

Tax Technology and Tax Compliance: A Digitalization and Artificial Intelligence Perspective

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Abstract

Nowadays, technology is crucial due to its numerous benefits, including facilitating more tax compliance in Malaysia. This study aims to create a conceptual framework for tax technology that can be utilised to analyse and discuss tax technology as a factor influencing tax compliance. Digitalisation and artificial intelligence were identified as two components of tax technology. Digitalisation refers to any online system that allows users to share and access digital data with one another. Artificial intelligence (AI) is the technology through which machines mimic human intelligence to do human-like activities. The proposed framework may aid future research by offering a systematic means of evaluating tax technology as a determinant of tax compliance. The framework may also help tax authorities design targeted tax technology outreach programs to comprehend taxpayer compliance behaviour better. This study offers appropriate tax technology variables as a factor of taxpayers' compliance behaviour for analysis and discussion.

Keywords: Tax Technology, Digitalization, Artificial Intelligence, Tax Compliance

Introduction

The fast development of digital technology has invaded nearly every facet of modern life, changing the way we work, communicate, and even manage our finances. Tax compliance is one area where technology has made major advancements. The term "tax compliance" is the practice of following the rules and guidelines established by the government concerning the collection, reporting, and payment of taxes (Owusu et al., 2022; Youde & Lim, 2019). Tax compliance relies on prompt and accurate compliance by people, organisations, and other entities. As governments worldwide strive to enhance revenue collection and reduce tax evasion, technology has emerged as a powerful ally in ensuring greater transparency and efficiency in the taxation process (Bird & Zolt, 2008). Tax compliance and technology are interconnected aspects that play a crucial role in modern taxation. Tax technology, which refers to technological solutions in tax processes, has a dynamic and transformational relationship with tax compliance. In this sense, technology developments in recent years have entirely revamped tax administration, boosting productivity, precision, and conformity (Agrawal & Wildasin, 2020)

Tax technology has developed into a strong instrument for taxpayers and tax authorities. Capabilities of tax technology include automation, data management, and real-time monitoring, which makes it possible for taxpayers to simplify their tax-related tasks, such as recordkeeping, reporting, and filing, while simultaneously improving their capacity to fulfil their tax duties efficiently (Hendayana et al., 2021). In addition, tax technology allows tax authorities to monitor compliance, identify possible problems caused by non-compliance, and enforce tax legislation more effectively. The relationship between tax compliance and tax technology is mutually beneficial. Moreover, tax authorities can improve their capacities of monitoring and enforcing tax laws thanks to technological advancements. Tax authorities can spot patterns, uncover inconsistencies, and target high-risk taxpayers for audits and investigations when they use modern data analytics, artificial intelligence, and machine learning (Li et al., 2020). This proactive approach to compliance enforcement helps to enhance the overall tax system and promotes a fair and equal distribution of tax responsibilities. Thus, tax compliance and tax technology share a symbiotic relationship.

The present study aims to develop a conceptual framework for tax technology that can be applied to investigating and discussing tax technology as a factor influencing tax compliance. The present study believes that the term "tax technology" can have a standardised meaning in all future research on tax compliance and can be analysed using the framework that will be proposed in the present paper. In reviewing relevant literature, it was found that the term "tax technology" is interpreted differently by tax scholars. The term is used in ways ranging from an umbrella term for different types and levels of tax technology to a one-dimensional interpretation. It is therefore submitted that the gap in the literature is that the concept of tax technology is not well-defined in tax compliance research and is generally used broadly. Therefore, this paper aims to construct a conceptual framework for the concept of tax technology that can be used to analyse, measure and discuss taxpayer compliance. In addition, the study will attempt to conduct a preliminary assessment of the framework.

This study is divided into a few sections. The following section introduces the concept of tax technology as presented in the existing literature. Then, it investigates the role of tax technology in the tax compliance decision and the validity of tax technology as a factor in improving tax compliance. In the following section, the methodology employed in this paper is discussed, followed by the literature's findings and interpretation. The paper concludes with the framework proposed.

Literature Review

The term "tax technology" is used in various settings throughout the tax compliance literature, with no uniform definition being provided.

The use of the concept of "tax technology" in the literature

The term "tax technology" refers to the use of various forms of computer tools, software, hardware, and online platforms to enhance the efficiency, accuracy, and overall effectiveness of tax-related activities for both individuals and businesses (Muturi & Kiarie, 2015)

The role of tax technology in tax compliance decision

It is not surprising that technology has profoundly affected the design and administration of tax systems to improve compliance, as it has revolutionised numerous facets of our daily lives. Data management is one area where technology has substantially improved tax compliance.

For instance, electronic filing systems and digital recordkeeping have been found to improve the accuracy and efficiency of tax reporting and reduce error rates (Affiza Mohd Tallaha et al., 2014; Hendayana et al., 2021). The automation and digitisation of tax data have enabled tax authorities to utilise advanced data analytics tools and allocate enforcement resources effectively to identify non-compliance patterns via mining and predictive modelling techniques (Alm et al., 2020; Noga & Arnold, 2002). In order to increase compliance and decrease deterrence, data analytics must be used to identify high-risk taxpayers and detect tax evasion. For this reason, they highlighted the use of big data analytics in tax compliance, which has helped tax authorities better detect tax fraud and evasion by spotting patterns and abnormalities.

As a result of technological advancements, tax authorities now have a better way to monitor suspected non-compliance in real-time through the monitoring and reporting of transactions. Evidence shows that using an electronic invoicing system can help reduce tax avoidance by making it easier to disclose all income and expenses (Bellon et al., 2022; Qi & Che Azmi, 2021). Thus, there has been a rise in both compliance and deterrent as a result of these technical developments. Technology has also improved communication between tax authorities and taxpayers, increasing taxpayer awareness and education. Mascagni et al., (2021) stressed the importance of taxpayers' access to information, assistance, and interactive tools to better understand their tax responsibilities through online platforms and digital resources. Consequently, these digital communication channels enable taxpayers to make informed decisions and comply with tax laws, thereby enhancing compliance rates overall.

