

## **E-GOVERNMENT IN TAX SERVICES: THE EFFECTIVENESS OF THE ELECTRONIC FILING SYSTEM**

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### **ABSTRACT**

This research aims to define and elaborate on the effectiveness of e-government in the Electronic Filing System (E-Filing) at the Tax Service Office (KPP) Pratama Pekanbaru Tampan, Pekanbaru City. The research method utilizes a qualitative approach, and descriptive analysis to elaborate on issues using the theory of e-government effectiveness according to Sigwejo & Pather (2016). This study found that the implementation of E-Government in the form of the Electronic Filing System (E-Filing System) at the Tax Service Office (KPP) Pratama Pekanbaru Tampan has not been effectively and maximally executed. This is due to many taxpayers experiencing difficulties in using the system because of inadequate socialization and training, as well as suboptimal technological facilities. Although public interest in using e-government services is quite high, infrastructure limitations and technical support hinder its usage, resulting in low public satisfaction with this service. To enhance effectiveness, improvements in facilities, socialization, training, and technological infrastructure are required to fulfill public expectations and satisfaction. Based on the analysis conducted, to enhance the effectiveness of the E-Filing System at KPP Pratama Pekanbaru Tampan, it is recommended that socialization and training programs for taxpayers be intensified and sustained, technological infrastructure be improved and enhanced, responsive technical assistance services be provided, periodic system evaluation and improvement be conducted, and feedback from taxpayers be collected and analyzed for further enhancement. The study implies that for the E-Filing System at KPP Pratama Pekanbaru Tampan to be more effective, several key areas need attention and improvement.

**Key words:** E-Government; Tax Services; Effectiveness

## **E-GOVERNMENT DALAM LAYANAN PAJAK: EFEKTIVITAS ELECTRONIC FILING SYSTEM (E-FILING)**

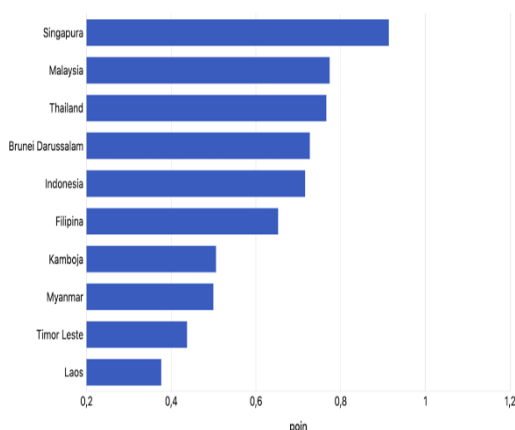
### **ABSTRAK**

Tujuan dari penelitian ini adalah untuk mendefinisikan dan menguraikan Efektivitas E-Government dalam Sistem Pengarsipan Elektronik (E-Filing) di Kantor Pelayanan Pajak (KPP) Pratama Pekanbaru Tampan, Kota Pekanbaru. Metode penelitian menggunakan pendekatan kualitatif, dengan menggunakan bibliometrik untuk mengidentifikasi kesenjangan penelitian, dan analisis deskriptif untuk menguraikan masalah menggunakan teori efektivitas e-government menurut Sigwejo & Pather (2016). Penelitian ini menemukan bahwa implementasi E-Government dalam bentuk Sistem Pengarsipan Elektronik (E-Filing System) di Kantor Pelayanan Pajak (KPP) Pratama Pekanbaru Tampan belum dilaksanakan secara efektif dan maksimal. Hal ini disebabkan banyak wajib pajak mengalami kesulitan dalam menggunakan sistem karena kurangnya sosialisasi dan pelatihan yang memadai, serta fasilitas teknologi yang suboptimal. Meskipun minat masyarakat dalam menggunakan layanan e-government cukup tinggi, keterbatasan infrastruktur dan dukungan teknis menghambat penggunaannya, sehingga kepuasan masyarakat terhadap layanan ini rendah. Untuk meningkatkan efektivitas, perlu dilakukan perbaikan fasilitas, sosialisasi, pelatihan, dan infrastruktur teknologi guna memenuhi harapan dan kepuasan masyarakat. Berdasarkan analisis yang dilakukan, untuk meningkatkan efektivitas Sistem E-Filing di KPP Pratama Pekanbaru Tampan, disarankan agar program sosialisasi dan pelatihan bagi wajib pajak diperkuat dan berkelanjutan, infrastruktur teknologi ditingkatkan dan diperbaiki, layanan bantuan teknis yang responsif disediakan, evaluasi dan perbaikan sistem secara berkala dilakukan, serta masukan dari wajib pajak dikumpulkan dan dianalisis untuk peningkatan lebih lanjut. Penelitian ini mengimplikasikan bahwa agar Sistem E-Filing di KPP Pratama Pekanbaru Tampan lebih efektif, ada beberapa hal utama yang perlu mendapat perhatian dan perbaikan.

