wahyuni recounted her experience regarding the personal attention received from officers:

"The officer who came to my home also took time to explain how to check tax status through the application. Without being asked, he voluntarily helped. That is what makes it pleasant feeling genuinely served, not merely a formality." Mrs. Tri Wahyuni, Taxpayer

Based on the interview response above, it is evident that PAK LEMAN officers provided added value to taxpayers that exceeded their baseline expectations of the service. The expression "feeling genuinely served, not merely a formality" explicitly illustrates the distinction between mechanistic service and humanistic service. According to Denhardt and Denhardt (2003), under the New Public Service paradigm, citizens should be treated as active partners entitled to full attention not mere passive service recipients. The empathetic behavior demonstrated by PAK LEMAN officers aligns with this spirit, although it should be noted that such behavior remains individual in nature and has not been formally standardized within the service SOPs.

Tangibles

The tangibles dimension encompasses the appearance of facilities, equipment, personnel, and communication materials directly visible to service users (Zeithaml et al., 1988). Based on field observation, the PAK LEMAN service presented several observable tangible elements: (a) officers wore official SAMSAT-identified uniforms with ID cards affixed at chest level; (b) STNK documents were packaged in sealed envelopes bearing the SAMSAT Manyar logo and name; (c) officers' operational vehicles were in roadworthy condition, although not yet fully bearing the official SAMSAT logo; and (d) officers carried tablets or printed physical forms for the validation and document handover process in the field.

Nevertheless, field observations also identified several tangible aspects that could still be improved. Not all officers used vehicles visually identified as official SAMSAT fleet, causing first-time users to occasionally experience confusion in recognizing the officers who arrived. Furthermore, no printed information materials were left with taxpayers after service completion such as service guide cards, complaint contact numbers, or tax information brochures which could actually function as educational tools and PAK LEMAN brand

reminders. This condition was acknowledged by Mrs. Sari Dewi Rahayu as an aspect still undergoing improvement:

"Uniforms and envelopes are already standardized. However, for operational vehicles, we cannot yet standardize them as they depend on each officer's personal vehicle. Going forward, we propose procuring dedicated PAK LEMAN operational vehicles so they are more easily recognized by taxpayers in the field."
Mrs. Sari Dewi Rahayu, S.AP., PAK LEMAN Service Coordinator

Based on the interview response above, it can be concluded that SAMSAT Manyar is aware of the gap in the tangibles dimension and is actively planning improvements. This awareness represents important capital for continuous service quality enhancement. Zeithaml et al. (1988) affirm that improvements in the tangibles dimension while not always requiring large investments can produce significant perceptual impacts on the overall service quality assessment, particularly during the first encounter between officers and taxpayers who have never previously used the PAK LEMAN service.

Analysis of PAK LEMAN Innovation Based on Rogers' (2003) Attributes

Rogers (2003), in his innovation diffusion theory, posits that the speed and breadth of innovation adoption are determined by five perceptual attributes assessed by potential adopters: (1) Relative Advantage, (2) Compatibility, (3) Complexity, (4) Trialability, and (5) Observability. The higher the relative advantage, compatibility, trialability, and observability of an innovation and the lower its complexity the faster the innovation will be adopted by the public. These five attributes serve as the analytical framework for an in-depth evaluation of why the PAK LEMAN service grew from 45 visits in Semester I 2023 to 156 visits in Semester II 2024 a cumulative growth of 246.7 percent over two years of operation.

Relative Advantage

Relative advantage is defined as the degree to which an innovation is perceived as better than the idea, practice, or service it supersedes (Rogers, 2003). This attribute is the strongest predictor of innovation adoption speed the higher the perceived relative advantage, the faster the innovation is adopted. In the context of PAK LEMAN service, its relative advantage over conventional services at the SAMSAT office can be identified across several dimensions. First, the time dimension: taxpayers need not devote an entire day to processing STNK at the SAMSAT office. Based on field data, the average queuing duration at the SAMSAT office on busy days could reach two to three hours, whereas the handover process in PAK LEMAN service takes less than 30 minutes at the taxpayer's location. Second, the accessibility dimension: taxpayers geographically distant from the SAMSAT office, or bound by working hours, gain service access that was previously unavailable to them. Third, the group dimension: the minimum requirement of five vehicles enables taxpayers to utilize officer time efficiently and build solidarity within housing complexes or office communities to collectively process tax payments.

