

## Efforts to Improve the Public Service Quality: Implementation of a Modern Electronic Tax System, Self-Efficacy, and Taxpayer Compliance

<sup>a</sup> Dyah Purnamasari; <sup>b</sup> Rusdin Tahir

<sup>a</sup> Faculty of Business and Management Universitas Widyatama, Bandung, Jawa Barat, Indonesia; <sup>b</sup> Business Administration, Universitas Padjadjaran, Bandung, Jawa Barat, Indonesia

### ABSTRAK

*Keberhasilan pendapatan pajak bergantung pada efektivitas administrasi pajak yang meningkatkan kepatuhan wajib pajak, kualitas layanan publik, dan penerapan ketentuan pajak secara uniform. Penelitian ini bertujuan mengeksplorasi faktor-faktor yang mempengaruhi kualitas layanan publik dengan fokus pada kepatuhan wajib pajak, termasuk pengaruh e-registration, e-filing, e-efficacy, dan literasi digital. Pendekatan kuantitatif digunakan dengan survei terhadap 535 responden (416 wajib pajak individu dan 119 otoritas fiskus) di Direktorat Jenderal Pajak Jawa Barat I, II, dan III. Analisis statistik dilakukan menggunakan SEM dengan aplikasi Lisrel. Hasil penelitian menunjukkan bahwa e-registration berpengaruh positif dan signifikan terhadap kepatuhan wajib pajak, sedangkan e-filing mempengaruhi kepatuhan namun tidak signifikan. Self-efficacy berpengaruh positif dan signifikan terhadap kepatuhan wajib pajak, sedangkan literasi digital berpengaruh tetapi tidak signifikan. Secara bersamaan, e-registration, self-efficacy, e-filing, literasi digital, dan kepatuhan wajib pajak berpengaruh positif dan signifikan terhadap kualitas layanan publik. Temuan ini memberikan kontribusi teoritis dengan memperjelas faktor-faktor yang mempengaruhi kepatuhan wajib pajak dan implikasi praktis untuk meningkatkan strategi administrasi pajak yang dapat meningkatkan keterlibatan dan kepatuhan wajib pajak.*

### ABSTRACT

The success of tax revenue depends on the effectiveness of tax administration that improves taxpayer compliance, the quality of public services, and the uniform implementation of tax provisions. This study aims to explore the factors that affect the quality of public services with a focus on taxpayer compliance, including the influence of e-registration, e-filing, e-efficacy, and digital literacy. A quantitative approach was used with a survey of 535 respondents (416 individual taxpayers and 119 fiscal authorities) at the Directorate General of Taxes of West Java I, II, and III. Statistical analysis was carried out using SEM with the Lisrel application. The results of the study show that e-registration has a positive and significant effect on taxpayer compliance, while e-filing affects compliance but is not significant. Self-efficacy has a positive and significant effect on taxpayer compliance, while digital literacy has an effect but is not significant. At the same time, e-registration, self-efficacy, e-filing, digital literacy, and taxpayer compliance have a positive and significant effect on the quality of public services. These findings make a theoretical contribution by clarifying the factors affecting taxpayer compliance and practical implications for improving tax administration strategies that can improve taxpayer engagement and compliance.

### INTRODUCTION

The Draft Law on the 2025 State Revenue and Expenditure Budget (RUU) and its Financial Notes emphasize the importance of both international and domestic factors in fiscal planning (Abrianto et al., 2019). The government recognizes that the dynamic global economy presents challenges to economic performance (Forney et al., 2018; Jandhana et al., 2018; Ji & Ranjan, 2019; Permatasari, 2020). In 2025, global economic growth is projected to stagnate at 3.3% (IMF, 2024), with limited reductions in global inflation, delaying monetary policy normalization in developed nations (Davies, 2020). High global interest rates are expected to restrict liquidity

### ARTICLE HISTORY

Submitted: 01 11 2024

Revised: 29 11 2024

Accepted: 30 11 2024

Published: 09 02 2025

### KATA KUNCI

Kualitas Pelayanan Publik; Kepatuhan Pajak; E-Registrasi; Efikasi diri; E-Filing; Literasi Digital

### KEYWORDS

Tax Service Quality; Tax Compliance; E-Registration; Self-Efficacy; E-Filing; Digital Literacy

and limit capital inflows into developing economies, impacting exchange rates in countries like Indonesia (Akhmadeev et al., 2018; Ibrahim et al., 2022; Melnichuk, 2018; Xavier et al., 2024). Geopolitical tensions, such as the Russia-Ukraine conflict, unrest in the Middle East, and US-China competition, contribute to global fragmentation and protectionism.

For 2025, Indonesia's state revenue is targeted at IDR 2,996.9 trillion, with a tax revenue goal of IDR 2,490.9 trillion. Key tax policies include expanding the tax base, promoting compliance through technology, strengthening tax reform, offering targeted incentives, and enhancing organizational structures (Ministry of Finance, 2024). The contribution of tax revenue to state revenue has fluctuated significantly from 2020 to 2024. In 2020, tax revenue accounted for 73% of state revenue, but the COVID-19 pandemic led to a shortfall, reaching only about 89% of the target (Meiryani et al., 2021; Nurfatriani et al., 2022). In 2021, tax revenue's contribution rose to 76%, aided by economic recovery efforts and tax incentives (Fitnawan et al., 2021; Ispriyarso & Wibawa, 2023). Non-tax revenues, such as grants and SOE dividends, also supported the recovery (Iqbal et al., 2023; Setiorini et al., 2021).

In 2022, tax revenue's share rose to 78%, exceeding targets due to higher global commodity prices and economic recovery (Ministry of Finance, 2021). Tax reforms, such as the Voluntary Disclosure Program (PPS), contributed to this success (Hatane et al., 2023; Mahmudah et al., 2023; Meiryani, Huang, et al., 2023). By 2023, tax revenue's contribution is expected to reach 79-80%, supported by sustainable recovery and ongoing tax reforms (Christina, 2022; Scarcella, 2020; Shkolnyk et al., 2021). In 2024, tax revenue is expected to comprise 80-81% of state revenue, driven by positive economic growth and strong fiscal policies (Ministry of Finance, 2021).

The Directorate General of Taxes (DGT), under the Ministry of Finance, plays a critical role in tax administration (Anjarwi et al., 2024; S. K. Rahayu, 2021; Supardianto et al., 2019). Its mission is to collect state revenue through an efficient and fair tax system, building trust and cooperative relationships with stakeholders (Nurwanah et al., 2018). The DGT aims to enhance taxpayer compliance through standardized services, education, oversight, and enforcement (Hasibuan et al., 2023; Kurniawan, 2020). Taxpayer compliance is measured by factors like registration, timely filing, accurate payments, and settling arrears (Bobek et al., 2013; Paleka & Vitezić, 2023; Prinz et al., 2014; Rosid et al., 2016). Non-compliance, leading to tax evasion and avoidance, poses a threat to state revenue (Lidwina, 2020), making improvements in tax administration crucial. The use of modern technology is expected to encourage compliance by enhancing services and enforcement (Harkushenko, 2022; Maksimchuk et al., 2021; Thuneibat et al., 2022; Zasko et al., 2021).

In West Java, income tax revenue has fluctuated over the past five years, primarily due to the COVID-19 pandemic. In 2020, tax revenues fell sharply due to reduced economic activity and purchasing power, resulting in a national revenue shortfall of about 89% of the target (Hartanto & Sugiharti, 2019; Irawan et al., 2024; Mulyani et al., 2021). By 2021, as the economy recovered and government stimulus measures took effect, income tax revenues began to rebound, though they remained below pre-pandemic levels in West Java (Ministry of Finance, 2021; Puspita et al., 2022). By 2022, stable economic growth, combined with policies to improve tax compliance, boosted income tax revenues in West Java (Michel & Jorgi Sutan, 2023; N. Rahayu et al., 2016; Sayidah & Assagaf, 2019; Thamrin et al., 2023).

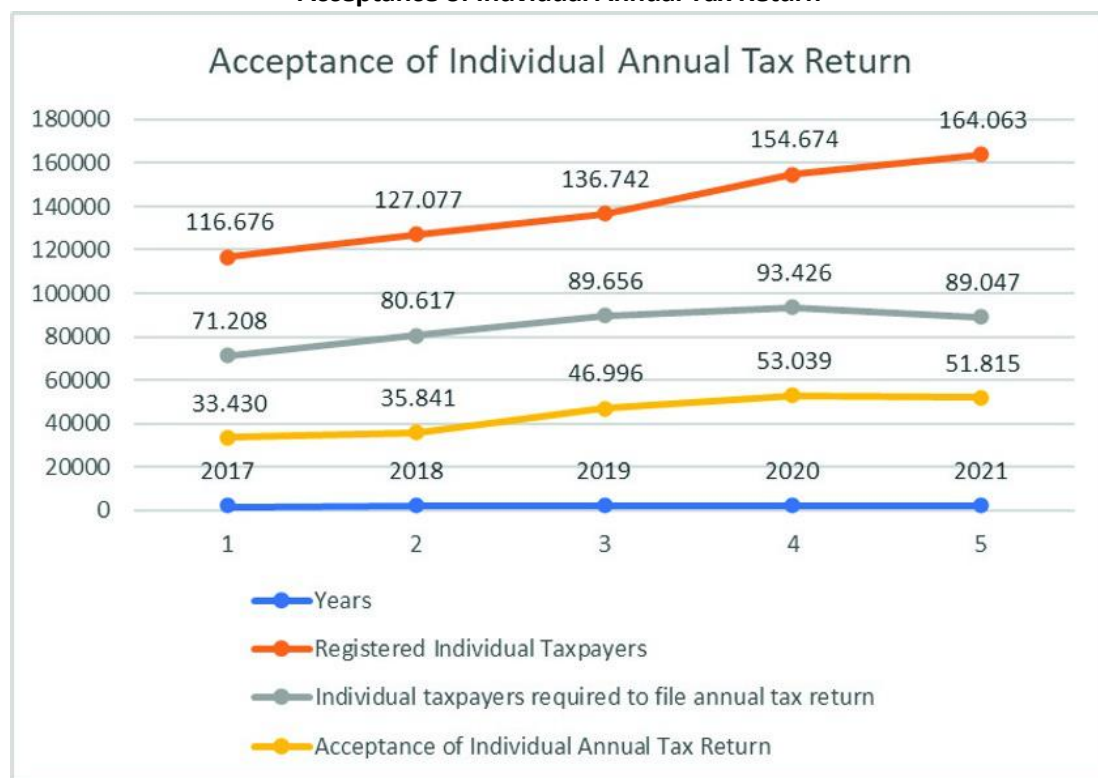
Preliminary data for 2023 shows a further rise in income tax revenues, supported by sustained growth and stronger taxpayer compliance, aided by tax reforms and recovery programs (Ispriyarso & Wibawa, 2023). In 2024, income tax revenue in West Java is expected to continue its upward trend, driven by positive economic growth and reinforced fiscal policies (Cuckler et

al., 2018; Kakaulina, 2021; Whealan George, 2019). The pandemic highlighted the role of technology, as the government relied on e-tax systems to maintain compliance amid restrictions (Błaszczuk et al., 2023; Ionita & Pastae, 2021; Oloke et al., 2023; Bigwanto et al., 2023; Ordonez et al., 2022).

