



Local Tax Revenue Before and After the Implementation of Online Local Tax Monitoring to Increase the Local Government Revenue (PAD) of Surakarta

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ABSTRACT

Local governments are given the authority to manage their regional finances independently. One area that provides the biggest contribution in Local Revenue is local tax. For that reason, the regional government, especially the city of Surakarta, seeks to increase tax revenue, one of which is by implementing an online-based local tax monitoring system on regional self-assessment taxes. The purpose of this study was to analyze the differences in regional tax revenue before and after the implementation of online-based local tax monitoring in the context of increasing Surakarta City's Original Regional Revenue. The data in this study are secondary and primary data, secondary data including realization data and hotel tax targets, restaurant tax, and parking tax during the period October 2016-September 2018 which amounted to 24 data obtained from BPPKAD Surakarta City and primary data obtained from the results interview at BPPKAD Surakarta City. The analysis technique used to analyze data is descriptive statistics, and willcoxon signed rank test, using SPSS (Statistical Product and Service Solutions) tools. The results showed that by using the Wilcoxon signed rank test there were differences in tax revenues on hotel taxes, restaurant taxes, and parking taxes before and after the implementation of this online-based regional tax monitoring, sequentially $0.004 < 0.05$, $0.002 < 0.05$, and $0.002 < 0.05$. The implementation of monitoring went quite well, as evidenced by the potential for tax leaks to be minimized which would automatically have an impact in increasing the original revenue of the city of Surakarta.

INTRODUCTION

Local tax is one of the sources of income from local revenue. Local taxes are used to finance regional development and administration of the regional government. Therefore, taxes must be well managed in order to increase Local Government Revenue (*Pendapatan Asli Daerah/PAD*), the higher the PAD of a region, the more independent a region is in managing its finances.

Departing from this ground, the local government of Surakarta City attempts to increase revenue from the tax sector. There are several efforts managed by the Regional Government, namely the renewal of the Regional Regulations in which the Regional Regulation of Surakarta City Number 4 of 2011 on Regional Taxes was updated into the Regional Regulation of Surakarta City Number 11 of 2018 which changes and additions were inserted into the regulations. Another effort by the Government of Surakarta City is the implementation of an online-based local tax monitoring system. It is done to follow the development of internet technology which has a major influence on daily life and it has also begun to cover the government sector, including in the tax sector.

The systems or technology tools used by the Government of Surakarta City to monitor local taxes based on online are the Terminal Monitor Device (TMD) and Cash Register. The implementation of online local tax monitoring was applied before the installation of the Terminal Monitor Device (TMD) and Cash Register tool. In (www.JawaPosRadarSolo.com), the Head of Revenue Finance and Asset Management Agency Regions of Surakarta (*Badan Pendapatan Pengelolaan Keuangan dan Aset Daerah/BPPKAD*) Yosca Herman Soedrajat states that tax calculation which is still conventional is prone to manipulation since the government cannot monitor or calculate income from a food stall or restaurant.

Section Head of Registration, Data Collection, and Documentation of the BPPKAD of Surakarta, Honggo Henri, as quoted from (www.JawaPosRadarSolo.com) states that prior to the installation of this instrument, the amount of tax could not be calculated accurately because there were many crowded restaurants or food stalls yet they did not have good financial management. As an effect, once they had to pay taxes, tax officials

and restaurant managers only assumed rough estimation. Besides, local tax revenue which is not optimum occurs because the tax potential database has not been integrated into a system or is manual.

Local taxes that are monitored online are applied on local taxes with self-assessment systems or taxes imposed by taxpayers themselves. The local taxes used in this study are hotel taxes, restaurant taxes, and parking taxes. These types of taxes were chosen due to the potential for further development in the collection of local taxes. According to the Head of BPPKAD of Surakarta City, Yosca Herman Soedrajat, as quoted from (www.surakarta.go.id), the culinary sector in Surakarta is categorized as a developed one and possesses great potential to drive the regional economy. Hundreds of food stalls or restaurants have a large enough turnover but poor transaction records. (Rawadani and Fidiana., 2018: 273) suggested the income of those three types of taxes is prone to fraud upon the submission or levying tax since the calculation remains self-assessment.

METHOD

This study used quantitative and qualitative descriptive approaches. Data used in this study comprise primary data and secondary data. The primary data used were structured interviews using guidelines carried out to the Head of the Registration, Data Collection, Documentation (DAFDA) and Determination of BPPKAD of Surakarta City, the Head of the Billing and Objection Division of the BPPKAD of Surakarta City, and Secretarial Staff regarding the implementation of online-based local tax monitoring as well as barriers and efforts made during the implementation of online tax monitoring. Secondary data were obtained through documentation techniques in the form of the number of realization and target of local tax revenues for the October 2016 - September 2017 tax period, which was before the implementation of online-based local tax monitoring and the October 2017 - September 2018 tax period after the implementation of online-based local tax monitoring.