**Kata kunci:** E-Government; Layanan Pajak; Efektivitas

## INTRODUCTION

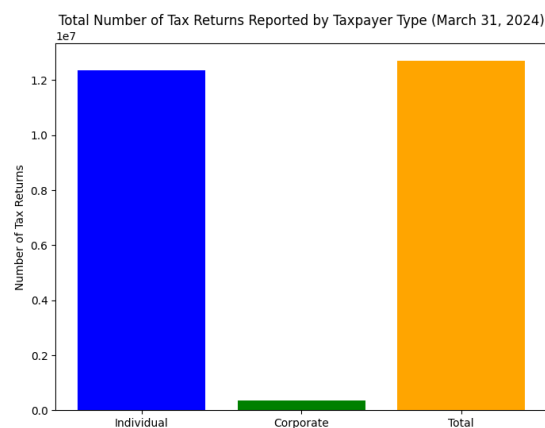
E-government refers to the situation where governance processes are conducted with the assistance of information and communication technology (ICT), particularly the internet. Currently, every country in the world has at least one e-government product. Measuring the level of e-government implementation becomes important for comparing e-government achievements globally. One of the main references to assess the performance of e-government in each country is the UN E-Government Survey, regularly published by the United Nations. Through e-government, citizens can be directly involved in governance management, public services, and policy-making. The use of e-government demonstrates the government's commitment to transparency and accountability, thus building public trust in the government. In this context, the e-filing system in tax services is one concrete example of e-government implementation.



**Figure 1. E-Government Development Index (EGDI) scores in Southeast Asia**

Source: United Nations (UN)

Indonesia, according to the United Nations (UN) report in 2022, has an E-Government Development Index (EGDI) score of 0.7160 out of 1, placing it fifth out of ten countries in Southeast Asia and 77th globally. Despite experiencing an improvement from the previous year, the country still lags behind Singapore, Malaysia, Thailand, and Brunei Darussalam. Therefore, Indonesia needs to continue enhancing the implementation of e-government to catch up. Here is the data on the Annual Tax Return (SPT) reported in 2024 in Indonesia:



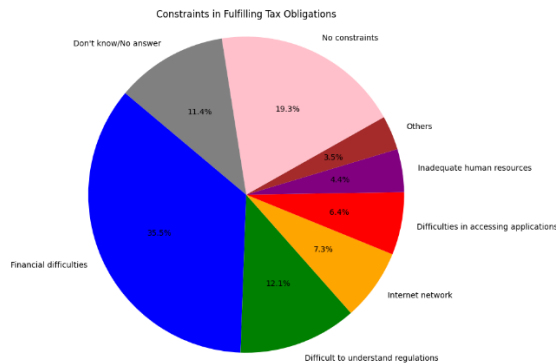
**Figure 2. Total Number Of Tax Returns Reported by Taxpayer Type 2024**

Source: Research Analysis, 2024

Based on the given data, the total number of Annual Tax Returns (SPT) reported on March 31, 2024, is divided by taxpayer type as follows: Individuals with a total of 12,349,437 and Corporations with a total of 348,317, reaching a total of 12,697,754. From this total, it can be seen that the majority of reporting comes from individual taxpayers, while reporting from corporations is much lower. Additionally, the data also reveals details about the methods of reporting Annual Tax Returns, where the majority are done through e-filing (10,897,233 taxpayers), followed by reporting through e-form (1,407,493 taxpayers), e-SPT (16 taxpayers), and manual reporting (393,012 taxpayers). It is evident that reporting through e-filing is the preferred choice for taxpayers, which is the most commonly used electronic reporting method. Although reporting through e-form is also significant, the number of reports through e-SPT and manual reporting is significantly lower. Considering this data, the government or relevant institutions can evaluate the effectiveness of the existing reporting system and possibly identify areas where manual reporting still dominates. This can help in efforts to improve the system or increase awareness of electronic reporting among taxpayers.

