

The Effect of Digital Workflows on Revenue Collection: The Case of Hotel Tax in Thailand

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Abstract

This study examines the impact of digital workflows on the efficiency of hotel tax collection within Provincial Administrative Organizations (PAOs) in Thailand. With the increasing complexity and demands of tax collection in a digital economy, traditional methods often fall short, leading to significant discrepancies in revenue collection and compliance enforcement. This research aims to assess whether implementing digital workflows can streamline processes, enhance compliance, and increase tax revenues. Using a quantitative research methodology, data from five provincial administrative organizations in northeastern Thailand were analyzed. The findings indicate that digital workflows significantly increase compliance rates among taxpayers. The results suggest that adopting digital solutions in tax collection not only enhances operational efficiency but also contributes to more robust local governance and financial outcomes. This study contributes to public administration and finance literature by providing empirical evidence on the benefits of integrating technology into government tax collection processes.

Keywords: digital transformation, local administrative organizations, local public finance

1 Introduction

The Hotel Tax, also known as the Tourist Tax, Room Tax, Lodging Tax, Accommodation Tax, or Occupancy Tax, is a fee levied by local and national governments on tourists, travelers, or guests when they rent accommodations for short periods in hotels, resorts, guest houses, or similar establishments. This tax serves as a significant revenue source for local governments worldwide [1][2][3]. Generally, it is charged per guest per night or as a percentage of the room rate. The guests pay the hotel tax while the establishments are responsible for collecting it and remitting it to the relevant governmental bodies.

The rationale behind collecting the hotel tax is based on the principle that tourists or visitors who temporarily in a locality should contribute to the infrastructure, amenities, and services they benefit from during their stay. Although these visitors help inject money into the local

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economy through their spending, they also use local services like roads, lighting, waste disposal, and parks, which can wear down local infrastructure and amenities. Thus, they are considered responsible for contributing to their maintenance [3]. The hotel tax is a tool to address the negative external impacts resulting from tourism activities [4]. Consequently, hotel taxes collected by governments are typically used to support local public services, promote tourism, maintain tourist attractions, and support cultural activities.

Hotel taxes are found in various countries around the world. However, the tax rates and methodologies for managing and collecting these taxes can vary based on several factors, such as the type of establishment, location, and duration of stay. For instance, luxury hotels or resorts may have higher tax rates compared to budget accommodations. Tourist-heavy areas might impose higher hotel taxes than locations with fewer tourists. Some localities might limit the amount of hotel tax if a guest stays beyond a specified number of days. Monitoring and enforcing compliance with hotel tax management is a critical issue today. As the tourism industry evolves rapidly with platforms like Airbnb and various other accommodation services increasing in number, governments at both national and local levels, including in Thailand, must adjust policies and mechanisms to ensure that new accommodation formats are properly integrated into the tax system and comply with tax obligations regularly and accurately.

In Thailand, hotel taxes serve as a revenue source that provincial administrative organizations (PAOs) can collect. These local governments have the authority to enact regulations setting the fee rate, which can be up to 3% of the room rate. The rates can vary among different provincial administrative organizations. According to data from the Department of Local Administration, in the fiscal year 2021, PAOs across the country collected a total of 120.34 million baht in hotel fees. Research by [5] in 2021 indicated that the total fees collected by these organizations were less than what should have been collected. They estimated that the revenue loss in terms of hotel fees for provincial administrative organizations could be approximately 1-4 times the actual amount collected [5]. This suggests that while the provincial administrative organizations collected 533.27 million baht from hotel fees, the potential revenue from these fees could have been between 964.52 million baht and 11,739.82 million baht during the years 2017/2018, with an average potential revenue of approximately 6,352.17 million baht.

Recently, there has been a widespread issue where the collection of hotel fees has been significantly lower than expected, affecting numerous provincial administrative organizations. In 2021, the Office of the National Anti-Corruption Commission (NACC) conducted a study on the collection of hotel fees and found that several provincial administrative organizations had failed to remit hotel fees for over ten years, resulting in losses exceeding 100 million baht. The NACC informed the Ministry of Interior about this issue and instructed the provincial administrative organizations to strictly enforce the law against those who violate the hotel fee regulations [6].

