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Cost Benefit Analysis of Tax Surveillance Technology in Indonesia

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Abstrak

Teknologi pengawasan pajak merupakan salah satu instrumen terpenting dalam pendapatan pemerintah daerah, yakni penerapan sistem self assesment. Penelitian ini bertujuan untuk mengetahui apakah teknologi pengawasan pajak efektif dan efisien dalam meningkatkan penerimaan pajak daerah. Komisi Pemberantasan Korupsi (KPK) mendorong daerah menggunakan tax surveillance untuk mengurangi kebocoran pajak. Namun, belum banyak daerah yang menerapkan pengawasan pajak. Studi ini menemukan bahwa penerapan kebijakan pengawasan pajak berhasil meningkatkan penerimaan pajak daerah di Kota Batam dan Surabaya. Pengujian analisis biaya dan manfaat pengendalian pajak menunjukkan tingkat efisiensi dengan NPV > 0. Makalah ini memiliki implikasi penting bagi otoritas pajak daerah karena menyoroti teknologi pengawasan pajak dapat relevan dengan penerimaan pajak daerah.

Kata kunci: Tax Surveillance, Teknologi, Indonesia

Abstract

Tax surveillance technology is one of the most important instruments in generating revenue for a local government, which is implemented self-assessment system. The objective of this study investigates whether tax surveillance technology is effective and efficient to increase local tax revenue. The Corruption Eradication Commission of the Republic of Indonesia (KPK) has encouraged the regions to use tax surveillance to reduce tax leakage. However, not many regions have implemented tax surveillance. The study found that the implementation of tax surveillance policies has succeeded in increasing regional tax revenues in Batam and Surabaya City. Furthermore, testing the analysis of costs and benefits of tax control shows the level of efficiency with NPV> 0. This paper has important implications for local tax authorities since it highlights tax surveillance technology can be relevant with local tax revenue.

Keywords : Tax Surveillance, Technology, Indonesia

INTRODUCTION

The era of regional autonomy requires regions to be creative in finding sources of revenue that can finance local government expenditure in the framework of governing government and development. From looking for various alternatives of regional revenue, the Law on Regional Government and also the Law on Financial Balance between the Central and Regional Governments, determine regional taxes and levies as a source of Local Revenue (PAD) sourced from within the region itself (Siahaan, 2016). Fiscal decentralization policy is one of the considerations of the regional autonomy law which was approved to make the aspect of independence in the region. The consequences of Act Number 23 of 2014 concerning Regional Government and Act Number 33 of 2004 concerning Financial Balance between the Central Government and Regional Governments include: the regions accept the transfer of sources containing the submission of tax bases in accordance with the principle of

following money function, based on consideration to reduce disparities that may occur between regions (horizontal imbalances) as well as between central and regional governments (vertical imbalances).

The granting of authority to the regions to collect local taxes and fees has resulted in the collection of various types of taxes and fees relating to various aspects of community life. This collection must be understood by the community as a source of revenue needed by the region to improve community welfare (Siahaan, 2016). The implementation of decentralization has resulted in regions being required to finance their own development costs with discretion given so broadly to the regions to plan development according to the characteristics and needs of each region (Prawoto, 2011). In order to achieve regional independence, adequate budget support is needed for the sustainability of government and development, especially in sectors directly related to community needs such as education and health, for that the local government is demanded to be able to continuously increase regional income. The composition of regional revenue consists of regional own-source revenue (PAD), balance funds, and other valid regional income.

The urgency of increasing local revenue in the era of decentralization is an indisputable aspect, local governments have the responsibility in the delivery of public services and regional development policies that are increasingly dynamic, whereas conceptually decentralization always requires conditions of regional financial independence. The level of independence of an area can be shown by the comparison of PAD to total revenue. The higher the ratio of PAD to total revenue, the higher the level of independence of an area, which means that the more regional expenditure is funded from the original income of the region. Based on Presidential Regulation No. 131 of 2015 concerning the Determination of the Leastest Regions in 2015-2019 Article 12 states that the financial capacity of the region is one of the criteria or indicators of underdeveloped regions. Underdeveloped areas are defined as district areas whose regions and communities are less developed compared to other regions on a national scale. According to Glynn, an expert from the World Bank believes that the 20% limit for the acquisition of PAD is the minimum limit for implementing regional autonomy, if the PAD is less than 20% then the region will lose its credibility as an independent entity (Anggoro, 2017). In Indonesia, there are regions that already have high PAD ratios and have ratios that are far different from other regions.