In the field of taxation, the implementation of e-government through the e-filing system is crucial. This system allows taxpayers to access government services online, which is expected to support the acceleration of electronic tax collection. E-filing, launched on January 24, 2005, is a service for filling and submitting Taxpayer Notification Letters electronically through a real-time online system to the Directorate General of Taxes via the

internet or through Application Service Providers appointed by the Directorate General of Taxes (Marliana et al., 2015).



**Figure 3. Constraints in Fulfilling Tax Obligations**

Source: Research Analysis, 2024

However, the implementation of the tax system in Indonesia has not been fully optimal. The compliance rate and awareness among taxpayers are still low. Based on a political indicator survey conducted with 1,246 selected respondents through telephone interviews from July 9-12, 2022, there are still 36.3% of respondents who find it difficult to fulfill their tax obligations. Taxpayers' constraints include poor financial conditions (35.5%), complex tax regulations (12.1%), unstable internet networks (7.3%), and difficult-to-access tax applications (6.4%). Another constraint is the inadequacy of Human Resources (HR) in the tax field. The bar graph illustrates the total number of Annual Tax Returns (SPT) reported by taxpayer type on March 31, 2024. From the graph, it can be seen that the number of SPTs reported by individual taxpayers (12,349,437) is much higher than the number reported by corporate taxpayers (348,317), totaling 12,697,754. Additionally, the data also provides details about the method of reporting Annual Tax Returns. The majority of taxpayers choose to report their SPTs through e-filing, with a total of 10,897,233 taxpayers. Reporting through e-form is also significant, with a total of 1,407,493 taxpayers. However, the number of taxpayers reporting through e-SPT and manual reporting is much lower, with only 16 taxpayers and 393,012 taxpayers, respectively. This analysis shows that although the majority of reporting is done electronically through e-filing and e-form, there is still a small portion of taxpayers who choose to report manually. This may be a consideration for the government to continue increasing awareness and ease of access to the electronic reporting

system to improve the overall efficiency and accuracy of tax reporting.

Therefore, the data provided reveals several crucial aspects related to tax reporting and the use of electronic reporting systems. First, the data shows that the majority of SPT reporting comes from individual taxpayers, while reporting from corporate taxpayers is much lower. This indicates the need for special attention to improve the efficiency of tax reporting from corporations. Furthermore, the data also indicates that the majority of reporting is done through electronic systems, especially through e-filing and e-form. This signifies a trend towards the use of technology in tax reporting, which has the potential to improve efficiency, accuracy, and reduce administrative costs. However, despite many taxpayers using electronic systems, there is still a small portion opting for manual reporting. This may be due to constraints such as financial issues, difficulty understanding regulations, or limited internet access. Considering this analysis, it becomes clear that research on the implementation and effectiveness of the Electronic Filing System (EFS) in tax services is highly relevant and important. Such research will help evaluate the effectiveness of the EFS in improving the efficiency, accuracy, and quality of tax reporting. Additionally, this research can identify the constraints faced by taxpayers in using the EFS and formulate strategies to increase taxpayer participation in electronic tax reporting. Thus, this research will make a significant contribution to improving overall tax efficiency, transparency, and compliance.

## METHOD

Research methodology is a scientific approach to obtain data with specific purposes and uses (Sugiyono, 2019). This study employs a qualitative approach. Creswell (in Kusumastuti & Khoiron, 2020) asserts that qualitative research is conducted to explore and understand meanings that are perceived by individuals or groups as originating from social or human issues. Furthermore, Sugiyono (2019) explains that qualitative research methods are considered artistic methods because the research process tends to be artistic (less structured). Sugiyono also explains that qualitative research methods are also referred to as interpretive methods because the research findings are based on the interpretation of the data found in the field. Creswell (in Kusumastuti & Khoiron, 2019).

The data collection techniques used in this research consist of four main methods. First, observation is conducted by the researcher through direct observation at the research location, namely the Pekanbaru Tampan Primary Tax Office, to observe facts related to the effectiveness of E-government on the e-filing system. Second, in-depth interviews are conducted face-to-face, where the researcher asks direct questions to the relevant parties to obtain the needed information. This interview aims to obtain oral data that can explain the research problem and is conducted in accordance with guidelines based on the concepts or variables from the theory used. Third, documentation is used to collect data through records or documents at the research location or other sources related to the research object, including files, photos, and public documents provided by the relevant agencies. Finally, a literature review is conducted by searching for relevant literature in the library, studying concepts and theories from various sources, and reviewing written materials and relevant lecture materials to support problem-solving in this research.