The research site was at the Revenue, Finance, and Asset Management Agency Regions of Surakarta. The research was conducted in August 2019 until completed. The data analysis technique

used is descriptive analysis and non-parametric difference of Wilcoxon signed-rank test.

RESULTS AND DISCUSSION

Results

1. Wilcoxon Signed-Rank Test

From the table below hotel tax, restaurant tax, and parking tax using the Wilcoxon signed-rank test different test there is a difference, the

difference here means that there is a change in the increase in the amount of local tax revenue in Surakarta during the implementation of online-based local tax monitoring, this can be seen from the probability value or sig (2-tailed) for hotel tax is 0.004 <0.05, for restaurant tax 0.002 <0.05, and finally for parking tax the probability value is 0.002 <0.05, which means if the probability value or sig value (2-tailed) less than 0.05, there is a significant difference.

Table 1. Difference Test Results of Wilcoxon signed-rank test

Before and After the Implementation of Online-Based Tax Monitoring	Test Method	Local Tax Revenue	
		Sig (2-tailed)	Information
Hotel Tax	Wilcoxon signed-rank test	0.004	There is a difference
Restaurant Tax	Wilcoxon signed-rank test	0.002	There is a difference
Parking Tax	Wilcoxon signed-rank test	0.002	There is a difference

Source: Data Processing in SPSS, 2019

2. Descriptive Analysis

This test provides an overview or description of the data as shown from the mean score, standard deviation, maximum and minimum variance of the data. Some differences can also be seen in Table 3 of the descriptive analysis which shows the mean of local tax revenue realization per month prior to the implementation of online-based local tax monitoring, which is for the October 2016 - September 2017 period and after the implementation of online-based local tax monitoring for the October 2017 - September 2018 period. Hotel tax was found increasing, which was originally Rp. 2,250,268,481.83 to Rp. 2,630,262,379.67 or 16.89%. Equally, the restaurant

tax also experiences increasing after online monitoring which was from Rp. 2,949,424,509.83 to Rp. 3,550,493,778.33 or 20.38%. Finally, the parking tax also inclined, which before the implementation of online monitoring was Rp. 364,221,350.42 increased to Rp. 470,058,155.83 or 29.06%. The difference in local tax revenues in Surakarta City, especially for hotel, restaurant, and parking taxes under the implementation of the online monitoring system is also supported by Mr. Widiyanto as head of the billing and objection division.

“For tax revenue, there is quite significant increasing, there is much compared to the manual one” (interview, 21 October 2019).

Table 2 Descriptive Statistics Before and After the Implementation of Online Local Tax Monitoring

		N	Min	Max	Mean	Std. Deviation
Hotel Tax	Before Online Local Tax Monitoring	12	1,467,195,778	2,662,499,092	2,250,268,481.83	331,653,266.312
	After Online Local Tax Monitoring	12	1,819,388,713	3,532,655,422	2,630,262,379.67	477,327,589.977
	Valid (listwise)	12				
Restaurant Tax	Before Online Local Tax Monitoring	12	2,405,437,886	3,337,503,779	2,949,424,509.83	255,590,908.821
	After Online Local Tax Monitoring	12	2,927,819,049	4,398,928,310	3,550,493,778.33	416,751,029.953
	Valid (listwise)	12				

		N	Min	Max	Mean	Std. Deviation
Parking Tax	Before Online Local Tax Monitoring	12	307,869,380	438,924,945	364,221,350.42	35,589,584.221
	After Online Local Tax Monitoring	12	363,614,332	651,396,950	470,058,155.83	97,387,218.701
	Valid (listwise)	12				

Source: Data Processing in SPSS, 2019

Discussion

1. Analysis of Differences in Hotel, Restaurant, and Parking Tax Revenues Before and After the Implementation of Online Local Tax Monitoring on Local Government Revenue

The results of the difference test using the Wilcoxon signed-rank test show; $0.004 < 0.05$ for hotel taxes, $0.002 < 0.05$ for restaurant taxes, and $0.002 < 0.05$ for parking taxes, thus there was a significant difference between before and after the implementation of online local tax monitoring. This difference can be observed in the data where there was an increase in tax revenue of the respective sector for each period. The average hotel tax revenue per month increased by Rp. 379,993,898 or 16.89%, Rp. 601,069,269 or 20.38% increase in restaurant sector, and, finally, parking tax increased by Rp.105,836,805 or 29.06%. This increase was caused or triggered as the taxpayer was monitored in every transaction so that the taxpayer became more compliant in levying on their obligations. Also, there is continuous socialization by BPPKAD employees to taxpayers to inform them about the importance of taxes for regional development. To appreciate those who are compliant in paying taxes, there is a reward given to appreciate taxpayers. This program is meant to stimulate other taxpayers in paying taxes.