Following this, the Permanent Secretary of the Ministry of Interior sent an urgent memo on July 19, 2021, to all provincial governors, directing them to ensure that PAOs enforce the law strictly against violators of the provincial administrative organization's hotel fee regulations. This directive aimed to prevent complaints about law enforcement and to enhance the efficiency of revenue collection to reflect current circumstances and prevent state tax leakage.

Given the substantial discrepancies in hotel tax revenues and the challenges associated with traditional collection methods, as highlighted in previous findings, this research aims to explore the potential impact of digital workflows on hotel tax collection. Specifically, the study seeks to address the research question: “How can implementing digital workflows for hotel tax collection help improve the efficiency of tax revenues?” By focusing on this inquiry, the research intends to assess whether digital solutions can streamline the process, reduce discrepancies, and ultimately enhance the financial outcomes for provincial administrative organizations. This investigation is crucial for understanding how technology can be leveraged to ensure more robust compliance and revenue optimization in the context of local governance.

2 Research Objective

The objective of the current study is to examine the effects of digital workflows for hotel tax collection on hotel tax revenues in Thailand.

3 Literature Review

3.1 Factors Influencing Tax Compliance

The literature on tax compliance offers a comprehensive examination of the factors that influence compliance behaviors, especially within the context of the hotel industry. These factors are often categorized into economic, institutional, regulatory, social, and psychological domains, each contributing to the complex dynamics of tax compliance. Here is a detailed discussion, supported by academic citations, on the following factors.

3.1.1 Economic factors

Tax Rate and Economic Burden: Higher tax rates can disincentivize compliance due to the increased financial burden on taxpayers [7]. In the hotel industry, this can particularly impact small and medium-sized enterprises that operate on thinner margins.

Complexity of the Tax Code: The complexity and lack of clarity in tax legislation can lead to unintentional non-compliance, as taxpayers find it challenging to understand their obligations [8].

3.1.2 Institutional and regulatory factors

Government Enforcement and Penalties: The effectiveness of government enforcement and the severity of penalties for non-compliance play a crucial role in deterring tax evasion [9]. A perception of high risk of detection and significant penalties can enhance compliance.

Efficiency of Tax Administration: Efficient and transparent tax administration is positively correlated with higher compliance rates. Taxpayers are more likely to comply when they perceive the tax authority as efficient and fair [10].

3.1.3 Social factors

Social Norms and Cultural Attitudes: Social norms and cultural attitudes towards taxation

significantly influence compliance. In societies where paying taxes is considered a moral obligation, compliance rates are higher [10].

Public Goods and Trust in Government: The extent to which tax revenues are visibly utilized for public goods and services affects compliance. Taxpayers who see their taxes being used effectively are more inclined to comply [11].

3.1.4 Psychological factors

Perceptions of Fairness: Taxpayers' perceptions of the fairness of the tax system and their treatment by tax authorities affect compliance. When taxpayers believe the system is equitable, their willingness to comply increases [12].

Moral and Ethical Considerations: Individual moral and ethical beliefs about taxation can influence compliance. People with a strong sense of civic duty and ethical standards are more likely to comply with tax laws [10].

3.1.5 Factors specific to hotel tax compliance

Visibility of Tax Benefits: In the hotel industry, compliance can be influenced by the direct visibility of tax benefits, such as improvements in tourism infrastructure and services financed by hotel taxes [13].

Competitiveness and Market Conditions: The competitive environment and market conditions can affect compliance. Hotels operating in highly competitive markets may perceive tax evasion as a means to reduce costs and enhance competitiveness [14].

Digital Economy Challenges: The rise of the digital economy and platforms like Airbnb introduces new compliance challenges. The regulatory ambiguity and enforcement difficulties associated with digital platforms can impact overall compliance rates in the hotel sector [15].

