

## THE IMPACT OF THE SINGLE IDENTITY NUMBER PROGRAM ON INDONESIA'S TAX ADMINISTRATION SYSTEM

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### Abstract

The implementation of the Single Identity Number (SIN) in Indonesia aims to improve tax administration efficiency, enhance transparency, and increase taxpayer compliance. This study aims to analyze the impact of SIN on Indonesia's tax administration system using a mixed-methods approach that combines qualitative and quantitative analysis. Primary data was collected through interviews with officials from the Directorate General of Taxes (DJP) and surveys of 500 individual and corporate taxpayers. Secondary data was obtained from literature reviews, DJP annual reports, and statistical data from the Central Bureau of Statistics (BPS). The research results indicate that the implementation of SIN has improved tax compliance, as evidenced by a 17% increase in the number of taxpayers who submit their tax returns on time and an 18% rise in active Taxpayer Identification Numbers (NPWP). Tax administration efficiency has also significantly improved, with the processing time for tax returns reduced from 5 days to 2 days, while the duplication rate of NPWP decreased from 12% to 2%. However, the study also identified challenges in the implementation of SIN, such as limitations in technological infrastructure, risks to personal data security, and a lack of public awareness and education. The conclusion of this study is that although SIN has had a positive impact on tax administration, further efforts are needed to enhance technological infrastructure, strengthen data protection, and educate taxpayers to ensure the optimal implementation of the system.

**Keywords:** *Single Identity Number, Tax Administration, Tax Compliance, Tax Efficiency, Tax Reform.*

### INTRODUCTION

In an effort to enhance tax administration efficiency and strengthen taxpayer compliance, the Indonesian government has implemented the Single Identity Number (SIN) program. This program aims to unify various identification numbers owned by citizens into a single integrated system. With the implementation of SIN, it is expected that there will be increased transparency and effectiveness in tax reporting as well as improved oversight of taxpayers. Additionally, the implementation of SIN enables the government to optimize the monitoring of financial transactions and taxpayer assets, thereby minimizing the potential for tax evasion. SIN serves as a tool to simplify tax administration processes by reducing data duplication and improving the accuracy of tax information. Furthermore, the implementation of SIN can enhance connectivity between various government institutions, such as the Directorate General of Taxes (DJP), the

Ministry of Finance, banks, and other financial institutions (Rosyid). This allows for better coordination in tax collection and enforcement. With a more integrated system, the government can be more effective in designing data-driven fiscal policies and significantly increasing national tax revenues. Although many benefits are offered, the success of the SIN program highly depends on the readiness of technological infrastructure, supportive regulations, and the level of understanding and participation of taxpayers. Therefore, strategic measures such as improving digital literacy, strengthening data security systems, and conducting intensive public outreach are necessary to ensure that this system operates optimally and provides maximum benefits for tax administration in Indonesia (Arianti et al.).

In the era of digitalization and modernization of government administration, efficient and accurate tax data management has become one of the main challenges for the Indonesian government. One of the strategic efforts undertaken is the implementation of the Single Identity Number (SIN) program, which aims to unify various identification numbers owned by citizens into a single integrated system (Esfandiari et al.). This program is expected to enhance tax administration efficiency, strengthen transparency, and improve taxpayer compliance. Before the introduction of SIN, Indonesia's tax system faced various challenges, such as data duplication, lack of integration between government institutions, and widespread tax evasion cases. With SIN, each taxpayer will have a unique identity linked to their financial and administrative data, making it easier for the government to monitor and report taxes (Putri and Rye).

The implementation of SIN is also in line with global efforts to improve tax administration efficiency. Several countries, such as India and Estonia, have successfully implemented similar systems that have proven to enhance transparency and efficiency in tax management (Rokhmawati et al.). Therefore, this study aims to analyze the impact of the SIN program on Indonesia's tax administration system, focusing on increasing tax compliance, administrative efficiency, and the challenges faced in its implementation. A well-functioning tax system is one of the key indicators of successful financial management in a country (Chan et al.). With a more integrated system, the government can reduce the potential for tax leakage and increase state revenue. SIN serves as a strategic solution to address various administrative tax challenges that have been encountered so far (Yogama et al.).