During the pandemic, tax revenues declined due to adjusted tax policies aimed at maintaining financial stability, while efforts to improve taxpayer compliance and awareness continued. Despite these efforts, the growth in Indonesia's tax ratio has remained modest, averaging under 1% between 2015-2019 and 2020-2024 (Ministry of Finance, 2024). Factors like taxpayer morality, the tax amnesty program, and varying levels of compliance have contributed to this slow growth. To address these issues, the DGT has modernized tax administration with digital systems like e-Registration and e-Filing, simplifying tax filing and payment, which supports greater compliance and boosts state revenue (Ministry of Finance, 2024). Enhanced compliance contributes to the government's ability to fund public services, furthering regional financial independence and supporting the nation's fiscal health (Ministry of Finance, 2024).

Figure 1 below shows that in our study we took samples at DGT West Java I, II, and III. Attached is data for the last five years that the public has remained compliant in fulfilling tax obligations for the last five years.

**Figure 1.**  
**Acceptance of Individual Annual Tax Return**



Source: West Java Directorate General of Taxes (DGT) I, II, and III (processed by the author, 2024)

The rise in taxpayer compliance can be attributed to the government's e-system, which simplifies the reporting of annual tax returns and leverages widespread internet familiarity to boost public self-efficacy, awareness, and compliance in tax calculations and filings. This positive trend is evident in the increased compliance ratios across West Java's DGT Regions I, II, and III, indicating that taxpayers, including those served by the KPP in the DGT West Java area Tax

Service Office I, II, and III, maintained their reporting consistency even during unpredictable circumstances like COVID-19 enabled by the convenience of the modern e-system.

**Table 1.**  
**Taxpayer Compliance Data**

Indicator	Taxpayer compliance data	Tahun (%)		
		2021	2022	2023
Taxpayer compliance and morality	Percentage of compliance with corporate taxpayer and non-employee individuals	65.89	67.00	72.08
	Percentage of compliance level with formal corporate taxpayer and non-employee individuals	64.89	69.15	72.52
	Percentage of corporate taxpayers and non-employee individuals who make payments	51.18	51.91	51.64
Tax amnesty	Revocation of appeal/Lawsuit due to tax amnesty	51.28	42.54	43.14

Source: West Java Directorate General of Taxes (DGT) I, II, and III (processed by the author, 2024)

The convenience of modern electronic tax systems, such as e-registration and e-filing, is enhanced by taxpayers' digital literacy and self-efficacy, contributing significantly to improved tax compliance. Research by Meiryani, Alkhanifani, et al. (2023) emphasizes that these factors are vital for fostering awareness and responsibility, leading to higher compliance rates. Additionally, tax amnesty programs and taxpayer morality are influential in enhancing compliance. Alabede et al. (2011) found that tax amnesty in Nigeria improves compliance by offering incentives and education, while Pui Yee et al. (2017) highlighted the role of morality, where trust in government increases a sense of obligation among taxpayers. This notion is supported by Dwenger et al. (2016), who observed that regular churchgoers tend to comply more with tax laws, suggesting that higher morality leads to better compliance.

Despite these findings, a gap remains in understanding how multiple factors, like tax amnesty and taxpayer morality, interact to influence compliance. Studies by Aladejebi (2018) and Murweni (2018) mainly focus on tax amnesty, while research by Luttmer & Singhal (2014) and Williams & Horodnic (2015) emphasizes taxpayer morality. However, comprehensive research analyzing the combined effects of these factors, especially through a mediating framework, is scarce. Additionally, the perspective of tax officers in shaping compliance remains underexplored. This gap highlights the need for a more nuanced approach to understanding the dynamics of tax compliance, especially as tax revenue is a critical source of public funding.

The implementation of electronic systems like e-registration and e-filing aims to streamline tax compliance, yet taxpayer adherence remains relatively low in several sectors, particularly among individuals and fiscal taxpayers (Ben Ismail & AlSadhan, 2023; Oktris et al., 2024; Yuniarta & Purnamawati, 2020). This reveals a critical issue: while electronic systems are widespread, their ability to consistently enhance compliance is not fully realized. Some studies indicate positive effects, while others report negligible impacts. Furthermore, the role of psychological factors, particularly self-efficacy, in leveraging these systems for compliance is under-researched.

This study seeks to address the urgent need for research on the interplay between modern electronic tax systems and psychological factors like self-efficacy in improving taxpayer compliance and public service quality. Key questions include whether electronic systems significantly impact compliance, the role of self-efficacy in shaping behavior, how digital literacy influences compliance, and how these factors contribute to improving public services. The study

aims to evaluate the impact of e-registration and e-filing on compliance, measure the influence of self-efficacy and digital literacy, and identify the main factors affecting compliance within the context of tax modernization.

By integrating psychological aspects with technological tools, this study offers a novel approach to understanding taxpayer behavior in the digital age. The findings will contribute to both academic knowledge and practical applications, providing insights that inform policy improvements, enhance taxpayer engagement, and improve public service quality. This comprehensive framework will help stakeholders design initiatives to increase compliance and support the successful implementation of modern tax systems, ultimately improving the quality of public services.

Recent advancements in digital tax systems, particularly e-registration and e-filing, have sparked significant discussions about their role in enhancing taxpayer compliance. However, there is still a lack of comprehensive studies that examine how psychological factors, such as self-efficacy, interact with these technological tools to influence compliance. This study introduces a unique approach by integrating psychological aspects like self-efficacy and digital literacy into the analysis of electronic tax systems, offering a fresh perspective on the factors influencing taxpayer compliance. By considering both technological and psychological variables, this research provides a novel framework for understanding taxpayer behavior in the digital era.

### **Literature Review**

Tax amnesty is a policy designed to offer individuals an opportunity to settle their back taxes without penalties or prosecution. Sawyer. A (2005) defines tax amnesty as a mechanism for taxpayers who have failed to report their income to resolve their tax obligations without facing sanctions. This policy aims to foster economic growth, promote tax restructuring, and increase state revenue, thereby supporting government programs (Adhariani et al., 2024; Angeli et al., 2023; Marpaung et al., 2023; Pratama, 2023) add that tax amnesty serves to eliminate tax obligations without administrative or criminal penalties. Its key goals include repatriating unreported assets, restructuring tax liabilities, and reducing the chances of taxpayers concealing assets overseas. According to Bayer et al. (2014), tax amnesty is a governmental initiative allowing delinquent taxpayers to repay their unpaid tax liabilities without fear of punishment, serving as an opportunity for taxpayers to voluntarily fulfill prior obligations, promoting compliance, and enhancing tax revenue.

The effectiveness of tax amnesty programs is evaluated through two primary dimensions and eight indicators that influence tax compliance. The first dimension focuses on taxpayer perceptions, including fairness, duration, benefits, propaganda, and willingness, while the second dimension addresses the role of sanctions, such as the fear of future audits and penalties (Awaeh et al., 2017; Bayer et al., 2014; Benke & Rhode, 1980; Curtis & Turley, 2014; Isa, 2014; Sawyer. A, 2005).

### **Taxpayer Compliance**

Taxpayer compliance, as defined by James & Alley (2002), refers to the willingness of taxpayers to comply with tax regulations voluntarily. Operationally, compliance includes timely reporting, accurate payment of taxes, and adherence to tax laws (Al-Hiyari et al., 2024; Chyz et al., 2021). It reflects taxpayers' capacity and willingness to meet tax obligations without incurring penalties. Compliance can be seen through accurate income

declaration, timely tax submissions, and fulfilling all tax responsibilities (Park & Hyun, 2003; Siglé et al., 2018; Thamrin et al., 2023). Operationally, compliance involves adherence to tax laws, which can be assessed by two dimensions and nine indicators. The first dimension includes submission and reporting, encompassing timely filing, income declaration, ease of tax administration, and third-party reporting. The second dimension looks at socio-economic factors influencing compliance, such as grievances, awareness, and effective business competition laws (Awaeh et al., 2017; Benke & Rhode, 1980; Curtis & Turley, 2014; Isa, 2014).

Research shows that government strategies, including tax amnesty programs, have a significant impact on taxpayer morale and compliance. Alm & Torgler (2011) indicate that frequent amnesty programs may reduce taxpayer morale, as the public may perceive tax avoidance as forgivable. This is especially concerning when the public's trust in the government diminishes, which leads to a decline in the perceived fairness of tax systems. Williams (2014) argues that tax amnesty policies should aim to increase moral obligations for citizens to pay taxes. Abd Hamid & Hilmi (2018) further explore the marginal increase in taxpayer morale due to tax amnesty programs in Malaysia, while Devano et al. (2024) stress the need for deterrent measures to address tax evaders and restore taxpayer trust.

Murweni (2018) concludes that tax amnesty programs can be effective in encouraging tax payments, but their impact on long-term compliance can be negative if implemented too frequently. This observation is supported by Gerger (2012), who suggests that repeated tax amnesty programs may lead to an expectation among taxpayers that tax evasion will be forgiven. Sudarma & Darmayasa (2017) argue that such programs do not always improve compliance, especially in contexts where trust in the government is low. For these programs to be effective, taxpayers need to believe that the government is fair and transparent in administering these initiatives. Emmiryzan (2017) adds that although governments aim to improve compliance, tax amnesty measures can be perceived as unjust by those taxpayers who have always complied with tax laws.

Suharyono (2018) highlights that taxpayer compliance is tied to fulfilling tax obligations according to legal frameworks. This includes registration, timely filing of returns, and accurate reporting of income. Measuring compliance involves various indicators such as registration, timely reporting, accurate payment, and cooperation during audits (Emmiryzan, 2017; Gerger, 2012; Murweni & ., 2018; Sudarma & Darmayasa, 2017; Suharyono, 2018; Williams, 2014).

### **E-Modern Tax System**

E-modern tax systems, including digital tools like e-Registration, e-SPT (Tax Return), and e-Filing, are designed to enhance taxpayer compliance. These systems streamline interactions between taxpayers and the Directorate General of Taxes, making tax administration more efficient and transparent. e-Registration allows new taxpayers to obtain a Taxpayer Identification Number (NPWP) and manage their data online, while e-Filing facilitates the real-time submission of tax returns. These systems are designed to improve tax compliance by aligning tax administration with technological advances, thus increasing efficiency (Bonilla et al., 2022; Clinton & Steinberg, 2019; Khreis et al., 2023; Zame et al., 2018). Key indicators for the e-modern tax system include ease of use, accessibility, processing speed, data accuracy, security, taxpayer compliance, and user satisfaction. These factors are critical for assessing the effectiveness of electronic systems in promoting tax compliance (Van Wyk & Marvel, 2018).

### **Self-efficacy**

Self-efficacy, the belief in one's ability to complete tasks, plays a significant role in taxpayer compliance. Bandura (1997) defines self-efficacy as an individual's confidence in their ability to achieve desired outcomes. Pinasti (2011) adds that individuals with high self-efficacy view challenges as opportunities for mastery. In the context of taxation, self-efficacy influences taxpayers' confidence in managing their tax obligations. Key indicators for measuring self-efficacy include the ability to complete tax returns, understanding tax regulations, calculating taxes payable, using electronic tax systems, meeting deadlines, and adapting to tax policy changes (Hussein et al., 2010; Mostafa, 2020; Wibowo & Mauritsius, 2022). Taxpayers with high self-efficacy are generally more compliant, as they are confident in their ability to navigate the complexities of tax law.

### **Digital Literacy Capabilities**

Digital literacy capabilities are crucial in ensuring that taxpayers can effectively utilize technology to fulfill their tax obligations. As tax authorities increasingly rely on electronic systems, digital literacy enables taxpayers to access and use online platforms such as e-Filing and e-Billing. This capability involves operating digital devices, navigating tax platforms, and ensuring data security. Taxpayers must also be able to search for relevant tax information, use applications for tax calculations, and resolve technical issues (Ochinanwata et al., 2024). These skills are essential for enhancing compliance through the use of modern tax systems.