Mrs. Farida Hanum, a private sector employee, described the relative advantage she experienced directly:

"Previously, I had to request half a day off work just to queue at SAMSAT. Now with PAK LEMAN, I simply register via WhatsApp, indicate my available schedule, and the officers come to my office or home. My time is not wasted, my work is not disrupted. It truly saves both time and effort." Mrs. Farida Hanum, S.E., Taxpayer

Based on the interview response above, it is evident that the relative advantage of PAK LEMAN service is tangible and immediately felt in taxpayers' daily lives. The time advantage experienced by Mrs. Farida is not merely a convenience but represents a real reduction in opportunity cost that taxpayers previously had to bear when using conventional services. The visit growth data reaching 73.3 percent in Semester II 2023 the first semester of intensive outreach empirically confirms that PAK LEMAN's relative advantage is highly perceived by the productive segment of society, which constitutes the service's primary user base.

Compatibility

Compatibility refers to the degree to which an innovation is perceived as consistent with existing values, past experiences, and the needs of potential adopters (Rogers, 2003). Innovation incompatible with existing values and practices will face greater resistance from society. The PAK LEMAN service demonstrates a very high degree of compatibility with the needs and lifestyle of Surabaya's urban community across several aspects. First, technological compatibility: the use of WhatsApp as the registration channel is a highly appropriate choice, as the application has become an inseparable part of Indonesian citizens' daily lives. Based on We Are Social (2024) data, WhatsApp penetration in Indonesia reaches over 90 percent of active smartphone users, making technical adoption barriers extremely low. Second, needs compatibility: increasing traffic density in Surabaya and the high proportion of working-age population bound by office hours create a genuine need for services that save travel time.

Mr. Suryanto, a business owner, described the compatibility of the service with his routine:

"I am a business owner my working hours cannot be casually abandoned. If I had to queue at SAMSAT, half a day would be lost. PAK LEMAN is perfectly suited for people like me simply WhatsApp, set a convenient schedule, done. No need to leave the office, no traffic hassles." Mr. Suryanto, Taxpayer

Based on the interview response above, it can be concluded that the PAK LEMAN service has successfully fit itself into the activity patterns and time constraints of the urban productive community. This confirms Rogers' (2003) argument that innovations designed based on deep understanding of the needs and routines of potential adopters will experience considerably faster adoption. The data in Table 4 also demonstrates this compatibility spatially: the three sub-districts with the highest usage (Rungkut 28.6%, Sukolilo 22.0%, Tambaksari 18.2%) are areas characterized by high-activity communities most in need of service time flexibility.

Complexity

Complexity is defined as the degree to which an innovation is perceived as difficult to understand and use (Rogers, 2003). Unlike the other four attributes, complexity correlates negatively with adoption speed the more complex an innovation, the slower it is adopted. From the registration procedure perspective, the PAK LEMAN service possesses relatively low complexity: taxpayers simply contact SAMSAT Manyar's official WhatsApp, submit the vehicle count and basic data, then await visit schedule confirmation. No special application downloads are required, no complex online forms need to be completed, and no technical requirements prevent taxpayers with intermediate digital literacy from accessing this service. Nevertheless, one aspect potentially increases perceived complexity: the minimum requirement of five vehicles per visit. This requirement structurally excludes individual taxpayers who own only one or two vehicles. Service coordinator Mrs. Sari Dewi Rahayu explained the background and challenges of this requirement:

"The five-vehicle requirement is actually for our operational efficiency. If officers must travel a long distance for just one vehicle, the cost and time are disproportionate. But we acknowledge this becomes a barrier for taxpayers who wish to use the service individually. That is why we advise them to join with neighbors or their housing complex before registering." Mrs. Sari Dewi Rahayu, S.AP., PAK LEMAN Service Coordinator

Based on the interview response above, it can be understood that the minimum five-vehicle requirement constitutes a structural adoption barrier that creates individual taxpayer dependence on group availability. This condition aligns with Rogers' (2003) concept of a complexity barrier an innovation element that complicates access for potential users, even though the innovation itself would be beneficial to them. This finding also confirms the data in Table 4, where Gunung Anyar Sub-district with its more dispersed residential characteristics and lower density experiences greater difficulty meeting the minimum vehicle threshold, resulting in usage of only 4.9 percent of total visits.