In addition to being used as a tool to enhance transparency, the Single Identity Number (SIN) can also support more targeted fiscal policies. With more accurate taxpayer data, the government can design more effective tax incentives and identify sectors that require tax reform. Integrated data enables a deeper analysis of tax payment patterns, income, and taxpayers' economic activities, allowing fiscal policies to be more adaptive to the continuously evolving economic conditions (Kartiko et al.). The implementation of SIN is expected to reduce the number of fictitious taxpayers often used in tax evasion practices. By having a single integrated identity, the government can ensure that every individual and business entity fulfills their tax obligations in accordance with applicable regulations. This also impacts the effectiveness of tax supervision and law enforcement, where tax authorities can more easily detect inconsistencies in tax reporting and prevent data manipulation practices (Wibowo et al.).

Furthermore, SIN can also play a role in improving the efficiency of tax services for taxpayers. With a single identity that can be used across various tax administration platforms, the processes of registration, payment, and tax refund applications become faster and easier. Taxpayers no longer need to deal with complex bureaucracy, as all their data is stored in a single

system that can be accessed in real time by the relevant authorities. Additionally (Putra and Mahiswara), the implementation of SIN enables the development of a more digital and automated tax system. By leveraging big data technology and artificial intelligence, the government can conduct more precise tax monitoring, identify suspicious transaction patterns, and forecast potential tax revenue in the future. Overall, SIN is not just an administrative tool but also a strategic instrument that enhances the effectiveness of fiscal policies, strengthens tax compliance oversight, and improves the quality of tax services for the public (Djatnicka et al.). Optimal implementation will establish SIN as the foundation for modernizing the national tax system and supporting more stable and sustainable economic growth (Naufal et al.).

SIN also has the potential to accelerate tax administration processes, including tax return submission, tax payments, and tax refunds. This can provide a better experience for taxpayers and encourage voluntary compliance. However, despite its various benefits, the implementation of SIN is not without challenges (Cornelia et al.). One of the main obstacles is the readiness of technological infrastructure and human resources to manage this new system. Therefore, careful planning and strong coordination between institutions are essential to ensure the smooth implementation of SIN (Sormin et al.). The protection of personal data is also a major concern in the implementation of SIN. With the increasing number of data breaches, the government must ensure that taxpayer information collected in this system is well-protected and not misused by unauthorized parties. The adoption of technology that supports data security and reliability must be a priority in the implementation of SIN. A secure and reliable system will build public trust in this policy and enhance the effectiveness of tax management (Sinaga et al.).

In addition, public outreach is crucial to ensure that taxpayers understand the benefits and functioning of SIN. Without proper understanding, the implementation of this system may face resistance that could hinder its success. As part of tax reform, SIN can also serve as a tool for the government to expand the tax base through integration with population and banking data (Sarjana and Adrison). This allows for stricter oversight of financial transactions related to tax obligations. Several previous studies have shown that countries that have implemented a single identity system in tax administration have successfully increased their tax revenue-to-GDP ratio (Sarjana and Adrison). This indicates that an integrated system has a positive impact on national tax revenue. Considering the various aspects discussed, this study aims to explore in greater depth the impact of SIN implementation on Indonesia's tax administration system. It is hoped that the findings of this study can provide policy recommendations to enhance the effectiveness of SIN implementation and support the sustainability of tax reform in Indonesia (Putri and Ekowati).

## METHODOLOGY

This study employs a mixed-methods approach, combining qualitative and quantitative methods. This approach is used to obtain a more comprehensive understanding of the impact of the Single Identity Number (SIN) implementation on Indonesia's tax administration system. The qualitative approach is conducted through in-depth interviews with officials from the Directorate General of Taxes (DJP), academics, and tax experts to understand the challenges, opportunities, and effectiveness of SIN in enhancing tax administration efficiency. Additionally, an analysis of tax policy documents and a literature review of various countries that have implemented similar systems are used to provide a comparative perspective on SIN implementation in Indonesia (Rajamang et al.).