### **Public Service Quality**

Public service quality plays a key role in promoting taxpayer compliance. Effective service delivery from the Directorate General of Taxes ensures that taxpayers can easily meet their obligations. Key indicators of service quality include reliability, assurance, responsiveness, empathy, tangibility, accessibility, and transparency. A high-quality service system fosters trust and satisfaction, motivating taxpayers to comply with their tax responsibilities (Siwi, 2020; Widiastini & Supadmi, 2020; Juliani & Sumarta, 2021; Kholis et al., 2021). These service quality factors are essential in increasing taxpayer compliance, as they enhance the overall taxpayer experience and strengthen the relationship between taxpayers and tax authorities.

In conclusion, tax amnesty, taxpayer compliance, e-modern tax systems, self-efficacy, digital literacy capabilities, and public service quality are interconnected factors that influence tax compliance. Governments need to implement effective tax policies, supported by modern technology, to encourage compliance. Furthermore, building taxpayer self-efficacy and digital literacy ensures that taxpayers can effectively manage their obligations, while high-quality tax services improve overall compliance rates.

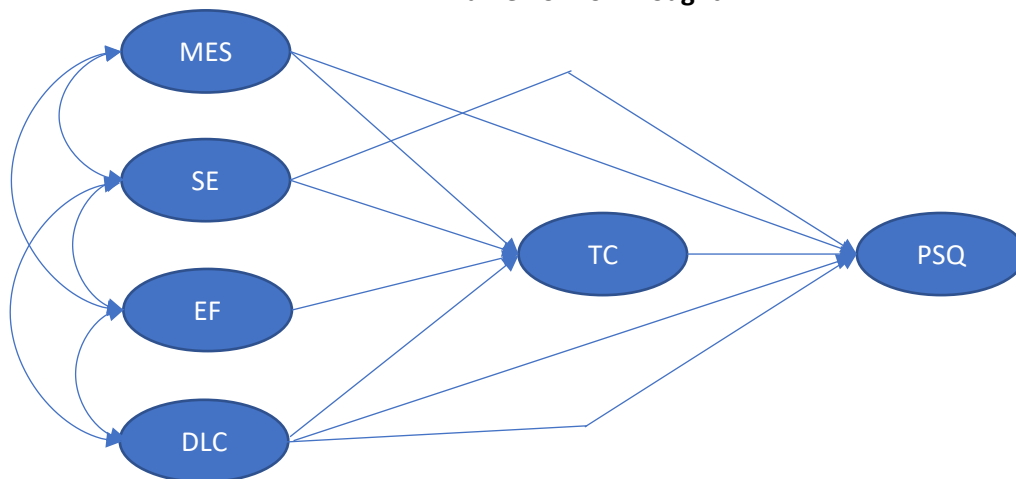
### **Framework of Thought**

The taxation e-System, which utilizes information technology for tax administration, includes components such as e-registration, e-filing, e-billing, and e-SPT, all of which significantly impact taxpayer compliance (Graham & Denning, 1971; Šimović et al., 2016; Sengupta & Shastri, 2019). E-registration allows taxpayers to self-register online, improving compliance rates (Prawati et al., 2020). Self-efficacy, defined as an individual's belief in their ability to achieve goals, is crucial for compliance (Wibowo & Mauritsius, 2022). High self-efficacy encourages taxpayers to view challenges as opportunities and increases their motivation to meet tax obligations (Kulviwat et al. (2014); Meiryani et al.,



(2023). Digital literacy, especially internet proficiency, also enhances compliance by improving access to information and services (Purba et al., 2020; Liza et al., 2019). Advancements in IT streamline data processing, making tax-related tasks easier and fostering positive perceptions of the tax system (Kussuari & Boenjamin, 2019).

**Figure 2.**  
**Framework of Thought**



*Notes: MES = Implementation of Modern Electronic Systems With Proxy e-Registration; SE= Self-Efficacy; EF = E-Filing; DLC =Digital Literacy Capabilities; TC = Taxpayer Compliance; PSQ= Public Service Quality*

Source: Processed by author

Building on the theoretical framework discussed, our research addresses a gap in understanding the factors influencing taxpayer compliance. Previous studies have primarily focused on limited aspects of this issue, which motivates us to explore additional variables and outcomes. This study differentiates itself by examining the impact of the e-modern system, self-efficacy, and digital literacy skills as independent variables affecting taxpayer compliance. Moreover, it features distinct research subjects, analysis methods, research objects, and loci. The subjects include individual and fiscal taxpayers, while the analysis employs Structural Equation Modeling (SEM). The research object focuses on the implementation of modern electronic systems, self-efficacy, and taxpayer compliance, with the locus being Tax Service Offices (TSO) under the Directorate General of Taxes (DGT) in West Java Region I, II, and III. Thus, this study aims to identify and differentiate the factors that influence taxpayer compliance.

## RESEARCH METHODS

### Data Types and Sources

This study uses primary data with a quantitative approach, namely through a questionnaire given to respondents. The data source used is individual taxpayers registered at the Tax Service Office in the West Java DGT Region I, II and III. The dependent variable is taxpayer compliance, which is thought to be influenced by three independent variables, namely esystem, self-efficacy, and digital literacy ability.



**Table 2.**  
**Indicators That Are Assessed**

Manifest Variable	Observed Variable	Manifest Variable	Observed Variable
Implementation of Modern Electronic Systems With Proxy e-Registration (eR)	1. Ease of Use (eR01)	Digital Literacy Capabilities (DLC)	1. Ability to Operate Digital Devices (DLC1)
	2. Accessibility (eR02)		2. Accessibility (DLC2)
	3. Processing Speed (eR03)		3. Ability to Use Electronic Tax System (DLC3)
	4. Data Accuracy (eR04)		4. Understanding Digital Security in the Tax Process (DLC4)
	5. Security (eR05)		5. Ability to Search for Tax Information Online (DLC5)
	6. Taxpayer Compliance (eR06)		6. Understanding the Use of Tax Applications (DLC6)
	7. User Satisfaction (eR07)		7. Readiness to Adapt to New Tax Technologies (DLC7)
e-filing (eF)	1. User Participation Rate (eF01)	Taxpayer Compliance (TC)	8. Ability to Overcome Technical Problems in the Use of Tax Digital System (DLC8)
	2. On-time Filing Compliance (eF02)		
	3. System Reliability (eF03)		
	4. User Convenience (eF04)		
	5. Data Security (eF05)		
	6. Time Efficiency (eF06)		
	7. Technical Support (eF07)		
	8. Usage Flexibility (eF08)		
	9. System Update Compliance (eF09)		
	10. Error Reduction (eF10)		
Self-Efficacy (SE)	1. Beliefs about the Ability to Fill Out SPT (SE1)	Taxpayer Compliance (TC)	1. Registration Compliance (TC1)
	2. Beliefs about the Ability to File/Report Tax Returns (SE2)		2. Filing Compliance (TC2)
	3. Understanding of Tax Regulations (SE3)		3. Payment Compliance (TC3)
	4. Ability to Calculate Taxes Payable (SE4)		4. Reporting Accuracy (TC4)
	5. Ability to Use Tax Electronic System (SE5)		5. Substantive Compliance (TC5)
	6. Confidence in Solving Tax Problems (SE6)		6. Administrative Compliance (TC6)
	7. Ability to Comply with Tax Deadlines (SE7)		7. Audit Compliance (TC7)
	8. Competence in Understanding Changes in Tax Policy (SE8)		8. Sanction Compliance (TC8)

Manifest Variable	Observed Variable	Manifest Variable	Observed Variable
Public Service Quality (PSQ)	1. Reliability (TSQ1);	6. Accessibility (TSQ6);	
	2. Assurance (TSQ2);	7. Transparency (TSQ7);	
	3. Responsiveness (TSQ3);	8. Efficiency (TSQ8);	
	4. Empathy (TSQ4);	9. Equity (TSQ9)	
	5. Tangible (TSQ5);	10. Service Innovation (TSQ10)	

Source: Emmiryzan, 2017; Gerger, 2012; Hussein et al., 2010; Ochinanwata et al., 2024; Sudarma & Darmayasa, 2017; Suharyono, 2018; Van Wyk & Marvel, 2018; Wibowo & Mauritsius, 2022; Williams, 2014.

### Sample Collection Method

The sample comprises a subset of individuals from the population from whom data will be collected for this study (Rusdin, 2015; Sugiono and Rusdin, 2018; Simanjuntak and Rusdin, 2018). A simple proportional random sampling technique will be employed, using a questionnaire administered to registered individual taxpayer respondents and fiscal officers at the Tax Service Offices in the DGT West Java Regions I, II, and III. The total population of individual taxpayers at these offices is 7,195,051. Based on this population, the Structural Equation Modelling (SEM) formula utilized is second order. The path diagram reveals 33 exogenous manifest variables (p), 8 endogenous manifest variables (q), and a total of 107 estimated parameters (t) as detailed by (Hair et al., 2017).

**Table 3.**  
**Number of Parameters Observed**

Parameter	Symbol	First Order
Loading factor observe Exogenous Variables	$(\lambda_x)$	= 37
Measurement Error in Observing Exogenous Variables	$(\delta)$	= 37
Loading Factor Observe Endogen Variables	$(\lambda_y)$	= 10
Measurement Errors in Observing Endogenous Variables	$(\varepsilon_y)$	= 10
Loading Factor Observe Endogen Variables	$(\lambda_z)$	= 8
Measurement Error on Observe Endogenous Variables	$(\varepsilon_z)$	= 8
Gamma	$(\gamma)$	= 2
Beta	$(\beta)$	= 3
<b>Total</b>	<b>(t)</b>	<b>= 107</b>

Source: Processed by author

Referring to the calculation results, the number of analysis units was obtained from a sample of 535 (107x5) respondents, with the division of Individual Tax Obligations as many as 416 Taxpayers and 119 Fiscal.

### Data Analysis Methods

The data was analyzed in 2 (two) ways, namely: Descriptive Analysis and Structural Equation Modeling.  $H_0: \gamma_i = 0$  ;  $H_i: \gamma_1 \neq 0$ . Subtract  $H_0$  for the real level of 95% ( $\alpha=0.05$ ), if the p-value >

$\alpha$ , where  $t = \frac{\hat{\gamma}}{Se(\hat{\gamma}^2)}$ , while the simultaneous  $H_0: \gamma_1 + \gamma_2 = 0$  ;  $H_i: \gamma_1 + \gamma_2 \neq 0$ . Subtract  $H_0$  for

the real level of 95% ( $\alpha=0.05$ ), if the p-value >  $\alpha$ , where  $F_{cal} = \frac{R^2/q}{(1-R^2)/(n-q-1)} - 1$ .

## RESULTS AND DISCUSSIONS

### Result

#### Overview of Revenue from the Tax Sector in West Java

The tax revenue in West Java from 2020 to 2024 reveals significant trends in fiscal performance, encompassing the annual budget (pagu), actual realization (realisasi), and the percentage of realization for each fiscal year. This data illustrates the fluctuations in tax revenue performance, showcasing the impact of government policies and economic conditions on taxpayer compliance and revenue generation. The trends highlighted in this overview reflect the efforts made by the government, particularly in implementing fiscal incentives and enhancing taxpayer services, as well as the challenges faced in achieving revenue targets.

**Table 4.**  
**West Java Tax Revenue**

In Billions of Rupiah			
Year	Allocation	Realization	% Realization
2020	128.664	98.402	76,48
2021	115.533	111.611	96,60
2022	125.740	143.391	28,47
2023	125.251	144.300	39,43
2024	125.450	60.43*)	24,46*)
<b>Growth</b>			<b>28,47</b>

Note: as of April 2024

Source: Processed by author

Table 4 shows the fiscal performance of tax revenues in West Java from 2020 to 2024. In 2020, tax revenue was IDR 98.40 trillion, 76.48% of the target. This improved in 2021 to IDR 111.61 trillion (96.60% of the target). The recovery continued in 2022 with a 28.47% growth, reaching IDR 143.39 trillion, and continued in 2023, surpassing the target at IDR 144.30 trillion. However, in early 2024, revenues dropped to IDR 60.43 trillion, only 24.46% of the projected target, highlighting fluctuations driven by economic and policy factors.