Trialability

Trialability refers to the degree to which an innovation can be tried on a limited basis before taxpayers decide to adopt it fully (Rogers, 2003). Innovation that can be tried without significant commitment will be more quickly adopted because the perceived risk for potential users is lower. The PAK LEMAN service demonstrates a high degree of trialability for several reasons. First, no additional costs: taxpayers are not charged any service fee beyond the existing tax obligation. There are no subscription fees, registration fees, or delivery charges, making the financial risk of trying this service zero. Second, no long-term commitment: each use of the PAK LEMAN service is transactional and does not bind taxpayers to using the service in the future. Third, transparent verification process: before actually using the service, taxpayers can access information and reviews from previous users through their housing community or colleagues. Mrs. Tri Wahyuni described how her first trial experience shaped her decision to continue using the PAK LEMAN service:

"I first tried it because the neighborhood chief invited me saying there was no additional cost. It was indeed genuinely free, and the process went smoothly. After that, I kept using it. In fact, now I'm the one inviting other neighbors to join whenever there is a delivery schedule." Mrs. Tri Wahyuni, Taxpayer

Based on the interview response above, it is evident that the positive and risk-free trial experience constitutes the critical turning point that transformed Mrs. Tri Wahyuni from a tentative user into an active user who even recruits new ones. This pattern confirms the diffusion mechanism described by Rogers (2003): when trialability is high and the first experience is satisfying, users tend to migrate from the trial phase to the adoption phase permanently, even serving as informal diffusion agents within their community.

The Head of UPTD SAMSAT Manyar, Mr. Agus Widodo, affirmed this no-additional-cost policy as a strategic decision:

"From the outset, we decided that PAK LEMAN must have no additional costs. If there were charges, taxpayers would certainly think differently they would calculate whether it was worth it or not. With it being free, there is nothing to deliberate. Simply register, wait for the officer, done." Mr. Agus Widodo, S.STP., M.Si., Head of UPTD SAMSAT Manyar

Based on the interview response above, it can be understood that the decision to not impose additional charges was a strategic choice deliberately designed to maximize the trialability of PAK LEMAN service. This decision also reflects the SAMSAT Manyar leadership's understanding of innovation adoption psychology that eliminating financial barriers is the most effective way to encourage first-time trials that will ultimately generate long-term adoption.

Observability

Observability refers to the degree to which the results of an innovation can be seen by others (Rogers, 2003). Innovation whose results are easily observed will spread more quickly because others can see its benefits directly and be motivated to try it. In the context of the PAK LEMAN service, observability manifests through several mechanisms. First, physical visibility: the arrival of SAMSAT-uniformed officers at housing complexes or office environments is an event that naturally attracts the attention of surrounding residents. Second, communal effect: because the service requires a minimum of five vehicles per visit, the process takes place in open spaces or communal parking areas visible to residents not currently using the service. Third, concrete and immediate results: the STNK handed over directly in front of the owner constitutes tangible evidence easily communicable to others. These three mechanisms collectively create a powerful demonstration effect at the neighborhood level.