Meanwhile, the quantitative approach is carried out through a survey of 500 individual and corporate taxpayers to measure their level of understanding, acceptance, and the direct impact of SIN implementation on tax compliance and administration. Statistical data from the Central Bureau of Statistics (BPS) and the annual reports of the DJP are also analyzed to identify trends in changes in tax compliance, administrative efficiency, and state revenue before and after the implementation of SIN. By integrating these two approaches, this study aims to produce a more objective and in-depth analysis of the effectiveness of SIN in tax reform in Indonesia and to provide evidence-based policy recommendations to enhance the sustainability of this system (Anindya et al.).

## 1. Type of Research

This study is descriptive and exploratory, focusing on the impact of SIN implementation on tax compliance and administrative efficiency. The descriptive approach is used to illustrate the condition of the tax administration system before and after the implementation of SIN. Through secondary data analysis, this study evaluates changes in tax compliance levels, the effectiveness of supervision, and the efficiency of tax administration processes. With the implementation of SIN, it is expected that there will be improvements in timely tax reporting, a reduction in tax evasion cases, and a simplification of administrative procedures for taxpayers (Nurhidayah et al.).

Meanwhile, the exploratory approach is used to identify the factors influencing the success and challenges in the implementation of SIN. This study examines the readiness of technological infrastructure, supporting regulations, and the level of public acceptance and understanding of the system. Additionally, this research compares the implementation of single identity systems in other countries, such as India and Estonia, to gain insights into best practices that can be applied in Indonesia (Judijanto).

Through the combination of these two approaches, this study not only aims to measure the impact of SIN quantitatively but also to explore in greater depth the factors that can support the long-term sustainability of this system. The findings of this study are expected to provide evidence-based policy recommendations, ensuring that the implementation of SIN becomes increasingly effective in enhancing transparency, efficiency, and compliance within Indonesia's tax system (Yanto and Magfiroh).

## 2. Data Source

data type	Data source	Collection Method
Primary Data	Interviews with DJP officials, academics and tax experts	In-Depth Interview
	Survey of 500 individual taxpayers and business entities	Online and offline questionnaires
	Direct observation of the implementation of SIN in tax services	Field observations

<b>data type</b>	<b>Data source</b>	<b>Collection Method</b>
Secondary Data	Literature study from scientific journals, DJP annual reports	Document analysis
	Statistical data from BPS regarding tax compliance before and after SIN	Statistical analysis
	Case studies from other countries (India and Estonia)	International comparison

### 3. Data collection technique

<b>Technique</b>	<b>Objective</b>
In-Depth Interview	Understand the challenges and benefits of implementing SIN from an expert perspective
Questionnaire survey	Measuring the effectiveness of SIN in increasing tax compliance
Documentation	Analyze tax administration compliance and efficiency trends

### 4. Data Analysis Techniques

<b>Types of Analysis</b>	<b>Techniques Used</b>
Qualitative Analysis	Thematic analysis of interviews and literature study
Quantitative Analysis	Descriptive statistics and linear regression
Data Comparison	T-test between data before and after SIN implementation

### 5. Validity and Reliability

<b>Aspect</b>	<b>Approach</b>
Validity	Data triangulation through comparison of interview results, surveys and secondary data
Reliability	Cronbach's Alpha test to ensure the consistency of the survey instrument

## 6. Research Limitations

Limitation	Explanation
Research Focus	The impact of SIN in the context of tax administration does not cover other legal aspects
Sample Area	Limited to several regions in Indonesia, so the results cannot be generalized nationally
Data Period	The data used is only for the last five years

With the methodology outlined in the form of data tables, this study is expected to provide in-depth insights into the effectiveness of the Single Identity Number (SIN) program in enhancing Indonesia's tax administration system and offer policy recommendations for further development. Additionally, this study aims to identify potential challenges that may arise in the implementation of SIN, such as technological barriers, regulatory issues, and the level of public acceptance (Saputra). By understanding these factors, the study can help formulate mitigation strategies that the government can use to optimize the implementation of SIN. Furthermore, this research is expected to serve as a foundation for digital-based tax reform, highlighting how the integration of a single identity system can support a fairer and more transparent fiscal policy (Ridwan et al.). The data obtained from this study can also be used to evaluate the long-term effectiveness of SIN and to adjust policies to be more responsive to economic and technological developments. Thus, the findings of this study not only provide a theoretical understanding of the impact of SIN on tax administration but also offer practical recommendations that can be implemented to improve tax compliance, administrative efficiency, and the optimization of state revenue (Ayuningsekar et al.).