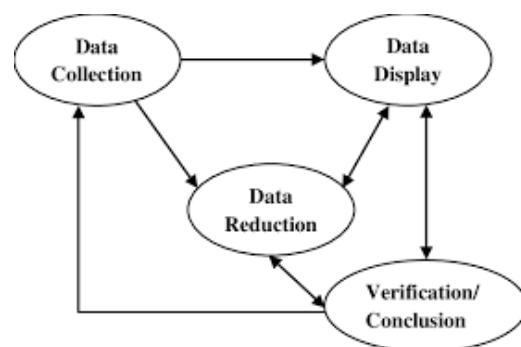
**Table 1. Research Informant**

NO.	INFORMANT	DUTIES AND FUNCTIONS	DESCRIPTION
1.	Head and Staff of Data Quality Assurance (PKD) Section	<ul style="list-style-type: none"> <li>- Data collection, retrieval, and processing</li> <li>- Presentation of tax information</li> <li>- Technical computer support services</li> <li>- Monitoring of e-SPT and e-filing applications</li> </ul>	Informant 1 (1 person)
2.	Head of Service Section	<ul style="list-style-type: none"> <li>- Determination and issuance of tax law products</li> <li>- Administration of tax documents and files</li> <li>- Receipt and processing of tax notifications and other letters</li> <li>- Serving taxpayer registration</li> </ul>	Informant 3 (1 person)
3.	Account Representative	<ul style="list-style-type: none"> <li>- Potential exploration and intensification</li> <li>- Monitoring taxpayer compliance</li> <li>- Collection and management of data and information</li> </ul>	Informant 4 (1 person)

NO.	INFORMANT	DUTIES AND FUNCTIONS	DESCRIPTION
4.	Taxpayer	<ul style="list-style-type: none"> <li>- Registering oneself</li> <li>- Calculating owed taxes</li> <li>- Paying owed taxes and tax arrears</li> <li>- Reporting tax returns</li> </ul>	Informant (unlimited number)

Source: Research Analysis, 2024

The selection of informants in this study was done through key persons using purposive sampling method, where informants were chosen based on specific criteria and relevant competencies. Selected informants were those who understood the issues and were willing to provide complete and accurate information. Data analysis utilized the interactive model technique by Miles & Huberman (1992), which comprises three stages: data reduction, data display, and conclusion drawing. Data reduction involves selection, focus, simplification, and transformation of raw data into summaries, codes, themes, and memos. Data display is the process of organizing information to enable drawing conclusions and further actions based on understanding of the data. Conclusion drawing or verification involves reviewing research findings to test the truthfulness, strength, and appropriateness of meanings emerging from the data, resulting in conclusions that underpin decision-making.



**Figure 4. Data Analysis**

Source: Miles and Huberman, 1992

## RESULTS AND DISCUSSION

The city of Pekanbaru is home to two Primary Tax Service Offices, namely KPP Pratama Pekanbaru Tampan and KPP Pratama Pekanbaru Senapelan. KPP Pratama Pekanbaru Tampan has a larger number of Individual

Taxpayers, totaling 242,329 individuals, while KPP Pratama Pekanbaru Senapelan has only 127,898 individuals. However, the implementation of e-filing at KPP Pratama Pekanbaru Tampan is not yet fully effective. Some challenges faced include the increase in the number of Individual Taxpayers, which has not been accompanied by a high level of compliance among them in reporting Annual Tax Returns (SPT) via e-filing, inadequate online server capacity leading to frequent downtimes, lack of knowledge among taxpayers regarding tax modernization, and low levels of technological skills and digital literacy among taxpayers. Based on this background, this research will analyze the effectiveness of e-government in tax services with a focus on the effectiveness of the Electronic Filing System at the Tax Service Office (KPP) Pratama Pekanbaru Tampan. This study will use the e-government effectiveness theory according to Sigwejo & Pather (2016), which includes five dimensions: Citizens Expectations, Facilitating Conditions, Intention to Use e-Government Service, Use of e-Government Service, and Citizen Satisfaction.

The Analysis of E-Government Effectiveness in Tax Services: The Effectiveness of the Electronic Filing System at the Tax Service Office (KPP) Pratama Pekanbaru Tampan is based on the e-government effectiveness theory by Sigwejo & Pather (2016). This analysis examines the effectiveness of the implementation of the e-filing system at KPP Pratama Pekanbaru Tampan using five dimensions: Citizens Expectations, Facilitating Conditions, Intention to Use e-Government Service, Use of e-Government Service, and Citizen Satisfaction.