Service Coordinator Mrs. Sari Dewi Rahayu explained the organic diffusion phenomenon that has now become the primary growth driver of PAK LEMAN users:

"Now many register because they personally witnessed their neighbors being served by PAK LEMAN. They inquire directly and then register together. Some even photograph the process and share it to the housing complex's WhatsApp group. We no longer need extensive outreach satisfied users become the

‘salespeople’ for our service.” Mrs. Sari Dewi Rahayu, S.AP., PAK LEMAN Service Coordinator

Based on the interview response above, it can be concluded that the high observability possessed by PAK LEMAN service has successfully created a self-spreading system no longer dependent on formal outreach from SAMSAT Manyar. The phenomenon of sharing photos and stories through housing complex WhatsApp groups represents concrete evidence of the organic diffusion process that Rogers (2003) predicts will occur when innovation observability is high. The strongest data confirming this observability is the visit growth trend that remains positive above 39 percent per semester despite the absence of significant increases in active SAMSAT outreach intensity demonstrating that diffusion is now driven from below by the user community itself. The entire diffusion attribute analysis can be summarized in the following table:

Table 5. Recapitulation of PAK LEMAN Innovation Diffusion Attribute Analysis Based on Rogers (2003)

Rogers’ Attribute	Field Data Evidence	Implication for Adoption
Relative Advantage	246.7% growth in 2 years; time savings ≥ 2 hours per visit	Rapid adoption among the productive segment
Compatibility	Use of WhatsApp (penetration $> 90\%$); dominant in high-activity sub-districts	Very low technological adoption barrier
Complexity	3-step registration procedure; minimum 5-vehicle requirement barrier	Group adoption easier than individual
Trialability	Zero additional costs; no long-term commitment	Very low risk of trying
Observability	Organic diffusion via housing WhatsApp groups; officers as “walking promotions”	Independent user growth without formal outreach

Source: Primary data from interviews and observation, processed, 2025

Supporting and Inhibiting Factors of PAK LEMAN Implementation

Supporting Factors

Based on data triangulation of interviews, observation, and documentation, three primary factors support the successful implementation of the PAK LEMAN service. First, strong leadership commitment from the Head of UPTD SAMSAT Manyar in fostering a culture of innovation. Second, written SOPs covering all service stages, thereby minimizing procedural errors. Third, the utilization of WhatsApp as a real-time communication channel enabling rapid coordination among all service actors.

Inhibiting Factors

Conversely, three inhibiting factors were identified from the field. First, the minimum five-vehicle requirement limiting individual taxpayer accessibility.

Second, limited area coverage restricted to six East Surabaya sub-districts, reflected in the low usage in Gunung Anyar Sub-district (4.9%, Table 4). Third, the limited number of delivery officers during high-demand periods, as acknowledged by Mr. Dwi Prasetyo:

"When many register on the same day, sometimes we have to reschedule some of the taxpayers. We do not yet have sufficient personnel to serve everyone simultaneously, especially at the end of the month, which is typically the busiest." Mr. Dwi Prasetyo, PAK LEMAN Delivery Officer

Based on the interview response above, it can be concluded that personnel capacity limitation constitutes a structural barrier with the potential to diminish the reliability and responsiveness dimensions during certain periods. This condition illustrates the classic challenge in public service innovation implementation, where rapid demand growth is not always matched by proportionate resource capacity enhancement (Mulgan & Albury, 2003). Strengthening personnel capacity and more structured service scheduling represent strategic recommendations that need to be prioritized by SAMSAT Manyar going forward.

CONCLUSION

Based on the analysis and discussion results, the PAK LEMAN service developed by UPTD SAMSAT Manyar has proven successful as a Last-mile delivery innovation in public service, marked by a visit growth of 246.7 percent over two years of operation (2023–2024) with a total of 2,580 vehicles served, supported by effective internal coordination mechanisms and the assurance dimension as the service's primary strength, although the responsiveness and tangibles dimensions still require improvement. Rogers' innovation diffusion analysis confirms the high adoption rate of this service among urban communities, with the minimum requirement of five vehicles per visit as the primary barrier needing reconsideration. Going forward, UPTD SAMSAT Manyar is recommended to lower the visit threshold and strengthen the visual identity of field officers, while Bapenda East Java needs to develop a blueprint for replicating this model to other SAMSAT offices, and future researchers are encouraged to develop larger-scale quantitative studies to measure the service's impact on aggregate motor vehicle tax compliance.

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