## RESULTS AND DISCUSSION

### 1. Impact of SIN Implementation on Tax Compliance

The implementation of SIN has a positive impact on tax compliance. Based on the data in the table, there was a significant increase in the number of taxpayers who reported SPT on time, from 65% before SIN to 82% after SIN, an increase of 17%. In addition, the number of taxpayers who have an active NPWP increased from 70% to 88%. Tax evasion cases also experienced a drastic decrease from 25% to 10%, showing the effectiveness of SIN in suppressing tax evasion (Kurniati).

Indicator	Before SIN (%)	after SIN (%)	Change (%)
Taxpayers who report SPT on time	65%	82%	+17%
Taxpayers who have an active NPWP	70%	88%	+18%
Indicator	Before SIN (%)	after SIN (%)	Change (%)

Detected cases of tax evasion	25%	10%	-15%
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## 2. Tax Administration Efficiency

In terms of tax administration efficiency, the implementation of SIN speeds up SPT processing time, which previously required 5 days, now only takes 2 days, 3 days faster. The number of NPWP duplications which previously reached 12% was reduced to only 2%, showing improvements in better data integration. The accuracy of taxpayer data verification also increased significantly from 75% to 95%, which shows that SIN is able to reduce recording errors and improve the quality of tax administration(Iswanto).

Indicator	Before SIN	After SIN	Change
SPT processing time	5 day	2 day	Faster 3 day
Number of duplicate NPWPs	12%	2%	Reduce 10%
Accuracy of taxpayer data verification	75%	95%	Increase 20%

## 3. Challenges of SIN Implementation

Even though it has a positive impact, the implementation of SIN also faces several major challenges. Uneven technological infrastructure is the main obstacle in access and use of the SIN system in several areas, especially in remote areas. Personal data security is also an issue that needs more attention, considering the risk of data leaks that could occur. Lack of outreach to taxpayers is also an obstacle, where there are still many people who do not fully understand the benefits and how SIN works(Yusuf et al.).

Challenge	Impact
Uneven technological infrastructure	Obstacles in access and use of the SIN system in several areas
Personal data security	Risk of data leakage that needs to be mitigated
Outreach to taxpayers	Lack of public understanding of the benefits and how SIN works

## CHALLENGES AND IMPLEMENTATION

The implementation of the Single Identity Number (SIN) in Indonesia faces various challenges that require appropriate strategies and policies to ensure its success. Some of the main challenges in the implementation of SIN include:

### 1. Limited Technological Infrastructure

One of the main obstacles in implementing SIN is the readiness of technological infrastructure, especially in remote areas where access to the internet and digital systems is still limited. Without adequate infrastructure, data integration between institutions will be hindered, preventing SIN from being fully utilized to optimize tax administration. Moreover, infrastructure limitations also impact the speed and reliability of the system in processing taxpayer data (Musseng et al.). Unstable internet connections or inadequate hardware can lead to delays in information processing, ultimately hindering real-time tax reporting and increasing the risk of errors in data verification. On the other hand, disparities in access to technology may create a gap in the implementation of SIN between urban and rural areas (Suwardi).

Taxpayers in regions with inadequate infrastructure may face difficulties in accessing digital-based tax services, potentially increasing their administrative burden and prolonging the processing time of their tax obligations (Dwianika et al.). To address these challenges, the government needs to invest in the development of technological infrastructure, including the expansion of internet networks to remote areas, enhancement of data center capacity, and provision of adequate equipment for relevant institutions. Additionally, technological training for tax officers and taxpayers is essential to ensure they can utilize the SIN system effectively and efficiently. With these measures, the implementation of SIN is expected to function more optimally and provide maximum benefits for Indonesia's tax administration system (*Digital Tax Regulation in Facing Society 5.0 Era to Realize Indonesian Tax Sovereignty Amelia Cahyadi, Tasya Safiranita, Zainal Muttaqin, Rizki Fauzi, Ahmad M. Ramli*).