#### 1. Citizens Expectations

The community expects the e-filing system to simplify and expedite the process of reporting the Tax Return (SPT). However, the implementation of e-filing at KPP Pratama Pekanbaru Tampan has not fully met these expectations. The number of Individual Taxpayers (WPOP) increased from 2020 to 2022, but the compliance rate of WPOP in reporting SPT via e-filing remains low. This indicates that the community's expectations regarding the ease and speed of the reporting process have not been fulfilled.

#### 2. Facilitating Conditions

The supporting facilities for implementing e-filing at KPP Pratama Pekanbaru Tampan are not adequate. The insufficient capacity of the online server often

leads to server downtime, especially during the final period of reporting SPT. This hampers taxpayers' access to report SPT in a timely manner, indicating that the facility's conditions are not yet capable of supporting the optimization of e-filing usage.

#### 3. Intention to Use e-Government Service

Taxpayers' interest in using e-filing services is influenced by their knowledge and skills in technology as well as digital literacy. Many taxpayers, especially newcomers, are still unfamiliar with tax modernization and lack technological skills. This reduces their interest in using e-filing services because they find it challenging to understand the stages of reporting SPT via e-filing.

#### 4. Use of e-Government Service

The use of e-filing in KPP Pratama Pekanbaru Tampan is not yet optimal. Despite the increase in the number of individual taxpayers (WPOP), the level of compliance in reporting SPT via e-filing remains low. Difficulties in accessing the server and lack of technological skills and digital literacy among taxpayers are the main factors hindering the maximum utilization of this service.

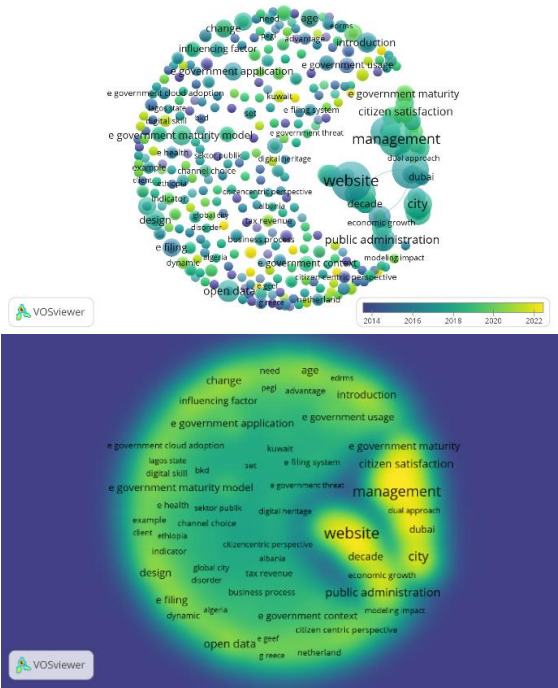
#### 5. Citizen Satisfaction

Citizen satisfaction with the e-filing service at KPP Pratama Pekanbaru Tampan has not yet been achieved. Technical issues such as inadequate server capacity and insufficient taxpayer knowledge contribute to dissatisfaction with the SPT reporting process. To enhance satisfaction, there is a need for increased server capacity and further education for taxpayers regarding e-filing usage.

The analysis evaluating the effectiveness of the e-filing system implementation at KPP Pratama Pekanbaru Tampan across these five dimensions reveals several relevant findings related to factors discussed in previous research (Asnifah & Fahriani, 2024). Firstly, in the dimension of "Citizens Expectations," it highlights society's expectations regarding the e-filing system to simplify and expedite the process of reporting SPT. However, the findings indicate that these expectations have not been fully met, especially concerning the low level of compliance among Individual Taxpayers (WPOP) in reporting SPT via e-filing. Secondly, in the dimension of "Facilitating Conditions," it's found that the supporting facilities for e-filing implementation at KPP Pratama Pekanbaru Tampan are inadequate, particularly concerning the frequently disrupted online server capacity.

This hampers WPOP's access to report SPT accurately and timely.