**Figure 3.**  
**Growth in tax revenue**



Source: West Java Directorate General of Taxes (DGT) I, II, and III (processed by the author, 2024)

In 2020, the government introduced Fiscal Incentives for Taxation and Customs to support MSMEs in West Java, benefiting 66,751 taxpayers, including 34,568 MSMEs, with IDR 5.61 trillion in total incentives. In 2021, West Java's State Revenue reached IDR 117.026 trillion, achieving

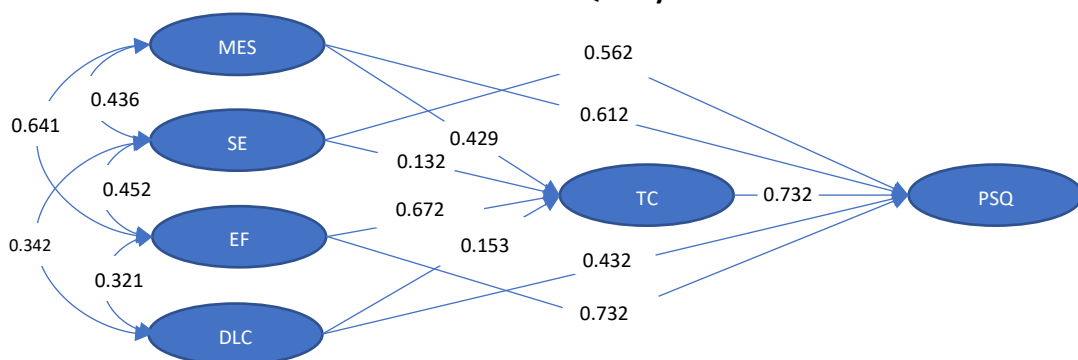
98.12% of the target, but decreased by 9.9% from the previous year. State Revenue rebounded in 2022, growing 27.65% to IDR 149.38 trillion, driven by tax revenue of IDR 143.39 trillion. In 2023, revenues increased by 4.84%, totaling IDR 151.39 trillion, with tax revenues of IDR 144.30 trillion and state spending reaching IDR 119.87 trillion, resulting in a surplus.

However, in the second quarter of 2024, revenues slightly declined by 0.16% to IDR 74.57 trillion, largely due to lower tax revenues, particularly in VAT and excise duties. Despite this, state spending remained strong, increasing by 17.72%, leading to a surplus. To assess public service performance, the Directorate General of Taxes in West Java uses the Public Service Index (PSI), evaluating aspects such as policy, HR professionalism, infrastructure, and service innovation, informing regional revenue and expenditure planning.

### Statistical Overview

This research surveying 535 respondents (416 taxpayers and 119 fiscal authorities) in West Java DGT I, II, and III regions, revealed key findings: Public Service Quality (PSQ) achieved 59.98% of the ideal score, Taxpayer Compliance (TC) reached 58.62%, Proxy e-Registration (eR) implementation stood at 63.12%, Self-Efficacy (SE) was at 62.43%, and E-Filing (EF) reached 67.12%. These scores indicate moderate performance levels across all areas. Taxpayer compliance and public service quality are both at medium levels, while the adoption of Modern Electronic Systems (eR, EF) shows progress but still falls short of optimal standards. This suggests that while there is progress in adapting to modern tax systems, there is room for improvement. Both taxpayers and fiscal authorities need further development and support to better utilize electronic tax systems. These results emphasize the importance of continued efforts to enhance the effectiveness of tax compliance and the use of modern technology in tax administration.

**Figure 4.**  
**MES & SE Implementation Model and Its Implications for Taxpayer Compliance and Public Services Quality**



Notes: MES = Implementation of Modern Electronic Systems With Proxy e-Registration; SE= Self-Efficacy; EF = E-Filing; DLC =Digital Literacy Capabilities; TC = Taxpayer Compliance; PSQ= Public Service Quality

Source: Processed by author

If the current issues with tax administration are not addressed, West Java's tax performance may suffer, negatively affecting key metrics such as the Tax Revenue Ratio, Tax Compliance Ratio, Tax Revenue Growth, Tax Collection Ratio, and Taxpayer Satisfaction Index. These metrics are essential for assessing the effectiveness of tax policies, and a decline could hinder state revenue and taxpayer compliance. Our research, surveying 535 respondents (416 taxpayers and 119 tax officials) in the Directorate of Taxes I, II, and III regions of West Java, examined the

structural relationships between key factors affecting tax performance. Using Linear Structural Relations (LISREL) statistical techniques, the findings revealed that the modern e-taxation system, represented by e-registration, significantly impacts taxpayer compliance ( $p\text{-Value} = 0.000 < \alpha = 0.05$ ). However, e-filing does not significantly affect compliance ( $p\text{-Value} = 0.172 > \alpha = 0.05$ ), suggesting that other factors may be influencing its effectiveness.

Additionally, self-efficacy has a significant impact on taxpayer compliance ( $p\text{-Value} = 0.000 < \alpha = 0.05$ ), while digital literacy does not ( $p\text{-Value} = 0.145 > \alpha = 0.05$ ). Taxpayer compliance is also significantly linked to public service quality ( $p\text{-Value} = 0.000 < \alpha = 0.05$ ). Overall, e-registration, self-efficacy, e-filing, digital literacy, and taxpayer compliance collectively improve public service quality ( $p\text{-Value} = 0.000 < \alpha = 0.05$ ). These results highlight that strengthening e-registration processes and boosting self-efficacy are essential for improving tax compliance and the quality of tax-related services. Tailored interventions are needed to optimize these areas and ensure the effective use of modern tax systems.

## **Discussion**

These findings underscore the importance of a well-implemented e-taxation system, alongside efforts to boost taxpayer self-efficacy, in enhancing tax compliance and public service quality. Although e-filing and digital literacy alone show limited impact, the collective influence of modern electronic systems, taxpayer confidence, and compliance significantly contribute to the effectiveness of public tax services. Addressing these areas is vital for optimizing tax performance and achieving sustainable revenue growth in West Java's DGT regions, fostering a more responsive and efficient tax administration that aligns with broader regional development goals.

### **Effect of E-Modern System on Taxpayer Compliance**

Our research indicates that the e-modern system, particularly e-registration, significantly influences taxpayer compliance. Over the past five years, e-registration has effectively met community needs, facilitating individual taxpayer registration. Furthermore, during the COVID-19 pandemic, the Directorate General of Taxes (DGT) implemented policies that streamlined the process for taxpayers to obtain identification numbers online. This aligns with observed annual increases in the number of registered individual taxpayers. Additionally, our findings corroborate Sukiyaningsih (2020) research, which highlights that improved e-registration correlates with enhanced tax compliance. In summary, the more effectively e-registration is implemented, the greater the increase in taxpayer compliance.

### **Effect of Self-Efficacy on Taxpayer Compliance**

The results reveal that self-efficacy has a significant impact on taxpayer compliance, with a probability value of 0.000 ( $p < 0.05$ ). This indicates that individual taxpayers within the DGT regions of West Java I, II, and III demonstrate a high level of awareness and intention to navigate obstacles in tax reporting. Consequently, this awareness positively influences compliance rates. This finding is consistent with the analysis by Santalina & Yudiantara (2020), which emphasizes that taxpayer compliance is largely driven by self-efficacy—the belief in one's ability to adhere to tax regulations. A high level of self-efficacy fosters a more compliant attitude among taxpayers regarding their tax obligations.

### **E-filing and Taxpayer Compliance**

In contrast, our study found that e-filing has a probability value of 0.172 ( $p > 0.05$ ), suggesting that it does not significantly impact taxpayer compliance. Despite an increase in e-filing usage, many individuals still fail to register or report their taxes properly. Recent data show that only 25-50% of registered individual taxpayers fulfill their annual tax return obligations. This indicates a crucial area for government intervention to enhance public awareness and encourage compliance. The government must demonstrate the benefits and feedback from individual taxpayer reporting to promote voluntary compliance through e-filing. Our findings differ from those of Arimurti et al. (2021), who suggested that technology-based tax reforms improve taxpayer compliance. Despite positive perceptions regarding compliance and tax reporting among respondents, our results did not yield statistically significant evidence.

### **Effect of Digital Literacy on Taxpayer Compliance**

The probability value related to digital literacy in our study was 0.145 ( $p > 0.05$ ), indicating that while there is positive awareness in the community, the lack of adequate digital literacy skills does not significantly affect taxpayer compliance. This may stem from insufficient governmental information and educational outreach concerning the use and benefits of tax software. The frequent changes and complexities in tax regulations, coupled with system malfunctions near reporting deadlines, can hinder compliance. Thus, the DGT should work towards improving systems to mitigate congestion during peak reporting times. This aligns with Arimurti et al. (2021) findings, which stress the need for collaboration among all stakeholders—including taxpayers, regulators, government, service vendors, and related agencies—to enhance taxpayer compliance through e-filing systems.

### **Connecting E-Modern Systems to Digital Literacy Capabilities**

The implementation of e-modern systems, such as e-registration, significantly intersects with the realm of digital literacy capabilities. The success of e-modern systems in enhancing taxpayer compliance is not solely dependent on the technology itself but also on taxpayers' ability to navigate these systems effectively. As noted in the literature, the ability to utilize digital tools is paramount for individuals to engage fully with e-modern systems (Arimurti et al. 2021). While our findings indicate that e-registration has a positive impact on compliance, the efficacy of this system is contingent upon taxpayers' digital literacy levels. If taxpayers lack the necessary skills to utilize the e-registration platform, the potential benefits may not be fully realized. Therefore, a concerted effort to enhance digital literacy through targeted educational programs is essential. This not only empowers individuals to engage more effectively with e-modern systems but also fosters a culture of compliance as taxpayers become more adept at understanding and fulfilling their obligations.

### **Self-Efficacy and Digital Literacy Capabilities**

The link between self-efficacy and digital literacy capabilities is another critical area of consideration. Our study finds that high levels of self-efficacy significantly contribute to taxpayer compliance. However, this relationship is further reinforced by the presence of adequate digital literacy skills. As Santalina & Yudiantara (2020) suggest, an individual's belief in their ability to comply with tax regulations is closely tied to their understanding and use of digital tools. Taxpayers with high self-efficacy are more likely to seek out information and engage with digital

platforms if they possess the necessary skills. Conversely, those lacking digital literacy may experience diminished self-efficacy, as they struggle to navigate the complexities of e-modern systems and tax reporting. This interconnectedness highlights the importance of not only promoting self-efficacy but also ensuring that taxpayers are equipped with the digital skills necessary to utilize e-modern systems effectively. By providing comprehensive training and resources, tax authorities can enhance both self-efficacy and digital literacy, leading to improved taxpayer compliance overall.

### **E-Filing and Digital Literacy Capabilities**

The relationship between e-filing and digital literacy capabilities further illuminates the challenges faced by taxpayers in adhering to their tax obligations. Our findings reveal that while e-filing is available, its effectiveness is undermined by insufficient digital literacy among taxpayers. As highlighted by previous studies, effective use of e-filing systems requires not just access to technology but also the capability to understand and engage with these systems effectively (Sukiyaninsih, 2020). The low rates of annual tax return submissions among individual taxpayers suggest that many individuals may not fully comprehend the e-filing process or its significance. Therefore, enhancing digital literacy is crucial for fostering confidence and competence in utilizing e-filing systems. Governments should prioritize educational initiatives that explain the e-filing process, the importance of timely submissions, and the consequences of non-compliance, thus bridging the gap between technology and its effective use.