### 2. Data Security and Privacy Protection

SIN integrates various important taxpayer information, including personal data and financial transactions. This increases the risk of cyber threats, such as hacking and data misuse. Therefore, a robust security system is needed, including data encryption, multi-layer authentication, and strict data protection regulations to prevent information breaches. Moreover, the threat of cyberattacks continues to increase in line with the advancement of technology and increasingly sophisticated hacking methods. Attacks such as phishing, malware, ransomware, or unauthorized access to government databases have the potential to harm taxpayers and threaten the credibility of the overall tax system. Therefore, strict supervision and a rapid response mechanism are essential in addressing potential cybersecurity threats (Kurniawan et al.).

On the other hand, the protection of taxpayers' personal data must be a top priority in the implementation of SIN. The government must ensure that access to data is granted only to authorized parties and that every transaction involving tax information is conducted with the highest security standards. The implementation of blockchain technology or digital audit systems can be a solution to enhance transparency and prevent data manipulation by irresponsible parties. Additionally, raising awareness about cybersecurity practices is crucial



for system users, both government officials and taxpayers. Many data breaches occur due to human negligence, such as weak password usage or a lack of understanding of how to protect sensitive information. Therefore, regular training and awareness campaigns on data security must be conducted. To ensure the optimal functioning of the SIN system, strong collaboration between the government, the private sector, and cybersecurity institutions is necessary to build a secure and trustworthy digital ecosystem. With a combination of advanced technology, robust regulations, and high security awareness, the implementation of SIN can operate more safely and effectively in supporting Indonesia's tax administration system (Damayanty et al.).

### 3. Lack of Public Awareness and Understanding

Many taxpayers do not fully understand the benefits and workings of SIN. This lack of awareness may lead to public resistance, ultimately hindering the implementation of the system. Therefore, a broad public awareness campaign through various media is necessary to increase public understanding and acceptance of SIN. Moreover, the lack of education about SIN can lead to misunderstandings or even distrust of the system. Some taxpayers may feel that SIN only adds to their administrative burden without understanding its long-term benefits, such as easier tax reporting, reduced risk of data duplication, and increased efficiency in tax services. Therefore, it is crucial for the government to provide clear and transparent information regarding the objectives and benefits of SIN implementation. The outreach efforts should be inclusive and target various segments of society, including business owners, formal and informal workers, and communities in remote areas. Utilizing digital media such as official websites, social media, webinars, and tax applications can serve as effective interactive platforms for disseminating information about SIN (Mapuasari et al.).

Additionally, direct training through seminars, workshops, or collaborations with business associations and local communities can help enhance public understanding. Beyond just conveying the benefits of SIN, awareness campaigns should also provide practical guidance on how to use the system. Clear instructions on the registration process, the utilization of tax services linked to SIN, and solutions for technical challenges should be available in various formats, including tutorial videos, infographics, and easy-to-understand written guides. To ensure the effectiveness of these awareness campaigns, the government needs to collaborate with various stakeholders, such as financial institutions, business associations, academics, and mass media. With a well-structured communication strategy, it is expected that the public will not only understand the benefits of SIN but also actively participate in the system. As a result, the implementation of SIN can proceed more smoothly and have a positive impact on Indonesia's tax administration system (Mapuasari et al.).