Thirdly, in the dimension of "Intention to Use e-Government Service," the findings suggest that WPOP's interest in using e-filing services is influenced by their knowledge, technological skills, and digital literacy. These factors pose barriers for new or less tech-savvy WPOP in utilizing e-filing services. Fourthly, in the dimension of "Use of e-Government Service," it's found that the usage of e-filing at KPP Pratama Pekanbaru Tampan is not optimal. Constraints in accessing servers and the lack of technological skills and digital literacy are the primary factors hindering maximal usage of this service. Lastly, in the dimension of "Citizen Satisfaction," it's revealed that society's satisfaction with the e-filing service at KPP Pratama Pekanbaru Tampan has not yet been achieved. Technical issues such as inadequate server capacity and insufficient WPOP knowledge contribute to dissatisfaction in the SPT reporting process. These findings underscore the importance of factors such as acceptance, service quality, and user satisfaction with e-filing in efforts to enhance its effectiveness. Therefore, recommendations from this analysis, such as improving server capacity and providing further education to WPOP regarding e-filing usage, could be appropriate steps to increase compliance and user satisfaction in using the e-filing system.:



**Figure 5. Overlay and Density Visualization Research Gap**

Source: Research Analysis, 2024

To conduct a research gap search using Publish or Perish and VOSviewer with bibliometric output, the first step is to use Publish or Perish to search for papers relevant to the keyword "ELECTRONIC FILING SYSTEM" within a 10-year timeframe, starting from 2014 to 2024. The search results will then be utilized to analyze research trends and identify potential research gaps, which will subsequently be visualized using VOSviewer. After gathering data from the Publish or Perish search results, the next step is to import this data into VOSviewer for bibliometric analysis. Using VOSviewer, we can visualize collaboration networks among authors, institutions, and countries, as well as analyze keyword clusters that emerge from the literature found. From the VOSviewer analysis, it was found that in 2016, the dominant keywords in the literature were "management," "website," "citizen satisfaction," "public administration," and "e-government maturity." Although these topics have received significant attention, there is still potential to identify research gaps. One approach to finding research gaps is by paying attention to keyword clusters formed in the VOSviewer analysis. If there are keyword clusters that are less related to the dominant keywords, it could indicate areas of research that have not been adequately explored. Furthermore, through further analysis, we can search for specific trends within the identified topics to find aspects that have been less researched.

**Table 2. Dominant Keywords in Bibliometric Analysis**

Years	Dominant Keywords in Bibliometric Analysis
2014	Tax Revenue, Local Government Level
2015	Influencing Factor
2016	Management, Website, Citizen Satisfaction, Public Administration, E-Government Maturity
2017	e-Gov Context, Digital Inclusion
2018	Management, E-gov Threat, Change
2019	E-gov context, accessibility standard
2020	Country perspective, global city
2021	Dynamic, smart city, inistrative system
2022	Environtmental, Tax
2023	Digital Skill
2024	E-gov trust, e-gov adoptions

Source: Research Analysis, 2024

From the data analysis in the table of dominant keywords in bibliometric analysis, we can observe the changing trends and research focus surrounding the e-filing system in the taxation context over the past few years.



Starting from research more concentrated on tax revenue and the role of local government in 2014, to an emphasis on management, citizen satisfaction, and e-government maturity in 2016. In 2017, the research focus shifted to the context of e-government and digital inclusion, highlighting the importance of accessibility to the e-filing system for all layers of society. While in 2018, attention was given to threats to e-government, emphasizing the importance of security in implementing the e-filing system. In 2019, research remained centered on the e-government context and accessibility standards, while in 2020, global perspectives on the e-filing system began to be noticed. Shifting to 2021, research focused on city dynamics and intelligence, as well as the integration of the e-filing system into smart city administration. Furthermore, in 2022, research highlighted environmental and tax aspects, underlining the impact of tax and technology-related policies. 2023 showed an increased focus on digital skills, emphasizing the importance of digital literacy in using the e-filing system. Finally, in 2024, the focus returned to e-government aspects with an emphasis on trust and adoption, indicating challenges and opportunities in implementing an e-filing system that can be widely accepted by society.

From this analysis, it is evident that research developments include improvements in security, accessibility, and digital inclusion in the e-filing system, as well as awareness of the environmental impact of tax policies and related technology. An ideal e-filing system should consider these aspects while enhancing tax administration efficiency and effectiveness. By further analyzing the data using VOSviewer, we can identify potential research gaps that can be further explored, such as specific aspects of management or e-government maturity that were not extensively researched in 2016. Thus, the conclusion from this analysis is that while topics like management, websites, citizen satisfaction, public administration, and e-government maturity have been the main focus in research, there are still opportunities to explore specific aspects in the context of electronic filing systems that have not been well covered in the literature. This underscores the importance of further research to complement our understanding of the effectiveness and implementation of electronic filing systems and the potential to enhance efficiency and service quality in the government sector.