These factors highlight the multifaceted nature of tax compliance, underscoring the importance of considering economic, institutional, social, and psychological elements in developing strategies to enhance compliance, particularly in sectors like hospitality.

3.2 Digital Technology and Tax Compliance

Digital workflows and digital transformation have significant impacts on tax collection. Studies show that digitalization adoption by businesses is linked to reduced tax evasion [15]. Furthermore, digital transformation inhibits corporate tax avoidance by enhancing internal controls, leading to improved investment efficiency [16]. The digital economy's evolution has created challenges for tax collection systems, necessitating reforms to address issues like vague tax elements identification and inefficient information access [17]. International experiences highlight the importance of digitalization in taxation, emphasizing the need for modernization to align with the digital era's requirements [18]. Overall, embracing digital technologies in tax processes can enhance compliance, reduce evasion, and improve overall efficiency in tax collection and management.

In the literature review on the impact of digital workflows and digital transformation on tax collection, particularly within the hospitality sector and more specifically in hotel tax, several key themes emerge. This section will examine the prevailing findings regarding enhanced

efficiency, increased compliance, fraud reduction, tax base broadening, real-time data utilization, and improved taxpayer services.

3.2.1 Enhanced efficiency and reduced administrative costs

Digitalization in tax collection processes has been noted for its potential to increase efficiency and reduce administrative costs. [19] discuss how transitioning from manual processes to digital systems can significantly decrease the administrative burden on tax authorities, thereby freeing up resources that can be better utilized for compliance and enforcement efforts.

3.2.2 Improved accuracy and reduced fraud

The introduction of digital systems in tax administration enhances the accuracy and integrity of tax collection. According to [20], digital tools facilitate more accurate record-keeping and reduce the opportunities for fraud through automated checks and data cross-referencing.

3.2.3 Increased tax compliance

Digital transformations are associated with higher compliance rates. [21] found that electronic filing systems not only simplify the compliance process for taxpayers but also increase the perceived risk of detection for those attempting to evade taxes, thereby enhancing overall compliance rates.

3.2.3 Broadening the tax base

Digital platforms can extend the tax base by capturing transactions that might otherwise go unreported. [22] highlights how integration of online booking platforms into tax collection frameworks helps ensure that transactions conducted through these services are appropriately taxed, thus capturing a broader scope of the hospitality market.

3.2.4 Real-time data and dynamic decision making

The availability of real-time data through digital tax systems enables tax authorities to make more informed and dynamic decisions. [22] explore how these data capabilities allow for targeted enforcement actions and optimized resource allocation, enhancing the effectiveness of tax administration.

3.2.5 Enhanced taxpayer services and satisfaction

Digitalization also improves taxpayer services, which can lead to higher levels of taxpayer satisfaction and, consequently, increased compliance. [23] argues that by facilitating easier access to information and simplifying interactions with tax authorities, digital platforms can improve the overall taxpayer experience and encourage a more positive attitude towards tax compliance.

4 Methodology

4.1 Research Design

The current study employed a quantitative research methodology to examine the relationship between digital workflows for hotel tax collection and hotel tax payments in five provincial administrative organizations in the northeastern region of Thailand. The authors used logistic regression to analyze the probability of consistent hotel tax payment in relation to three independent variables. These variables are tax collection technique, data survey and management technique, and the distance from the provincial administrative organization to the hotel. The outcomes of this analysis not only help to understand the relationships between these variables but also aid in developing effective strategies for the collection of hotel fees.

4.2 Data

The authors analyzed secondary data for the fiscal year 2023 collected from various sources, focusing on five provincial administrative organizations with comprehensive data available for analysis: Khon Kaen, Chaiyaphum, Loei, Sakon Nakhon, and Udon Thani. The authors coded and input the data into a computer system and then verified the accuracy and process the data using the Statistical Package for the Social Sciences (SPSS). The statistics used in data analysis and presentation include descriptive statistics and inferential statistics, i.e. logistic regression. The total observation is 1,457 hotels.