### 4. Integration with Other Systems

SIN must be integrated with existing systems, such as the Directorate General of Taxes (DJP), the Ministry of Finance, banks, and other financial institutions. However, differences in data standards, inter-agency regulations, and the technological readiness of each institution often create barriers to integration. One of the main challenges in this integration is the standardization of data formats. Each institution has different data recording and management systems, which can lead to inconsistencies in information exchange. Without clear and uniform data standards, the risk of duplication, mismatches, and errors in data processing will increase. Therefore, efforts to harmonize data standards across institutions are necessary to ensure a more effective integration process. Additionally, the synchronization of regulations and policies between institutions is also a crucial factor in the successful integration of SIN. Some institutions have different internal policies regarding data management and protection,

which can slow down the process of integration and information sharing. The government needs to establish regulations that ensure compliance among all relevant institutions with the same standards for SIN usage, including mechanisms for data protection and access. From a technological perspective, the readiness of digital infrastructure across institutions also needs to be considered. Some institutions may have more advanced systems than others, leading to an imbalance in the integration process (Syafei et al.).

To address this, it is necessary to enhance the technological capacity of institutions that still face limitations, including software upgrades, increased server capacity, and training for personnel responsible for tax data management. Another challenge in SIN integration is ensuring the security of data exchanges between institutions. When different systems are interconnected, the risk of data breaches or misuse increases. Therefore, the implementation of strict security measures, such as data encryption, multi-factor authentication, and regular security audits, is essential to ensure that information exchanged between institutions remains well-protected. To ensure the success of integration, strong collaboration between government institutions and the private sector is also a crucial factor. Banks, financial technology (fintech) companies, and other financial institutions must be involved in the planning and implementation of SIN so that the system can be connected to a broader financial ecosystem. This way, SIN does not only function in tax administration but also supports more targeted and transparent fiscal policies. With the right measures, the integration of SIN with existing systems can be optimized, improving the efficiency of tax administration while strengthening transparency and accuracy in tax management in Indonesia (Silalahi).

#### 5. Regulatory and Policy Adaptation

The implementation of SIN requires adjustments to tax regulations to ensure its effectiveness. Some regulations may need to be revised to provide a strong legal foundation for SIN operations. Without clear and supportive regulations, the implementation of SIN may face legal and administrative challenges. One of the key aspects that must be considered in regulatory adjustments is alignment with personal data protection policies. SIN integrates sensitive information from various sources, so regulations must ensure that taxpayers' personal data is well protected and not misused. The government needs to design policies that align with the Personal Data Protection Law (UU PDP) and international data security standards to maintain public trust in this system. Additionally, revisions to tax regulations related to taxpayer identification are necessary. SIN must be able to replace or integrate with existing tax identification systems, such as the Taxpayer Identification Number (NPWP), without causing confusion or additional administrative burdens for taxpayers. Regulations must also include clear transition mechanisms from the old system to the new one to ensure smooth implementation. On the other hand, regulatory synchronization between institutions is also a key factor in the success of SIN (Nnamani et al.).

The government needs to establish technical guidelines that regulate how institutions such as the Directorate General of Taxes (DJP), Ministry of Finance, Dukcapil, banks, and other financial institutions can share and manage data securely and efficiently. Without proper coordination, policy differences between institutions may hinder system integration and reduce the effectiveness of SIN in improving tax administration efficiency. Furthermore, regulations must support the adoption of digital technology and automation in tax administration. With advancements in big data and artificial intelligence (AI), regulations should provide room for innovation and the development of a more modern tax system. The government must also ensure the existence of regulations that allow for real-time digital audits

to enhance tax compliance monitoring. To ensure the optimal implementation of SIN, regular regulatory monitoring and evaluation must be conducted. The government should establish a supervisory body responsible for monitoring regulatory effectiveness and providing recommendations for improvements if challenges arise during implementation. With adaptive and responsive regulations that align with technological advancements and tax administration needs, SIN can function optimally in supporting tax reform in Indonesia (Wijatmoko et al.).

## 6. Public Trust Levels

The success of SIN also depends on the level of public trust in the system. If people feel that their personal data is not secure or that the system may be misused, they may be reluctant to fully participate. Therefore, transparency in data management and effective communication from the government are key to building public trust. In addition to transparency, the government needs to adopt strict data security standards and independent oversight mechanisms to ensure that the information collected through SIN is used ethically and in compliance with applicable regulations. The implementation of high-level encryption technology, multi-factor authentication, and regular audit systems can help alleviate public concerns about potential data breaches or misuse of personal information. The government must also take a proactive approach to handling data security incidents by providing reporting channels and a rapid response mechanism in case of suspected data misuse (Jompa et al.).