Previous research has provided valuable insights into the implementation of e-filing in

various Tax Service Offices (KPP). Previously, (Aksara, 2021) researched at the Cilandak Primary Tax Service Office Jakarta and found that e-filing had not effectively impacted taxpayer compliance, as evidenced by a decreasing compliance rate every year and the failure to achieve compliance targets. Meanwhile, (Barimbing, 2023) found that the implementation of e-filing in the South Malang Primary Tax Service Office was not optimal due to a lack of employee training, minimal socialization, and server capacity limitations. On the other hand, (Simatupang & Dompok, 2022) researched the South Batam Primary Tax Service Office and found that target errors were due to a lack of taxpayer capability and awareness, as well as difficulties accessing the DJP Online website due to frequent server downtime.

From these studies, it is apparent that common issues in e-filing implementation include low compliance rates, lack of training and socialization, and technical issues related to IT infrastructure. However, there are previous research gaps that have not been covered, such as a comprehensive analysis of taxpayers' digital literacy and technology skills and their impact on e-filing effectiveness. Additionally, there has been no specific research highlighting public knowledge issues regarding tax modernization. Therefore, this research will complement previous studies by focusing on e-government effectiveness in e-filing implementation, considering the level of digital literacy and public tax knowledge. The research method used is descriptive with a qualitative approach, referring to the e-government effectiveness dimensions proposed by Sigwejo & Pather (2016). Through observation, interviews, and documentation at the Pekanbaru Tampan Primary Tax Service Office, this research aims to identify and understand the issues faced in e-filing implementation and seek solutions to enhance its effectiveness.

**Table 3. Submission of WPOP Annual SPT via E-filing at KPP Pratama Pekanbaru Tampan 2020-2022**

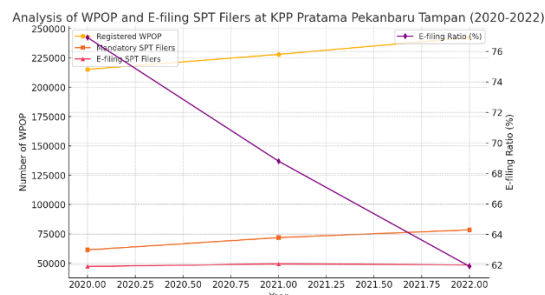
Years	WPOP amount Registered	33 / 5.000 WPOP amount Who Must Report SPT	WPOP Reports SPT Via E-filing	E-filing Usage Ratio (%)
2020	215.207	61.341	47.206	76,9 %
2021	227.989	71.786	49.430	68,8 %
2022	242.329	78.381	48.525	61,9 %

Source : KPP Pratama Pekanbaru Tampan (2024)

E-government is the implementation of information and communication technology (ICT), especially the internet, to enhance government services. In the context of taxation, e-government is manifested through the e-filing system, which allows taxpayers to report their Annual Tax Returns (SPT) online. Based on the data, there has been an increase in the number of Individual Taxpayers (WPOP) registered at the Pekanbaru Tampan Primary Tax Service Office every year, from 215,207 in 2020 to 242,329 in 2022. The number of WPOP required to report SPT also increased from 61,341 in 2020 to 78,381 in 2022. However, the number of WPOP reporting SPT via e-filing did not experience a significant increase, even decreasing from 49,430 in 2021 to 48,525 in 2022. The e-filing usage ratio also decreased from 76.9% in 2020 to 61.9% in 2022. Based on the table above, the decrease in the e-filing usage ratio despite the increasing number of WPOP required to report SPT indicates challenges in the adoption of e-filing technology among taxpayers. Technological constraints such as limited and frequently down server capacity are one of the main factors hindering the effective use of e-filing. Additionally, low digital literacy and lack of knowledge about tax modernization among taxpayers reduce their interest and ability to use e-filing.