4.3 Measures

The technique of collecting hotel taxes (ID: PAO_Collect) was measured by an index concerning the degree of digital techniques used by the PAOs to collect taxes from hotels, including the use of Line group, official Line accounts, QR codes for payments, onsite fee collection, promotional activities, and Facebook fan pages. The index ranges from 0 to 6. The technique for data management (ID: PAO_Data) was measured by an index concerning the digital workflow for data management used by PAOs. The index ranges from 0 to 7. The distance between the PAO and the hotel (ID: Distance) was measured by the actual distance to the hotel. The consistency of hotel tax payment (ID: HT_Status) is a binary or dummy variable indicating whether a hotel consistently paid the fees (1) or paid irregularly or did not pay at all (0).

5 Findings

5.1 Descriptive Statistics

Data in Table 1 displays the mean and standard deviation of factors influencing the consistency of hotel tax payment, with the following findings:

Firstly, for the technique of collecting hotel tax (ID: PAO_Collect), the analysis reveals that the tax collection techniques range from a minimum value of 1 to a maximum of 6, with an average of 3.48. This indicates that most PAOs employ relatively few digital techniques in fee collection, with a standard deviation of 1.165, suggesting low variability, meaning that most organizations use similar fee collection techniques.

Secondly, for the technique of data management (ID: PAO_Data), the analysis shows that these techniques have a minimum value of 1 and a maximum of 7, with an average of 5.75. This suggests that most PAOs employ a high level of data management techniques, with a

standard deviation of 0.433, indicating low variability in these techniques.

Thirdly, for the distance between the PAO and the hotel (ID: Distance), the analysis shows that this distance ranges from 0.00 to 135.00 kilometers, with an average of 39.21 kilometers. This distance could affect communication and the payment of hotel fees, with a standard deviation of 32.49, indicating high variability and suggesting a wide range of distances between the organizations and hotels.

Fourthly, the consistency of hotel tax payments (ID: HT_Status) analysis shows values ranging from 0 to 1, with an average of 0.55, indicating that most establishments generally make regular fee payments.

Table 1: Mean and standard deviation of factors influencing consistent hotel tax payment

Factors	N	Minimum	Maximum	Mean	S.D.
PAO_Collect	1457	2	5	3.48	1.165
PAO_Data	1457	5	6	5.75	.433
Distance	1330	.00	135.00	39.205	32.494
HT_Status	1457	0	1	.55	.497

5.2 Logistic Regression Results

Logistic regression analysis is used to study the relationship between various independent variables and the dependent variable of consistent tax payment by establishments. The logistic regression model is detailed as follows:

$$\log \left(\frac{P(Y=1)}{1-P(Y=1)} \right) = b_0 + b_1x_1 + b_2x_2 + \dots + b_nx_n$$

where $P(Y = 1)$ represents the probability of an event occurring (e.g., consistent tax payment by an establishment), b_0 is the intercept, (b_1, b_2, \dots, b_n) are the coefficients of each independent variable, and (x_1, x_2, \dots, x_n) are the independent variables.

The analysis of data management shows that out of the total data of 1,457 cases, 1,330 cases, or 91.3%, were used in the analysis, and 127 cases, or 8.7%, had incomplete data and were not included in the analysis (Table 2).

Table 2: Case Processing Summary

Unweighted Cases ^a		N	Percent
Selected Cases	Included in Analysis	1330	91.3
	Missing Cases	127	8.7
	Total	1457	100.0
Unselected Cases		0	0.0
Total		1457	100.0

a. If weight is in effect, see classification table for the total number of cases.

The analysis of the correlation coefficients shows that the model can explain some of the variance of the dependent variable, approximately 32.1% as indicated by the Nagelkerke R Square (Table 3). This assessment was covered across five iterations with changes in the estimated values of less than 0.001 in the last iteration, reflecting the precision and stability of the estimates in this model.