2. Implementation of Online Local Tax Monitoring in Surakarta City.

The implementation of this monitoring came into effect on September 19, 2017, while the implementation procedure has been applied since October 2018 and has been effective in 2018. Mayor Regulation Number 21 of 2017 on procedures of online system implementation was arranged by considering the Regional Regulation of Surakarta City Number 4 of 2011 as amended by Regional Regulation Number 11 of 2018 on regional taxes. The implementation of Local Tax monitoring has several positive impacts; it reduces tax leakage and

tax can be collected optimally. In connection to services, there are efforts done, namely facilitating service and providing transparency to taxpayers in Regional Tax payments, as stated by Wulan Tendra, the Head of DAFDA and the Determination of BPPKAD of Surakarta,

"The goal is related to service, so if we haven't used online system yet, or other words still manual, time consumed will be longer, and the transparency hasn't also been good. So, with this system, the service can be faster and ensure transparency to the taxpayers, all taxpayers can have access to it." (interview, 21 October 2019).

Fundamentally, the concept of the Terminal Monitor Device (TMD) tool is take-send-save and transaction data of taxpayers will be retrieved from the database by the authorities, then sent via a recording device installed to a server of BPPKAD. After data are received by BPPKAD, those will be stored and used as the basis for calculating the amount of hotel, restaurant, and parking taxes.

For cash registers, this tool is used in restaurants where the calculation of payments still uses a calculator or manual tools. The tool provided by BPPKAD is in the form of cash registers, as explained by Wulan Tendra as the head of DAFDA of Surakarta.

"... If it is Cash Register, we don't need a database because we provide the tool of a cash register". (Interview, 21 October 2019)

The online monitoring tool is not used as a benchmark in paying Local Tax but as a means for inspection. If taxpayers want to pay their tax debts to the Regional Government, the tax officers will conduct an inspection or cross-check during the tax period with a tool installed in the taxpayer's business place. If a significant difference is found, the tax officer will clarify by issuing a

tax underpayment assessment (SKPDKB) to the taxpayer, as explained by Mr. Widiyanto as head of the billing and objection division of Surakarta.

“Taxpayers are free to make any payments they have reported, but we have TMD tool to cross-check whether the data paid by the taxpayer is the same with the TMD if the tax is not yet appropriate, the tool is used as a means of cross-checking to see the tax paid is according to the TMD transaction earlier. If, for instance, there is a difference, we will conduct an examination, we will clarify it later, the output can be underpayment taxes, so the tax previously paid is not in accordance with the actual TMD. There is an output of underpayment tax of SKPDKB (regional tax underpayment letter. (Interview, 22 October 2019).

The implementation of this online Local Tax monitoring provides convenience to taxpayers where taxpayers are given freedom from legalizing notes/bills, can reduce the burden of time, energy, and operational costs in procuring bills, apart from providing convenience to taxpayers, it also provides benefits to the Tax Officer, which can reduce the time burden and the number of field officers, where officers are not allowed to receive tax payments, as expressed by Widiyanto as Head of billing and objection,

“... officers are no longer allowed to receive tax payments, so there is no such thing as taking the ball, it doesn't exist.” (Interview, 22 October 2019).

3. Analysis of the Implementation of Online Local Tax Monitoring in Surakarta City has been Effective according to Regional Regulation Number 11 of 2018.

The implementation of Online Local Taxes Monitoring on hotel, restaurant, and parking taxes has increased as shown in Table 2, in which hotel taxes increased by 16.89%, restaurant taxes by 20.38%, and parking by 29.06%. The implementation of online local tax monitoring is also supported by the preparedness of the tax officers who will carry out the monitoring task. Several tax officers are in charge of handling the implementation of the online application, its relation to the database, and the coordination with banks.

With various preparedness carried out by the

Regional Government, especially Surakarta, and also supported by the preparedness of BPPKAD officers in carrying out online tax monitoring and the willingness of the taxpayers from hotels, restaurants, and parking to obey these regulations, it will eventually achieve objectives as well as effectively run in accordance with Regional Regulation Number 11 of 2018. Hence, the implementation of online local tax monitoring can be performed properly.