According to the 2022 UN report, Indonesia has an E-Government Development Index (EGDI) score of 0.7160, placing it 5th in Southeast Asia and 77th globally. Although there has been an improvement from the previous year, Indonesia still lags behind some neighboring countries. The decrease in the e-filing usage ratio at the Pekanbaru Tampan Primary Tax Service Office reflects broader challenges in the implementation of e-government in Indonesia. To enhance the effectiveness of e-filing at the Pekanbaru Tampan Primary Tax Service Office and support the progress of e-government in Indonesia, several strategic steps need to be taken. First, improving the capacity and stability of servers to address technical issues during the SPT reporting period. Second, conducting continuous education and training programs for taxpayers on the use of e-filing and tax technology. Third, enhancing digital literacy among taxpayers through intensive campaigns and socialization. Fourth, conducting more intensive socialization about the benefits and ease of e-filing to increase

taxpayer interest and compliance. By addressing these constraints, it is hoped that e-filing usage can increase, which in turn will enhance the effectiveness of e-government in taxation services in Indonesia.



**Figure 6. Analysis of WPOP and E-Filing SPT Filers at KPP Pratama Pekanbaru**

Source: Research Analysis, 2024

As highlighted by Zidkova et al. (2024), the digitization of the economy and governance has become a significant topic of economic research. Supported by Lin et al. (2024), it is noted that since the onset of the COVID-19 pandemic, all countries have actively promoted adaptive governance within digital government frameworks. Initiatives such as remote work, online application processes, and telemedicine have seen substantial progress. Rani and Kalpana (2024) further emphasize the importance of ensuring seamless and transparent transactions without complex tax compliance burdening dealers, business operators, and consumers following the implementation of GST. In the initial stages of GST implementation, many small business units found it challenging to adapt due to mandatory registration and digitization.

Additionally, Rwakihembo et al. (2024) underscore the critical role of electronic tax systems in explaining the relationship between attitudes toward electronic tax systems and tax compliance among small and medium enterprises (SMEs). SMEs are encouraged to ensure tax compliance and maintain a good reputation through online registration, tax reporting, and prompt settlement of tax obligations to limit tax evasion and incidental consequences. Lai and Marques (2024) also point out that the level of public trust in the government determines the success or failure of e-Government initiatives. However, the unique nature of this concept and the broad scope of its approaches still present relevant challenges.

Data from the Pekanbaru Tampan Primary Tax Service Office reveals an interesting trend regarding the effectiveness of e-filing during the period 2020-2022 figure 6. Within this



timeframe, there was a significant increase in the number of Individual Taxpayers (WPOP) registered and required to file Annual Tax Returns (SPT). However, despite this increase in numbers, e-filing usage did not follow the same trend. Although there was a slight increase in 2021, e-filing usage actually decreased in 2022. This indicates that despite the presence of infrastructure for e-filing, taxpayer compliance in utilizing it is not optimal. The e-filing usage ratio also shows a decline from year to year, decreasing from 76.9% in 2020 to 61.9% in 2022. Therefore, increasing education, investing in better technological infrastructure, and enhancing digital literacy are important to improve the effectiveness of e-filing in this context.

## CONCLUSION

The implementation of e-filing at the Pekanbaru Tampan Primary Tax Service Office as a form of e-government has not been effective and optimal. The main obstacles that need to be overcome include increasing server capacity, providing education and technology training for taxpayers, and enhancing digital literacy. Overcoming these obstacles will meet the expectations of the community, increase interest and usage of e-filing services, and improve satisfaction with tax services. To enhance the effectiveness of e-filing at the Pekanbaru Tampan Primary Tax Service Office, several strategic steps need to be taken. Firstly, enhancing server capacity and stability to address access issues during the final period of filing tax returns. Secondly, organizing educational and training programs for taxpayers to enhance their knowledge and skills in using e-filing. Thirdly, improving digital literacy among taxpayers to facilitate understanding and use of tax technology. Fourthly, conducting intensive socialization about the benefits and ease of e-filing to increase taxpayer interest and compliance. With these steps, it is hoped that the implementation of e-filing can proceed more effectively and optimally, thus increasing public satisfaction and trust in tax services.

This study contributes to the understanding of the challenges and requirements for effective e-government implementation in tax services, specifically through the use of e-filing systems. It identifies key areas for improvement, such as server capacity, taxpayer education, and digital literacy, which are critical to enhancing the effectiveness and efficiency of e-filing systems. The recommendations provided can serve as a

guideline for policymakers and tax authorities in improving the adoption and satisfaction of e-filing services.

The study is limited by its focus on a single tax service office, which may not fully capture the diversity of challenges faced by other offices in different regions. Additionally, the study relies on the analysis of existing literature and data from one specific context, which may limit the generalizability of the findings to other settings or countries with different technological and infrastructural capacities. Further research could explore the effectiveness of e-filing systems in other regions and contexts to provide a more comprehensive understanding of the factors influencing e-government success in tax services.

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