### **E-Modern Systems, Digital Literacy Capabilities, and Taxpayer Compliance**

The relationship between e-modern systems and taxpayer compliance is significantly influenced by digital literacy capabilities. Our research indicates that e-registration enhances taxpayer compliance; however, this effect is contingent upon taxpayers' ability to effectively utilize these systems. According to Arimurti et al. (2021) the success of e-modern systems relies not only on their technological robustness but also on users' familiarity and comfort with digital tools. As taxpayers develop greater digital literacy, they are more likely to navigate e-modern systems efficiently, leading to improved compliance rates. This connection underscores the importance of integrating digital literacy initiatives into tax administration strategies. By enhancing digital skills among taxpayers, tax authorities can ensure that the advantages of e-modern systems are fully leveraged, resulting in a higher compliance rate. Educational campaigns focused on the functionalities and benefits of e-registration can empower taxpayers, thus creating a positive feedback loop that fosters compliance.

### **Self-Efficacy, Digital Literacy Capabilities, and Taxpayer Compliance**

The interplay between self-efficacy, digital literacy capabilities, and taxpayer compliance further elucidates the complexity of compliance behavior. Our findings show that self-efficacy plays a significant role in influencing taxpayer compliance, but this influence is amplified when taxpayers possess adequate digital literacy skills. As Santalina & Yudiantara (2020) point out, individuals who believe in their ability to comply with tax obligations are more likely to engage with digital tools effectively. When taxpayers have high self-efficacy and strong digital skills, they are empowered to seek out information, navigate e-modern systems, and fulfill their tax responsibilities confidently. Conversely, a lack of digital literacy may hinder taxpayers' self-efficacy, creating a barrier to compliance. Therefore, initiatives that enhance both self-efficacy and digital literacy are essential for fostering a compliant taxpayer base. By providing



comprehensive training programs and support systems, tax authorities can create an environment where taxpayers feel capable and confident in meeting their obligations.

### **E-Filing, Digital Literacy Capabilities, and Taxpayer Compliance**

Similarly, the efficacy of e-filing systems is closely tied to taxpayers' digital literacy capabilities, which ultimately influences their compliance behavior. Although our study found that e-filing did not have a statistically significant effect on compliance, the underlying issue appears to stem from varying levels of digital literacy among taxpayers. As highlighted by Sukiyansih (2020), effective engagement with e-filing requires a solid understanding of tax regulations and the technical know-how to complete the filing process. If taxpayers lack these skills, the potential benefits of e-filing are diminished. Therefore, it is crucial to develop educational resources that equip taxpayers with the necessary knowledge and skills to use e-filing systems effectively. By fostering digital literacy, tax authorities can not only enhance the utilization of e-filing but also increase the likelihood of timely and accurate submissions, leading to better compliance outcomes.

### **Effect of E-Modern Systems on Taxpayer Compliance**

Our research findings indicate that the e-modern system, specifically e-registration, significantly influences taxpayer compliance, with a probability value of 0.000. This outcome corroborates recent trends wherein the implementation of e-registration has streamlined the taxpayer registration process, particularly benefiting individual taxpayers. The Directorate General of Taxes (DGT) has facilitated online taxpayer identification number (TIN) creation, making it easier for taxpayers to engage with the tax system, especially during the COVID-19 pandemic. As evidenced by the annual increase in registered individual taxpayers, our results align with Sukiyansih (2020), who also found that effective e-registration enhances tax compliance. This relationship underscores that improved e-registration systems lead to higher taxpayer compliance rates by simplifying access and fostering a sense of responsibility among taxpayers.

### **Effect of Self-Efficacy on Taxpayer Compliance**

Our results demonstrate a significant relationship between self-efficacy and taxpayer compliance, with a probability value of 0.000, indicating that higher self-efficacy correlates with improved compliance among taxpayers in West Java. This finding is consistent with the conclusions of Santalina & Yudiantara (2020), who assert that self-efficacy enhances compliance by fostering taxpayers' belief in their ability to meet tax obligations. As individual taxpayers develop a strong sense of confidence in their capabilities to navigate tax regulations and reporting processes, they are more likely to comply with their tax responsibilities. Therefore, initiatives aimed at boosting self-efficacy, such as workshops and resources that provide guidance on tax obligations can significantly contribute to improving overall taxpayer compliance rates.

### **Effect of E-Filing on Taxpayer Compliance**

Conversely, our study revealed that e-filing does not have a significant effect on taxpayer compliance, with a probability value of 0.172, exceeding the 0.05 threshold. Although the growing adoption of e-filing suggests an increase in taxpayer awareness regarding their reporting obligations, many taxpayers still struggle with the actual reporting process. Data indicating that only 25-50% of annual tax returns are submitted by registered individual

taxpayers points to a critical gap in compliance. This situation reflects the necessity for increased public awareness campaigns to educate taxpayers about the benefits and usage of e-filing. Furthermore, as noted by Arimurti et al. (2021) effective compliance requires individuals to adapt to technological changes. Hence, the government must emphasize not just the availability of e-filing but also the importance of understanding how to use it effectively.

### **Digital Literacy Capabilities and Taxpayer Compliance**

Digital literacy emerges as a crucial factor influencing taxpayer compliance across the studied variables. Although our results indicated a lack of significant influence of digital literacy capabilities on taxpayer compliance, with a probability value of 0.145, it is essential to recognize that low digital literacy can impede the effective use of e-modern systems and e-filing. The government's limited educational outreach on tax software and regulations may hinder taxpayers' understanding, leading to lower compliance rates. This aligns with Arimurti et al. (2021) assertion that a successful e-filing system necessitates support from all stakeholders, including tax authorities and taxpayers themselves. By investing in digital literacy programs, tax authorities can empower individuals with the skills necessary to utilize digital tools effectively, thereby enhancing compliance.

### **The e-modern tax system with proxies of e-registration, Self-Efficacy, e-Filing, Digital Literacy, and taxpayer compliance can improve Tax Service Quality**

The e-modern tax system with proxies of e-registration, Self-Efficacy, e-Filing, Digital Literacy, and taxpayer compliance simultaneously have positive and significant implications for Tax Service Quality ( $p\text{-Value} = 0.000 < \alpha = 0.05$ ). A modern electronic tax system that uses e-registration, self-efficacy, e-filing, digital literacy, and taxpayer compliance proxies can improve the quality of tax services because each element plays an important role in simplifying, accessing, and accelerating the tax process. **E-Registration:** Makes it easier for taxpayers to register and access tax services online, thereby reducing administrative barriers and speeding up the registration process; **Self-Efficacy:** The level of confidence of taxpayers in using electronic systems has a positive impact on their ability to manage tax obligations independently, which ultimately increases the speed and accuracy of services; **E-Filing:** Enables digital tax filling and reporting, thereby reducing the need for physical documents, minimizing errors, and speeding up the process of submitting and processing tax reports; **Digital Literacy:** Increasing taxpayers' understanding of how to use technology in the tax process, which reduces confusion and increases the effectiveness of using electronic services; **Taxpayer Compliance:** Increased taxpayer compliance through an easier and more transparent system supports the availability of accurate data and strengthens the integrity of the tax system.

With the existence of this proxy, the quality of tax services increases through increased efficiency, data accuracy, ease of access, and taxpayer satisfaction, which ultimately supports the optimization of state revenue.

### **Connections Between Variables**

The interconnections between e-modern systems, e-filing, self-efficacy, and digital literacy capabilities create a complex framework influencing taxpayer compliance. E-modern systems, such as e-registration, contribute significantly to compliance by simplifying processes and enhancing accessibility. However, for these systems to be effective, taxpayers must possess

adequate digital literacy skills. This connection suggests that the successful implementation of e-modern systems relies on the taxpayer's ability to understand and navigate these tools.

Similarly, while e-filing represents an essential reporting mechanism, its effectiveness is contingent upon taxpayers' digital literacy capabilities. If taxpayers lack the necessary skills or understanding of e-filing, the benefits of this system will not be realized, leading to lower compliance rates. Therefore, enhancing digital literacy should be a priority for tax authorities to ensure that the advantages of e-filing translate into improved compliance.

Moreover, self-efficacy directly impacts taxpayers' willingness to engage with e-modern systems and e-filing. High levels of self-efficacy may encourage individuals to seek help and learn how to use these digital tools effectively. However, this is contingent upon the taxpayers also possessing adequate digital literacy skills. Thus, initiatives aimed at fostering self-efficacy should go hand in hand with educational efforts focused on improving digital literacy among taxpayers.

The e-modern tax system, with proxies of e-registration, self-efficacy, e-filing, digital literacy, and taxpayer compliance, significantly improves tax service quality by simplifying, enhancing accessibility, and accelerating the tax process, thereby increasing efficiency, data accuracy, access ease, and taxpayer satisfaction for optimized state revenue.

In summary, The e-modern tax system, incorporating e-registration, e-filing, self-efficacy, and digital literacy, forms an interconnected framework that enhances taxpayer compliance by simplifying and making tax processes more accessible. However, the system's success depends on taxpayers' digital literacy skills, as a lack of understanding can hinder effective use and compliance rates. E-filing, a key reporting tool, relies on taxpayers' digital abilities for full effectiveness, making digital literacy a crucial focus for tax authorities. Furthermore, self-efficacy boosts taxpayers' willingness to engage with e-modern tools, but this also requires sufficient digital skills. Thus, combining self-efficacy programs with digital literacy training is essential to fully realize the benefits of e-modern tax systems and enhance tax service quality, ultimately supporting state revenue optimization.

## CONCLUSIONS

This study aims to explore the factors that affect the public service quality by looking at the level of taxpayer compliance, with a focus on the effects of e-registration, e-filing, self-efficacy, and digital literacy. A review of the literature shows that modern tax administration systems, especially those that incorporate digital technologies, have been shown to improve taxpayer compliance by streamlining processes and improving accessibility. Previous studies have highlighted the importance of self-efficacy in motivating taxpayers to meet their obligations, as well as the need for digital literacy in navigating the online tax system effectively.

Our conceptual framework suggests that modern e-systems and e-filing significantly affect taxpayer compliance and have implications for the quality of tax services, with self-efficacy and digital literacy serving as mediating factors. The results of this study confirm that modern electronic taxation systems with e-registration proxies, significantly increase taxpayer compliance. This shows that the implementation of e-registration effectively meets the needs of the community in online tax administration, a need underlined by the ease of obtaining a taxpayer identification number during the COVID-19 pandemic until now.

Conversely, while e-filing has gained traction among taxpayers, it does not significantly impact compliance rates. Despite increased awareness of the importance of reporting tax obligations through e-filing, many individuals remain either unregistered or fail to submit their tax returns. This highlights a critical gap in taxpayer engagement and underscores the need for targeted interventions to enhance compliance to improve the public services quality.

Additionally, our research indicates that self-efficacy is crucial in promoting taxpayer compliance. Individual taxpayers at the KPP in the DGT West Java area Tax Service Office I, II, and III exhibit a high level of awareness, intention, and capacity to overcome challenges related to tax reporting, thereby positively influencing compliance. However, digital literacy skills were found to have no significant effect on taxpayer compliance. While there is a notable level of positive awareness within the community, insufficient digital literacy and a lack of government education regarding tax software usage impede compliance efforts. This suggests that enhancing digital literacy and providing comprehensive educational resources are essential for improving taxpayer engagement.