4. Analysis of Barriers to Online Systems in the Implementation of Online Local Tax Monitoring in Surakarta and How to Overcome.

Obstacles experienced during the implementation of online local tax monitoring found are from taxpayers who object, feel constantly monitored, feel mistrusted, and the lack of knowledge of how important taxes are for the development of Surakarta, as explained by Wulan Tendra as head of DAFDA of Surakarta City.

“The obstacle is that people are still difficult to understand that this tool installed is for the benefit of people themselves, there will be no disadvantage at the end of the day, they also don't actually lose anything, the tax does not come from their own pocket since it's all coming from customers, right? So, the obstacle comes from the taxpayers themselves.” (Interview, 21 October 2019).

Taxpayers who do not fully understand the technology find it difficult with the tools provided. It is easier for them to use conventional methods or manual. Some taxpayers also deliberately turn off the monitoring tool. Besides the taxpayer aspect, some obstacles in monitoring tools have become concerns. The monitoring tools are human-made so it entails some drawbacks and problems. Nonetheless, this monitoring tool is constantly updated so that the tools used to become better.

Efforts made to overcome problems related to taxpayers, including continuing socialization about the importance of taxes. This socialization can be carried out in hotels, subdistrict offices, and through messages in every corner of the city by installing banners, using videos that display videos about taxes. Moreover, to increase the interest of local taxpayers to obey local taxes, the Government of

Surakarta provides appreciation by giving rewards or gifts to local taxpayers who are obedient in submitting tax payments, with prizes such as cars, televisions, refrigerators, and motorbikes as well it is expected that the awareness of regional taxpayers to comply their obligations will increase.

Other efforts are made to overcome problems related to the monitoring tool, such as if there is an error in the tool, taxpayers can contact BPPKAD so the immediate response from the office will be given to such problems and discuss it with third parties, such as Finnet and communication and information institution related to the damage suffered.

CONCLUSION

1. In this study, the results show that hotel tax, restaurant tax, and parking tax in Surakarta after the implementation of online local tax monitoring tool has increased the amount of local tax revenue as evidenced by the results of the Wilcoxon signed-rank difference test (asymptotic significance value $< \alpha$ value), which each asymptotic significance value is $0.004 < 0.05$; $0.002 < 0.05$; and $0.002 < 0.05$.
2. The implementation of Regional Regulation Number 11 of 2018 articles 57 and 58 related to Online Local Tax Monitoring which came into effect in 2018 has been effective. It can be observed from the increase in local tax revenue as shown in Table 1 and Table 2. Through this monitoring, it can reduce the tax leakage possibility and taxes can be collected optimally. Facilities are also provided, where taxpayers are exempted from the obligation to legalize notes/bills, which can save time, energy, and operational costs related to the procurement of bills. This service also provides convenience to tax officers where they no longer need to involve directly so it can save time and numbers of field officers.
3. Barriers that occur during the implementation of online local tax monitoring are as following:
 - a. From taxpayers:
 - 1) Taxpayers' lack of understanding about the importance of paying local taxes;
 - 2) Taxpayers find it difficult in using monitoring tools or are technologically challenged so they cannot keep up with the times;
 - 3) Taxpayers feel they are being monitored in every transaction, mistrusted; and
 - 4) Taxpayers deliberately turn off the monitoring tool to get an advantage by not paying large amounts of taxes.
 - b. In terms of monitoring tools since those are man-made, it must have problems, where the system experiences an error.
- 4) Efforts made during the implementation of online local tax monitoring are as follows:
 - a. Conducting socialization to taxpayers at hotels, subdistricts, which can present the Mayor or Head of the Agency and socialize in several newspapers;
 - b. Giving appreciation to taxpayers who obey their tax payments by giving gifts, such as cars, motorbikes, televisions, refrigerators, so that other taxpayers can be attracted to pay taxes in compliance.
 - c. Regarding the monitoring tool, if there is damage to the equipment, BPPKAD can be contacted so that it can be followed up with a third party, thus solutions can be applied to the problems.
 - d. Updating tools so that it can be better and avoid any tax fraud by taxpayers.
- 5) Regarding the implementation in Surakarta, this monitoring is adequately or effectively carried out in accordance with Regional Regulation Number 11 of 2018 articles 57 and 58, where the realization of tax revenue has increased; 16.89% from the hotel tax, 20.38% from restaurant tax, and 29.06% from restaurant tax. Moreover, it is supported by the readiness of tax officers who always approach taxpayers, visit taxpayers to ensure that monitoring tools are still functioning properly. The division of tasks is also adequate, in which some are in charge of handling the implementation of the online system, handling databases, and doing coordination.

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