Methodology

Based on the interpretivism paradigm of the literature (McKerchar, 2010), the current study provides a framework for understanding and studying the idea of technology in tax compliance. The framework was developed by a literature review of scholarly databases (such as Scopus, Emerald, Taylor & Francis, and EbscoHost) using terms such as technology, digitalisation, and or tax compliance or similar ideas as search terms. Our proposed paradigm was derived from a literature analysis that sought to identify commonalities between technology and tax compliance.

Result and Discussion

The present paper aims to develop a conceptual framework of tax technology from an analysis of the literature. Based on the preliminary assessment of the existing literature, the two elements, namely digitalisation and AI of tax technology, were derived. Results from the literature analysis about these elements are discussed below before the framework is constructed.

Towards a conceptual framework of tax technology

Digitalisation

Digitalisation describes any digital transformation via the network that facilitates digital information exchange, access and storage. Digitalisation is chosen for several reasons. To begin with, tax administration and compliance are among the many areas where digitisation is on the rise (Christians & Magalhaes, 2019). Internationally, governments and tax agencies are adopting digitalisation in tax to streamline the administration of taxes (Agrawal & Wildasin, 2020). Secondly, tax authorities can track actions and transactions in real-time by utilising

digital infrastructure. Tax authorities can more easily spot cases of probable tax evasion by analysing data from several sources, comparing data, and conducting risk-based audits businesses (Muturi & Kiarie, 2015). These digitalisation solutions provide the distinct advantage of enforcing tax compliance in real-time. Therefore, we propose that digitalisation is one of the main contributors to tax compliance decisions in tax technology.

Artificial Intelligence (AI)

Artificial intelligence (AI) refers to the endeavour of robots to replicate, mimic or exceed the cognitive capabilities exhibited by human beings. AI encompasses several aspects, and among its fundamental mechanisms is algorithms. These algorithms consist of explicit instructions that a mechanical computer may execute. The potential achievements of artificial intelligence, given its possession of human-like intellectual attributes, are potentially boundless. In a tax world, studies have shown that AI can anticipate and predict specific types of tax evasion when provided with the correct data and fed with many algorithms (Irish Times, 2018). In this reasoning, taxpayers and their advisors can use AI to uncover malicious tax non-compliance schemes, which involves comparing and contrasting different sections of the tax code to see if they can be combined to create a sophisticated tax dodge (Alm et al., 2020).

A framework for understanding and analysing “tax technology” and tax compliance

According to this thematic analysis of the relevant literature, the term “tax technology” should encompass both digitalisation and artificial intelligence in taxes. It was also demonstrated that these components had their unique dimensions. Figure 1 below presents a potential framework for understanding and analysing tax technology incorporating these two elements into the tax compliance model.

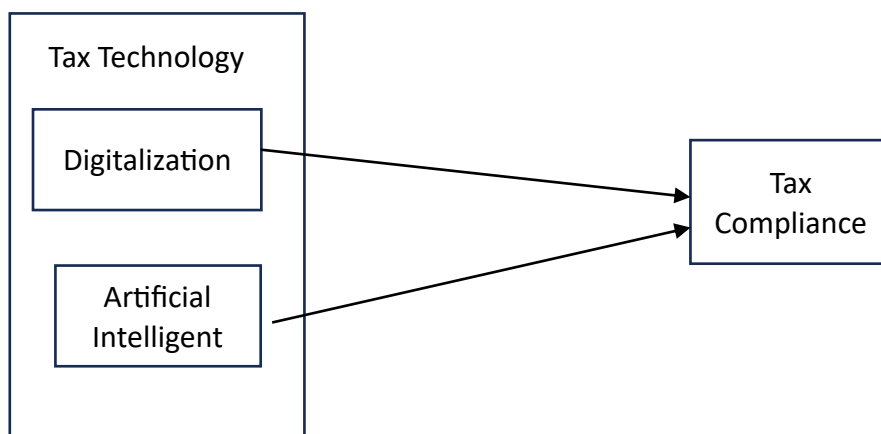


Figure 1: Author’s Presentation

Theoretical and Practical Contribution and Conclusion

The results of the current study contribute theoretically and practically in various ways. Theoretically, this research adds to our understanding of the factors that can impact taxpayer compliance when combined with tax technology. This paper developed a conceptual framework and demonstrated that tax technology has two distinguishable components: digitalisation and artificial intelligence in taxation.

Practically, how technology enhances tax compliance is very beneficial and can be used in Malaysia. The government can encourage the use of a digital tax filing system as a way to increase taxpayer compliance with tax laws. The government urges all taxpayers to become more proficient with the digital tax payment system. They can fill it out using a website or software programs that guide taxpayers step-by-step through the tax filing process on the user-friendly digital filing platform. Taxpayers will benefit from the simplicity of this so they can comprehend and accurately complete their tax obligations.

Next, government and tax authorities must invest more in infrastructure development to enhance tax compliance through technology. In order to maintain the stability of the taxation system's infrastructure, the government must increase and improve its support. The government may accomplish this by implementing cutting-edge hardware and software systems and providing users with various amenities. Software should be extensible, adaptable to changing tax laws, and able to integrate with other government systems to facilitate data sharing. Although AI offers significant benefits, its disadvantages should not be overlooked. The development of AI raises ethical questions about issues such as less transparency, unfairness, and bias in decision-making processes.

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