An overview of how e-registration, self-efficacy, e-filing, digital literacy, and taxpayer compliance have positive and significant implications on the public services quality (PSQ) shows that the use of modern electronic tax systems supported by taxpayers' ability to utilize technology effectively will increase efficiency, ease of access, and accuracy in tax services, which in turn provides a great impact in increasing special state revenues from the tax sector.

It is important to acknowledge the limitations of this study, particularly the sample size of 535 respondents, which may not fully represent the broader taxpayer population. Future research should consider expanding the sample size, exploring additional variables, and utilizing advanced analytical tools such as SmartPLS or AMOS to gain deeper insights. Investigating other contextual factors, including different periods and phenomena, may provide valuable perspectives on taxpayer compliance dynamics.

## REFERENCES

- Abd Hamid, N., & Hilmi, M. H. (2018). THE INFLUENCE OF TAXPAYERS' TAX LIABILITY, AFFORDABILITY, AND MORALITY ON TAX AMNESTY PROGRAM IN MALAYSIA. *Labuan E-Journal of Muamalat and Society (LJMS)*, 12, 1–25. <https://doi.org/10.51200/ljms.v12i.1347>
- Abrianto, B. O., Nugraha, X., & Izzaty, R. (2019). Hak Konstitusional Lembaga Kepresidenan Dalam Penolakan Pengesahan RUU APBN Oleh DPR. *Jurnal IUS Kajian Hukum Dan Keadilan*, 7(3), 519. <https://doi.org/10.29303/ius.v7i3.633>
- Adhariani, D., Hajawiyah, A., & Rini, R. K. (2024). Tax amnesty, corporate social responsibility disclosure, and organizational inertia. *Business Strategy & Development*, 7(1). <https://doi.org/10.1002/bsd2.317>
- Akhmadeev, R. G., Bykanova, O. A., & Turishcheva, T. B. (2018). Brics' Foreign Debt Burden and its Impact on Core Institutional Basis. *Journal of Reviews on Global Economics*, 7, 345–359. <https://doi.org/10.6000/1929-7092.2018.07.30>
- Al-Hiyari, A., Kolsi, M. C., & Mas'ud, A. (2024). Antecedents and consequences of automated VAT solution adoption in Gulf cooperation countries: the case of the United Arab Emirates. *Journal of Financial Reporting and Accounting*. <https://doi.org/10.1108/JFRA-10-2023-0617>

- Alabede, O. J., , Zainol, A., & Kamil, M. I. (2011). Determinants of tax compliance behavior: a proposed model for Nigeria. *International Research Journal of Finance and Economics*, 78, 121–136.
- Alasfour, F., Samy, M., & Bampton, R. (2016). *The Determinants of Tax Morale and Tax Compliance: Evidence from Jordan* (pp. 125–171). <https://doi.org/10.1108/S1058-749720160000023005>
- Albert Bandura. (1997). Albert Bandura Self-Efficacy: The Exercise of Control. In *W.H Freeman and Company New York* (Vol. 43, Issue 9, pp. 1–602).
- Alm, J., & Torgler, B. (2011). Do Ethics Matter? Tax Compliance and Morality. *Journal of Business Ethics*, 101(4), 635–651. <https://doi.org/10.1007/s10551-011-0761-9>
- Andrés Aucejo, E. (2017). Towards an International Code for administrative cooperation in tax matters and international tax governance. *Revista Derecho Del Estado*, 40, 45–85. <https://doi.org/10.18601/01229893.n40.03>
- Angeli, A., Lattarulo, P., Palmieri, E., & Pazienza, M. G. (2023). Tax evasion and tax amnesties in regional taxation. *Economia Politica*, 40(1), 343–369. <https://doi.org/10.1007/s40888-023-00297-9>
- Anjarwi, A. W., T, S., Baridwan, Z., & Iqbal, S. (2024). The Deterrent Role of Social Norms on Tax Evasion in Indonesia. *Deviant Behavior*, 1–20. <https://doi.org/10.1080/01639625.2024.2375017>
- Arimurti, T., Yanti, & Sasqia, U. (2021). The Effect of the Implementation of the E-Filing System with Internet Understanding on Taxpayer Compliance as a Moderation Variable in North Karawang Pratama Tax Service. *J. Accounting and Finance*, 3(2).
- Awaeh, M. A., Lambey, L., & Sherly, P. (2017). Analisis Efektivitas Penerapan Tax Amnesty (Pengampunan Pajak) Terhadap Penerimaan Pajak Pada Kantor Pelayanan Pajak Pratama Bitung. *Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, 5(2), 2268–2276. <https://ejournal.unsrat.ac.id/index.php/emba/article/view/16529>
- Bayer, R. C., Oberhofer, H., & Winner, H. (2014). The Occurrence of Tax Amnesties: Theory and Evidence. *SSRN Electronic Journal*, 487. <https://doi.org/10.2139/ssrn.2388497>
- Ben Ismail, M. M., & AlSadhan, N. (2023). Simultaneous Classification and Regression for Zakat Under-Reporting Detection. *Applied Sciences*, 13(9), 5244. <https://doi.org/10.3390/app13095244>
- Benke, R. L., & Rhode, J. G. (1980). The job satisfaction of higher-level employees in large certified public accounting firms. *Accounting, Organizations and Society*, 5(2), 187–201. [https://doi.org/10.1016/0361-3682\(80\)90009-4](https://doi.org/10.1016/0361-3682(80)90009-4)
- Bigwanto, M., Arumsari, I., & Fauzi, R. (2023). The portrayal of electronic cigarettes in Indonesia: a content analysis of news media. *BMC Public Health*, 23(1), 52. <https://doi.org/10.1186/s12889-022-14886-z>
- Błaszczuk, M., Popović, M., Zajdel, K., & Zajdel, R. (2023). Implications of the COVID-19 Pandemic on the Organization of Remote Work in IT Companies: The Managers' Perspective. *Sustainability*, 15(15), 12049. <https://doi.org/10.3390/su151512049>
- Bobek, D. D., Hageman, A. M., & Kelliher, C. F. (2013). Analyzing the Role of Social Norms in Tax Compliance Behavior. *Journal of Business Ethics*, 115(3), 451–468. <https://doi.org/10.1007/s10551-012-1390-7>
- Bonilla, D., Arias Soberon, H., & Galarza, O. U. (2022). Electric vehicle deployment & fossil fuel tax revenue in Mexico to 2050. *Energy Policy*, 171, 113276. <https://doi.org/10.1016/j.enpol.2022.113276>
- Brink, W. D., & Porcano, T. M. (2016). *The Impact of Culture and Economic Structure on Tax Morale and Tax Evasion: A Country-level Analysis Using SEM* (pp. 87–123). <https://doi.org/10.1108/S1058-749720160000023004>

- Carnevale, J. B., Huang, L., Vincent, L. C., Yu, L., & He, W. (2024). Outshined by Creative Stars: A Dual-Pathway Model of Leader Reactions to Employees' Reputation for Creativity. *Journal of Management*, 50(7), 2571–2596. <https://doi.org/10.1177/01492063231171071>
- Christina, S. (2022). Tax compliance of individual taxpayers in DKI Jakarta, Indonesia. *International Journal of Trade and Global Markets*, 15(1), 96. <https://doi.org/10.1504/IJTGM.2022.120908>
- Chyz, J. A., Gal-Or, R., Naiker, V., & Sharma, D. S. (2021). The Association between Auditor Provided Tax Planning and Tax Compliance Services and Tax Avoidance and Tax Risk. *The Journal of the American Taxation Association*, 43(2), 7–36. <https://doi.org/10.2308/JATA-19-041>
- Clinton, B. C., & Steinberg, D. C. (2019). Providing the Spark: Impact of financial incentives on battery electric vehicle adoption. *Journal of Environmental Economics and Management*, 98, 102255. <https://doi.org/10.1016/j.jeem.2019.102255>
- Cuckler, G. A., Sisko, A. M., Poisal, J. A., Keehan, S. P., Smith, S. D., Madison, A. J., Wolfe, C. J., & Hardesty, J. C. (2018). National Health Expenditure Projections, 2017–26: Despite Uncertainty, Fundamentals Primarily Drive Spending Growth. *Health Affairs*, 37(3), 482–492. <https://doi.org/10.1377/hlthaff.2017.1655>
- Curtis, E., & Turley, S. (2014). *Audit approaches and business risk auditing*.
- Davies, H. (2020). The \$19,000 Question: How Will the Economic Consequences of the Coronavirus Pandemic Affect the Financial System? *Global Perspectives*, 1(1). <https://doi.org/10.1525/gp.2020.14171>
- Devano, S., Mulyani, S., Winarningsih, S., & Ghani, E. (2024). Tax amnesty and taxpayer morality in predicting taxpayer compliance. *International Journal of Applied Economics, Finance and Accounting*, 18(1), 98–106. <https://doi.org/10.33094/ijaefa.v18i1.1332>
- Di Gioacchino, D., & Fichera, D. (2020). Tax evasion and tax morale: A social network analysis. *European Journal of Political Economy*, 65, 101922. <https://doi.org/10.1016/j.ejpoleco.2020.101922>
- Dwenger, N., Kleven, H., Rasul, I., & Rincke, J. (2016). Extrinsic and Intrinsic Motivations for Tax Compliance: Evidence from a Field Experiment in Germany. *American Economic Journal: Economic Policy*, 8(3), 203–232. <https://doi.org/10.1257/pol.20150083>
- Emmiryzan, S. (2017). Tax Policy in Action: 2016 Tax Amnesty Experience of the Republic of Indonesia. *Laws*, 6(4), 16. <https://doi.org/10.3390/laws6040016>
- Fitnawan, E. A. Y., Harsum, W. A., Hasan, A., Hannanu, M. I., Paulus, S. L., Dharma, S., Subhono, B., Lasabuda, A., Supriyadi, R. A., Ciptadi, S., Amanda, R., Mansyur, B., Kusumawati, I., Barliansyah, A., & Zein, A. A. (2021, October 4). Towards Achieving Indonesia's Oil Production Target of 1 MMBOPD by 2030: An Outlook from IATMI Norway. *SPE/IATMI Asia Pacific Oil & Gas Conference and Exhibition*. <https://doi.org/10.2118/205753-MS>
- Forney, J., Rosin, C., & Campbell, H. (Eds.). (2018). *Agri-environmental Governance as an Assemblage*. Routledge. <https://doi.org/10.4324/9781315114941>
- Gerger, G. C. (2012). Tax Amnesties and Tax Compliance in Turkey. , 2(3), 107–113. *International Journal of Multidisciplinary Thought*, 2(3), 107–113.
- Graham, G. S., & Denning, P. J. (1971). Protection. *Proceedings of the November 16-18, 1971, Fall Joint Computer Conference on - AFIPS '71 (Fall)*, 417. <https://doi.org/10.1145/1478873.1478928>
- Hair, J. F., Hult, G. T., Ringle, C., & Sarstedt, M. (2017). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) - Joseph F. Hair, Jr., G. Tomas M. Hult, Christian Ringle, Marko Sarstedt. In *Sage*.