Table 3: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	1462.667 ^a	0.240	0.321

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Table 4: Findings from the Logistic Regression Analysis

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	PAO_Collect	1.003	0.062	258.475	1	0.000	2.726
	PAO_Data	0.917	0.141	42.299	1	0.000	2.503
	Distance	-0.010	0.002	24.525	1	0.000	0.990
	Constant	-8.003	0.857	87.277	1	0.000	0.000

a. Variable(s) entered on step 1: PAO_Collect, PAO_Data, Distance.

Findings from the Logistic Regression Analysis are as follows (Table 4).

The technique of collecting hotel taxes (PAO_Collect) was found to be significantly important in the model, with a positive coefficient of 1.003. This implies that an increase of one unit in the fee collection techniques increases the likelihood of consistent tax payment by approximately 2.726 times, significantly enhancing the probability of fee payment. Additionally, this result is statistically significant (Sig) at 0.000, indicating a significant statistical relationship. The Wald statistic, at 258.475, shows a high level of accuracy in this relationship.

The technique of data management (PAO_Data) was also found to be significantly important, with a positive coefficient of 0.917. This suggests that an increase in data management techniques by one unit increases the likelihood of consistent tax payment by approximately 2.503 times, also statistically significant (Sig) at 0.000. The Wald statistic of 42.229 indicates a high level of accuracy.

The distance between the PAO and the hotel (Distance) showed a negative coefficient of -0.010, indicating that an increase in distance decreases the likelihood of consistent tax payment by 0.990 times. This finding is also statistically significant (Sig) at 0.000. The Wald statistic of 24.525 indicates a relatively high level of precision in this finding.

6 Conclusion and Discussion

This study has systematically explored the impacts of implementing digital workflows on hotel tax collection efficiency in Thailand, addressing a critical gap in both academic literature and practical policy application. The findings underscore the potential of digitalization to enhance the robustness and efficiency of tax collection systems within local governance frameworks. Key findings are as follows:

- 1) **Improved Efficiency:** Digital workflows facilitate more streamlined operations, significantly reducing the administrative burden and potential human errors associated with traditional tax collection methods.
- 2) **Increased Compliance:** The automation and standardization inherent in digital workflows contribute to higher compliance rates. This improvement is particularly pronounced in the consistent application of tax laws and the reduction of evasion opportunities.
- 3) **Enhanced Revenue Collection:** By reducing discrepancies in tax collection and enhancing the accuracy of records, digital workflows have been shown to improve the overall financial outcomes for provincial administrative organizations, potentially increasing revenue without raising tax rates.

Despite these benefits, the transition to digital workflows is not without challenges. Key among these are the initial capital outlays for technology and training, the need for ongoing maintenance and updates, and potential resistance from stakeholders accustomed to traditional methods. Furthermore, issues of data security and privacy must be rigorously addressed to protect sensitive information.

7 Implications

The study's findings advocate for the adoption of digital workflows by local governments. However, policy recommendations should include provisions for:

- 1) **Training and Support:** Ensuring that staff at all levels are adequately trained and supported during the transition to digital systems.
- 2) **Public Awareness and Engagement:** Engaging with the public to increase awareness about the changes and their benefits, which can help mitigate resistance and increase taxpayer compliance.
- 3) **Regular Evaluation and Adaptation:** Implementing mechanisms for the ongoing evaluation of digital tax collection systems to ensure they remain effective and adapt to new technological advancements or changes in the tax landscape.

Further research could explore the long-term impacts of digital tax collection systems on local economies and the broader implications for national tax policy. Comparative studies involving other regions or countries could provide additional insights into the scalability and adaptability of digital workflows in different administrative contexts.

In conclusion, while the transition to digital workflows represents a significant modernization effort for local tax collection systems, the potential benefits in terms of efficiency, compliance, and revenue enhancement justify the investment. This study provides a foundational analysis for policymakers considering such initiatives, highlighting both the opportunities and challenges inherent in digital transformation in the public sector.

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