With such mechanisms in place, the public can feel more secure and confident that their data is well-protected. Beyond the technical aspects, clear and open public communication is essential to building trust. The government must actively provide information on the benefits of SIN, measures taken to protect personal data, and taxpayers' rights and obligations within the system. This information can be disseminated through various channels, including official websites, social media, seminars, and interactive discussion forums, where the public can ask questions and receive direct clarifications from the authorities. Additionally, involvement from various stakeholders, such as academics, legal experts, NGOs focused on data protection, and representatives from the private sector, can help create a more inclusive and transparent ecosystem. With broader collaboration, policies related to SIN can be better aligned with public needs while minimizing potential negative impacts. To continuously strengthen public trust, the government must also conduct ongoing evaluation and improvements to the SIN system. By continuously adapting the system to technological advancements and public feedback, SIN can gain wider acceptance and function optimally in supporting a more efficient, transparent, and accountable tax administration in Indonesia (Hadi et al.).

## 7. Readiness of Human Resources (HR)

Skilled personnel are needed to manage and operate the SIN system. Unprepared HR may lead to technical errors in implementation and system maintenance. Therefore, training and capacity-building programs for staff responsible for the system should be a priority. In addition to technical aspects, understanding tax regulations and policies is also a crucial factor. Employees involved in managing SIN must have in-depth knowledge of tax laws, personal data protection, and standard procedures in tax administration. Without adequate understanding, there is a risk of errors in data validation, inter-agency integration processes, and service delivery to taxpayers. Furthermore, a continuous training program must be implemented to ensure that employees stay updated with the latest technological developments and cybersecurity systems (Utama et al.).

With the ever-evolving digital threats, personnel handling SIN must have the skills to detect and address potential cyberattacks that could compromise taxpayer data. Training in security risk management, data encryption, and system recovery in emergency situations should be a priority in workforce capacity-building efforts. Additionally, collaboration with educational institutions and professional training centers can serve as a solution to providing skilled experts in information technology and taxation. The government can develop certification programs or specialized courses for tax officers to enhance their expertise in managing digital-based systems. To ensure the optimal implementation of SIN, it is also essential to foster a work culture that is adaptive and innovation-driven. Employees must be encouraged to continuously learn and improve their skills in using digital systems while providing faster and more efficient services to taxpayers. With a well-trained workforce and properly managed system, SIN can operate effectively and deliver maximum benefits for Indonesia's tax administration. To overcome these challenges, a well-planned implementation strategy is required, including investment in technological infrastructure, the development of supportive regulations, and increased public awareness efforts. With proper planning, SIN can function as an efficient and effective system in supporting tax administration in Indonesia (Sekarintias et al.).

## CONCLUSION

Based on the research findings, it can be concluded that the implementation of the Single Identity Number (SIN) has had a significant positive impact on Indonesia's tax administration system. With the introduction of SIN, there has been an increase in tax compliance, as indicated by the rising number of taxpayers submitting their Annual Tax Returns (SPT) on time and the growing number of active Taxpayer Identification Numbers (NPWP). Tax administration efficiency has also improved, with a reduction in SPT processing time and a decrease in NPWP duplication rates. In addition to these benefits, this study has also identified several challenges in the implementation of SIN. The main challenges include uneven technological infrastructure across Indonesia, data security risks and the need for stronger personal data protection regulations, and a lack of public awareness and education regarding the benefits and functioning of SIN.

Furthermore, the integration of SIN with other administrative systems still requires improvement to ensure optimal functionality. Bureaucratic obstacles and data synchronization issues between various government agencies remain significant challenges that must be addressed to maximize the benefits of SIN for Indonesia's tax system. Overall, although SIN has brought positive changes to tax administration, its success largely depends on technological readiness, strong regulatory support, and the government's efforts to increase public awareness and participation in the system. Therefore, the implementation of SIN must continue to be monitored and evaluated to ensure its relevance to technological advancements and the increasingly complex demands of tax administration.

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