- Harkushenko, O. N. (2022). Prospects of VAT Administration Improvement in Digitalized World: Analytical Review. *Journal of Tax Reform*, 8(1), 6–24. <https://doi.org/10.15826/jtr.2022.8.1.105>
- Hartanto, G. S., & Sugiharti, D. K. (2019). The Impact of the Motor Vehicle Tax Award on the Increase of the West Java Province's Locally Generated Revenue. *Padjadjaran Jurnal Ilmu Hukum*, 6(1), 168–189. <https://doi.org/10.22304/pjih.v6n1.a9>
- Hasibuan, Y., A. N., & BZ, F. S. (2023). Evaluating Account Representative Competence and its Impact on Tax Collection Performance: A Strength Typology-30 Study. *2023 International Conference on Decision Aid Sciences and Applications (DASA)*, 374–379. <https://doi.org/10.1109/DASA59624.2023.10286756>
- Hatane, S. E., Diandra, J. C., Tarigan, J., & Jie, F. (2023). Voluntary intellectual capital disclosure and earnings forecast in Indonesia–Malaysia–Thailand growth triangle's pharmaceuticals sector. *International Journal of Emerging Markets*, 18(1), 1–21. <https://doi.org/10.1108/IJOEM-01-2020-0028>
- Horodnic, I. A., & Williams, C. C. (2022). Tackling undeclared work in the European Union: beyond the rational economic actor approach. *Policy Studies*, 43(1), 21–55. <https://doi.org/10.1080/01442872.2019.1649384>
- Hussein, R., Mohamed, N., Ahlan, A. R., Mahmud, M., & Aditiawarman, U. (2010). An integrated model on online tax adoption in Malaysia. *Proceedings of the European, Mediterranean and Middle Eastern Conference on Information Systems: Global Information Systems Challenges in Management, EMCIS 2010, 2010*, 1–16.
- Ibrahim, K. S. M. H., Huang, Y. F., Ahmed, A. N., Koo, C. H., & El-Shafie, A. (2022). A review of the hybrid artificial intelligence and optimization modelling of hydrological streamflow forecasting. *Alexandria Engineering Journal*, 61(1), 279–303. <https://doi.org/10.1016/j.aej.2021.04.100>
- IMF. (2024). *World Economic Outlook Update - The Global Economy in a Sticky Spot. Jul*, 1–8. <https://www.elibrary.imf.org/display/book/9798400278235/9798400278235.xml>
- Ionita, M., & Pastae, V. (2021). CHALLENGES OF ONLINE LEARNING DURING THE COVID-19 PANDEMIC. 176–181. <https://doi.org/10.12753/2066-026X-21-023>
- İpek, S., Öksüz, M., & Özkaya, S. (2012). Considerations of Taxpayers According to Situation of Benefiting From Tax Amnesty : An Empirical Research Department of Public Finance. *International Journal of Business and Social Science*, 3(13), 95–101.
- Iqbal, M., Azis, Y., Sucherly, S., & Kaltum, U. (2023). Factors affecting performance excellence in Indonesian state-owned enterprises. *Problems and Perspectives in Management*, 21(4), 264–277. [https://doi.org/10.21511/ppm.21\(4\).2023.21](https://doi.org/10.21511/ppm.21(4).2023.21)
- Irawan, A., Suwondo, S., Kusumastuti, E. D., & Setiawan. (2024). Quantifying tourist contributions: Assessing the impact of domestic and foreign visitors on Bandung's hotel tax income growth. *E3S Web of Conferences*, 479, 07003. <https://doi.org/10.1051/e3sconf/202447907003>
- Isa, K. (2014). Tax complexities in the Malaysian corporate tax system: minimize to maximize. *International Journal of Law and Management*, 56(1), 50–65. <https://doi.org/10.1108/IJLMA-08-2013-0036>
- Ispriyarso, B., & Wibawa, K. C. S. (2023). Reconstruction of the national economy post-COVID-19 pandemic: Critical study of tax reforms in Indonesia. *Cogent Social Sciences*, 9(1). <https://doi.org/10.1080/23311886.2023.2174517>
- James, S., & Alley, C. (2002). Tax compliance, self-assessment and tax administration Munich Personal RePEc Archive. *Journal of Finance and Management in Public Services*, 2(2), 27–42. <https://mpa.ub.uni-muenchen.de/26906/>
- Jandhana, I. B. M. P., Zagloel, T. Y. M., & Nurcahyo, R. (2018). Resilient Structure Assessment using Cobb-Douglas Production Function: The Case of the Indonesian Metal Industry.



- International Journal of Technology*, 9(5), 1061.  
<https://doi.org/10.14716/ijtech.v9i5.1862>
- Ji, Y., & Ranjan, R. (2019). A global climate-economy model including the REDD option. *Journal of Environmental Management*, 247, 342–355.  
<https://doi.org/10.1016/j.jenvman.2019.06.052>
- Kakaulina, M. O. (2021). The projected shortfall in personal income tax revenues of regional governments in Russia due to the COVID-19 pandemic. *Journal of Tax Reform*, 7(1), 39–54. <https://doi.org/10.15826/jtr.2021.7.1.089>
- Khreis, H., Sanchez, K. A., Foster, M., Burns, J., Nieuwenhuijsen, M. J., Jaikumar, R., Ramani, T., & Zietsman, J. (2023). Urban policy interventions to reduce traffic-related emissions and air pollution: A systematic evidence map. *Environment International*, 172, 107805. <https://doi.org/10.1016/j.envint.2023.107805>
- Kulviwat, S., C. Bruner II, G., & P. Neelankavil, J. (2014). Self-efficacy as an antecedent of cognition and affect in technology acceptance. *Journal of Consumer Marketing*, 31(3), 190–199. <https://doi.org/10.1108/JCM-10-2013-0727>
- Kurniawan, D. (2020). The Influence of Tax Education During Higher Education on Tax Knowledge and Its Effect on Personal Tax Compliance. *Journal of Indonesian Economy and Business*, 35(1), 57–72. <https://doi.org/10.22146/jieb.54292>
- Kussuari, P., & Boenjamin. (2019). The Effect of Tax Amnesty Policy and Tax Information System Modernization on Individual Compliance. *Public Financial Accounting*, 14(1), 59–80.
- Lidwina. (2020). *Lidwina*. 1–8.
- Liza, S. N., Andreas, E., & Savitri. (2019). The influence of knowledge and understanding of tax regulations, tax socialization, financial condition, and effectiveness of the tax system on the willingness to pay corporate tax with awareness of paying taxes as an intervening variable. *J. Accounting*, 7(2), 208–223.
- Luttmer, E. F. P., & Singhal, M. (2014). Tax Morale. *Journal of Economic Perspectives*, 28(4), 149–168. <https://doi.org/10.1257/jep.28.4.149>
- Mahmudah, H., Yustina, A. I., Dewi, C. N., & Sutopo, B. (2023). Voluntary disclosure and firm value: Evidence from Indonesia. *Cogent Business & Management*, 10(1). <https://doi.org/10.1080/23311975.2023.2182625>
- Maksimchuk, O., Borisova, N., Ereshchenko, T., & Klyushin, V. (2021). Digital technologies in the tax sphere as a factor in the sustainability of economic activity. *E3S Web of Conferences*, 274, 10002. <https://doi.org/10.1051/e3sconf/202127410002>
- Marpaung, G. N., Dahana, T. N., Pitaloka, L. K., Widia, S., Setiawan, A. B., & Kumala, S. N. (2023). Implementation Of Tax Amnesty Policy on The Indonesia Economic Development. *Quality - Access to Success*, 24(195), 19–28. <https://doi.org/10.47750/QAS/24.195.03>
- Meiryani, Alkhanifani, D., & Ramadhanti, V. (2023). The Effect of E-System Modernization, Self Efficacy and Digital Literacy Capabilities on Taxpayer Compliance. *E3S Web of Conferences*, 426, 01020. <https://doi.org/10.1051/e3sconf/202342601020>
- Meiryani, Huang, S. M., Soepriyanto, G., Jessica, Fahlevi, M., Grabowska, S., & Aljuaid, M. (2023). The effect of voluntary disclosure on financial performance: Empirical study on manufacturing industry in Indonesia. *PLOS ONE*, 18(6), e0285720. <https://doi.org/10.1371/journal.pone.0285720>
- Meiryani, M., Fernando, E., Dewiyanti, S., Angelus, M., & Haliyanti, I. (2021). The Effect of Covid-19 on Regional Revenue of DKI Jakarta Province, Indonesia. *2021 2nd International Conference on Internet and E-Business*, 122–128. <https://doi.org/10.1145/3471988.3472009>
- Melnichuk, M. V. (2018). Analysis of the Investment Activity Regulation in Priority Sectors of the Economy: A Case Study of China. *EUROPEAN RESEARCH STUDIES JOURNAL*, XXI(Issue 4), 783–793. <https://doi.org/10.35808/ersj/1246>

- Michel, D., & Jorgi Sutan, A. (2023). Analyzing the Role of the @sapawarga\_jabar Twitter Account in Advancing Digital-Based Public Services towards Smart City Development in West Java Province, Indonesia. *E3S Web of Conferences*, 440, 03007. <https://doi.org/10.1051/e3sconf/202344003007>
- Ministry of Finance. (2021). *Anggaran Pendapatan dan Belanja Negara 2021*.
- Ministry of Finance. (2024). *Anggaran Pendapatan dan Belanja Negara 2025*. Depkeu RI.
- Mostafa, A. (2020). Self-reported addiction to and perceived behavioural control of waterpipe tobacco smoking and its patterns in Egypt: Policy implications. *Eastern Mediterranean Health Journal*, 26(1), 18–28. <https://doi.org/10.26719/2020.26.1.18>
- Mulyani, H. S., Sudirno, D., & Hakim, A. (2021). Driving Factors For Local Government Self-Financing Ability. *IOP Conference Series: Earth and Environmental Science*, 748(1), 012028. <https://doi.org/10.1088/1755-1315/748/1/012028>
- Murweni, I., & . G. (2018). PELAKSANAAN PROGRAM TAX AMNESTY DALAM RANGKA MENINGKATKAN KEPATUHAN WAJIB PAJAK BADAN. *Jurnal E-Bis (Ekonomi-Bisnis)*, 2(2), 53–63. <https://doi.org/10.37339/e-bis.v2i2.84>
- Nurfatriani, F., Salminah, M., & Kurniasari, D. R. (2022). Chapter 10 Fiscal governance to support post-COVID low-carbon development in Indonesia. In *De Gruyter Handbook of Sustainable Development and Finance* (pp. 193–218). De Gruyter. <https://doi.org/10.1515/9783110733488-010>
- Nurwanah, A., T., S., Rosidi, R., & Roekhudin, R. (2018). Determinants of tax compliance: theory of planned behavior and stakeholder theory perspective. *Problems and Perspectives in Management*, 16(4), 395–407. [https://doi.org/10.21511/ppm.16\(4\).2018.33](https://doi.org/10.21511/ppm.16(4).2018.33)
- Ochinanwata, C., Igwe, P. A., & Radicic, D. (2024). The institutional impact on the digital platform ecosystem and innovation. *International Journal of Entrepreneurial Behavior & Research*, 30(2/3), 687–708. <https://doi.org/10.1108/IJEBr-01-2023-0015>
- Oktris, L., Muktiasih, I., & Azhar, Z. (2024). *Understanding of Taxation, Taxpayer Morality, and Tax Compliance in Indonesia: The Importance of Tax Awareness*. 16(1), 1–14. <https://doi.org/10.26740/jaj.v16n1.p1-p14>
- Oloke, D., Gyoh, L., Daniel, E. I., Oladinrin, O., & Abdallah, N. (2023). The impact of disruptive events on built environment degree apprenticeship delivery – a case study of COVID-19. *International Journal of Building Pathology and Adaptation*. <https://doi.org/10.1108/IJBPA-09-2022-0147>
- Ordonez, J. A., Fritz, M., & Eckstein, J. (2022). Coal vs. renewables: Least-cost optimization of the Indonesian power sector. *Energy for Sustainable Development*, 68, 350–363. <https://doi.org/10.1016/j.esd.2022.04.017>
- Paleka, H., & Vitezić, V. (2023). Tax Compliance Challenge through Taxpayers' Typology. *Economies*, 11(9), 219. <https://doi.org/10.3390/economies11090219>
- Palil, R. M. (2022). Determinants of Business House Rental Income Taxpayers' Compliance with Tax System in Afar Region, Northeast Ethiopia. *Journal of Tax Reform*, 8(3), 270–284. <https://doi.org/10.15826/jtr.2022.8.3.121>
- Park, C.-G., & Hyun, J. K. (2003). Examining the determinants of tax compliance by experimental data: a case of Korea. *Journal of Policy Modeling*, 25(8), 673–684. [https://doi.org/10.1016/S0161-8938\(03\)00075-9](https://doi.org/10.1016/S0161-8938(03)00075-9)
- Permatasari, Y. (2020). Build Indonesia through ASEAN Economic Community. *JAS (Journal of ASEAN Studies)*, 8(1), 81. <https://doi.org/10.21512/jas.v8i1.6040>
- Pinasti, W. (2011). The Effect of Self-Efficacy, Locus of Control, and Demographic Factors on Career Maturity of Students. *Syarif Hidayatullah State Islamic University Jakarta*.
- Pratama, A. (2023). Why participate in tax amnesty The case of the Indonesian individual taxpayer. *International Journal of Business and Globalisation*, 33(4), 468. <https://doi.org/10.1504/IJBG.2023.129537>

- Pratiwi, L. Y. F., & Somantri. (2011). Modernization of Tax Administration, Human Integrity and Taxpayer Compliance in East Preanger. *J. International Conference Proceedings*, 4, 243–253.
- Prawati, L. D., Setyawan, M. H., & Elsera, M. (2020). The Effect of Tax Rate, E-Billing Payment System, and E-Filing System on Micro, Small and Medium Enterprises (MSMEs) Taxpayer Compliance in Jakarta. *2020 International Conference on Information Management and Technology (ICIMTech)*, 715–719. <https://doi.org/10.1109/ICIMTech50083.2020.9211205>
- Prinz, A., Muehlbacher, S., & Kirchler, E. (2014). The slippery slope framework on tax compliance: An attempt to formalization. *Journal of Economic Psychology*, 40, 20–34. <https://doi.org/10.1016/j.joep.2013.04.004>
- Pui Yee, C., Moorthy, K., & Choo Keng Soon, W. (2017). Taxpayers' perceptions on tax evasion behaviour: an empirical study in Malaysia. *International Journal of Law and Management*, 59(3), 413–429. <https://doi.org/10.1108/IJLMA-02-2016-0022>
- Purba, H., Sarpingah, S., & Nugroho, L. (2020). The Effect of Implementing E-Filing Systems on Personal Tax Compliance With Internet Knowledge as Moderated Variables (Case Study on Personal Tax Payers at KPP Pratama Jakarta Kramat Jati). *International J. Commerce and Finance*, 6(1).
- Puspita, D., Pahlevi, M., Raharja, Y. M., Hadi, S., Baroto, A. L., Permana, A. W., & Rahayu, W. T. (2022). *TWO DECADES OF FISCAL IMPLEMENTATION Two Decades of Fiscal Decentralization*.
- Rahayu, N., Dwiyanto, N., & Setyowati, M. S. (2016). Tax amnesty policy implementation in Indonesia. *International Journal of Economic Research*, 13(8), 3539–3549.
- Rahayu, S. K. (2021). Utilization of artificial intelligence in tax audit in indonesia. *Management and Accounting Review*, 20(3), 135–157. <https://doi.org/10.24191/mar.v20i03-06>
- Rosid, A., Evans, C., & Tran-Nam, B. (2016). Do perceptions of corruption influence personal income taxpayer reporting behaviour? Evidence from Indonesia. *EJournal of Tax Research*, 14(2), 387–425.
- Santalina, N. M., & Yudiantara, I. G. A. P. (2020). The effect of self efficacy, tax services, and tax sanctions on taxpayer compliance. *Scientific J. Accounting Students*.
- Sawyer, A. (2005). Targeting Amnesties at Ingrained Evasion New Zealand Initiative Warranting Wider Consideration. *J. Australasian Tax Tchrs. Ass'n*, 1(84).
- Sayidah, N., & Assagaf, A. (2019). Tax amnesty from the perspective of tax official. *Cogent Business & Management*, 6(1). <https://doi.org/10.1080/23311975.2019.1659909>
- Scarcella, L. (2020). E-commerce and effective VAT/GST enforcement: Can online platforms play a valuable role? *Computer Law & Security Review*, 36, 105371. <https://doi.org/10.1016/j.clsr.2019.105371>
- Sengupta, D., & Shastri, N. (2019). Digital Payments through PFMS - Facilitating digital inclusion and accelerating transformation to a "Digital Economy." *Proceedings of the 12th International Conference on Theory and Practice of Electronic Governance*, 196–201. <https://doi.org/10.1145/3326365.3326391>
- Setiorini, K. R., Rahmawati, Payamta, & Hartoko, S. (2021). The Pentagon fraud theory perspective: understanding of motivation of executives to manipulate with the financial statements of a state-owned enterprise. *Economic Annals-XXI*, 194(11–12), 104–110. <https://doi.org/10.21003/ea.V194-13>
- Shkolnyk, I., Kozmenko, S., Drahosova, J., Kozmenko, O., & Aldiwani, K. (2021). State budget revenue optimization using the simplex method. *Journal of International Studies*, 14(2), 245–266. <https://doi.org/10.14254/2071-8330.2021/14-2/16>
- Siglé, M., Goslinga, S., Speklé, R., van der Hel, L., & Veldhuizen, R. (2018). Corporate tax compliance: Is a change towards trust-based tax strategies justified? *Journal of*

- International Accounting, Auditing and Taxation*, 32, 3–16. <https://doi.org/10.1016/j.intaccudtax.2018.06.003>
- Šimović, H., Blažić, H., & Štambuk, A. (2016). Income vs. consumption-based concept of direct taxation: Eternal debate in Croatia. *Ekonomski Pregled*, 67(3), 185–205.
- Stark, J. A., & Kirchler, E. (2017). Inheritance tax compliance – earmarking with normative value principles. *International Journal of Sociology and Social Policy*, 37(7/8), 452–467. <https://doi.org/10.1108/IJSSP-07-2016-0086>
- Sudarma, I. M., & Darmayasa, I. N. (2017). Does Voluntary Tax Compliance Increase After Granting Tax Amnesty? *GATR Accounting and Finance Review*, 2(3), 11–17. [https://doi.org/10.35609//afr.2017.2.3\(2\)](https://doi.org/10.35609//afr.2017.2.3(2))
- Suharsono, Y., & Istiqomah. (2014). Validity and Reliability of Self-Efficacy Scales. *Scientific J. Applied Psychology*, 2(1).
- Suharyono. (2018). The Effect of Applying E-Filing Applications towards Personal Taxpayer Compliance in Reporting Annual Tax Returning (SPT) in Bengalis State Polytechnic Indonesia. *International Journal of Public Finance*, 3(1), 47–62. <https://doi.org/10.30927/ijpf.432848>
- Sukiyansih, T. W. (2020). Study of E-System Implementation and Self-Assessment System Implementation on Taxpayer Compliance. *J. Accounting and Management*, 17(1).
- Supardianto, Ferdiana, R., & Sulisty, S. (2019). The Role of Information Technology Usage on Startup Financial Management and Taxation. *Procedia Computer Science*, 161, 1308–1315. <https://doi.org/10.1016/j.procs.2019.11.246>
- Tahir, R. (2015). Quality of work life factors and employee engagement. *Business Management Journal*, 11(2), 82–119.
- Tahir, R., Rudiyanto, Prayitno, A., Amiruddin, D., & Rosita, T. (2019). Employee competencies and compensation strategies as company's strategic effort to escalate employee performance. *International Journal of Recent Technology and Engineering*, 8(3), 7200–7208. <https://doi.org/10.35940/ijrte.C6220.098319>
- Tahir, R., Vidiyansyah, A. N., Suryadana, L., & Rakhman, C. U. (2019). Employee Engagement as a Performance Driver of State-Owned Enterprises (SOE's) in Indonesia. In *researchgate.net*. [https://www.researchgate.net/profile/Rusdin\\_Tahir/publication/338901048\\_Employee\\_Engagement\\_as\\_a\\_Performance\\_Driver\\_of\\_State-Owned\\_Enterprises\\_SOE's\\_in\\_Indonesia/links/5e31c79a299bf1cdb9fc86b7/Employee-Engagement-as-a-Performance-Driver-of-State-Owned-Ent](https://www.researchgate.net/profile/Rusdin_Tahir/publication/338901048_Employee_Engagement_as_a_Performance_Driver_of_State-Owned_Enterprises_SOE's_in_Indonesia/links/5e31c79a299bf1cdb9fc86b7/Employee-Engagement-as-a-Performance-Driver-of-State-Owned-Ent)
- Thamrin, M. H., Eriza, F., Faisal, M., Nasution, I. K., Afrizal, & Dalimunthe, M. A. (2023). Religiosity in Paying Zakat and Tax Compliance in Medan City. *Pharos Journal of Theology*, 104(3), 1–12. <https://doi.org/10.46222/pharosjot.104.330>
- Thuneibat, N., B, A., M, A., & Thneibat, H. (2022). The Mediating Role of Innovation On the Relationship Between Information Technologies and Reducing Tax Evasion. *Information Sciences Letters*, 11(5), 1359–1370. <https://doi.org/10.18576/isl/110505>
- Van Wyk, K., & Marvel, J. A. (2018). Strategies for Improving and Evaluating Robot Registration Performance. *IEEE Transactions on Automation Science and Engineering*, 15(1), 320–328. <https://doi.org/10.1109/TASE.2017.2720478>
- Whealan George, K. (2019). The Economic Impacts of the Commercial Space Industry. *Space Policy*, 47, 181–186. <https://doi.org/10.1016/j.spacepol.2018.12.003>
- Wibowo, H., & Mauritsius, T. (2022). Factors That Affect the E-Filing Usage in Indonesia: an Extension of Technology Acceptance Model and Theory of Planned Behavior. *Journal of Theoretical and Applied Information Technology*, 100(7), 2169–2180.
- Williams, C. C. (2014). *Policy Approaches Towards Undeclared Work*. 4, 0–44.

- Windebank, J., & Horodnic, I. A. (2017). Explaining participation in undeclared work in France: lessons for policy evaluation. *International Journal of Sociology and Social Policy*, 37(3/4), 203–217. <https://doi.org/10.1108/IJSSP-12-2015-0147>
- Xavier, V. K., Elias, I. P., & Nazar, S. N. (2024). *Pandemic, War and Geo-Political Risk: The Outlook for Global Economy* (pp. 25–61). [https://doi.org/10.1007/978-981-97-4367-4\\_2](https://doi.org/10.1007/978-981-97-4367-4_2)
- Yuniarta, G. A., & Purnamawati, I. G. A. (2020). Spiritual, psychological and social dimensions of taxpayers compliance. *Journal of Financial Crime*, 27(3), 995–1007. <https://doi.org/10.1108/JFC-03-2020-0045>
- Zame, K. K., Brehm, C. A., Nitica, A. T., Richard, C. L., & Schweitzer III, G. D. (2018). Smart grid and energy storage: Policy recommendations. *Renewable and Sustainable Energy Reviews*, 82, 1646–1654. <https://doi.org/10.1016/j.rser.2017.07.011>
- Zasko, V., Sidorova, E., Komarova, V., Boboshko, D., & Dontsova, O. (2021). Digitization of the Customs Revenue Administration as a Factor of the Enhancement of the Budget Efficiency of the Russian Federation. *Sustainability*, 13(19), 10757. <https://doi.org/10.3390/su131910757>