Surabaya City and Batam City are regions that have the highest PAD ratio in Indonesia. Surabaya City and Batam City are two cities that increase their local tax revenue through tax surveillance technology. The regulations implemented in the City of Surabaya are based on the respective Regional Regulations concerning the implementation of an online system for recording data on hotel, restaurant, entertainment and parking tax transactions in the context of supervising local tax payments, tax authorities implementing transaction surveillance between taxpayers and hotel, restaurant, entertainment and parking. Tax surveillance technology is divided into two forms, the first is software such as that absorbed in Surabaya, the application is installed on the taxpayer's personal computer client to obtain transaction information from the database, or record payment transactions with an internet connection so that each transaction from the taxpayer will be recorded in realtime. The second tax surveillance is hardware called tapping box, the tools connected cash register to tax authority, like what is installed in Batam City. The existence of tax surveillance technology in the form of the use of online transaction recording devices is mainly shown in the tax sector of hotels, restaurants, entertainment venues and parking lots that aim to optimize local tax revenue was also encouraged by the Corruption Eradication Commission (KPK) (DDTCNews, 2019).

Local tax system in Indonesia follows a Government tax regime. such as tax administration and tax collection systems. But, unlike government taxes with self assessment and withholdingtax, local taxes consist of two tax collection systems. The tax collection can be done by the taxpayer himself (self assessment) or by defaulting the tax authority (official assessment).

The theory of development from below holds that people would be more willing to pay taxes to local governments rather than the central government because they can it is easy to

see the direct benefits of development in the region them (Davey, 1988). Based on this opinion seen the importance of local taxes for regional development. Other than that, the benefits of local taxes can be directly seen by community in the area. Local government taxes must be politically acceptable, One rule of thumb is that less visible taxes tend to be more acceptable (Bahl & Smoke, 2003). Local government taxes must be politically acceptable. Where is the tax in the decision to determine the structure, the amount tariffs, who must pay, sanctions against violators is a political agreement between the executive and the legislature as a representation of society. Nowday, the local government applies technology to monitor taxpayer transaction data by installing equipment and installing equipment. this provision is determined by the executive along with the legislature.

Slemrod (1990) notes that the design of optimal tax systems requires consideration not only of changes in the technology of collecting taxes but also of how technology may alter the economic environment in which governments seek to collect revenue. Bird & Zolt (2008) examine how technology may improve the ability of tax authorities in developing countries to perform different administrative functions. In this paper, technology as a tool of tax surveillance which able to record every transaction of taxpayer. Indonesia approach reflects the new reality of local tax administration. The local government is using new technology to reduce tax evaders.

Hatfield (2015) had predicted that over the next twenty-five years surveillance technologies will be used to reduce the compliance burden and compliance gap, at least to some extent. Technology of tax surveillance may improve the quantity and quality of information available to taxing authorities and their ability to use that information effectively. Bird & Zolt (2008) also stated that technology may make tax administrations more effective by improving information flow, facilitating coordination, and improving their allocation of resources. In other words, if the technology of tax surveillance could collect and analyze all tax-relevant information, it could lower cost of tax audit.

METHODS

This research was undertaken through a qualitative approach to gain natural setting of the local tax authority. Data was collected through direct observation, documentation, and in-depth interview. Tax authority, taxpayers, and tax surveillance providers were selected as informants. Interactive Model of qualitative data analysis was employed to examine the qualitative data. Interactive analytical model is process data analysis that has been done simultaneously with data collection process. The flow of analysis follows an interactive analysis model. In this research process analysis is done through four stages, data collection, data reduction, data presentation, and withdrawal Conclusion. In addition, this study analyzes the level of efficiency using cost and benefit analysis.

Cost-benefit analysis is a way of evaluating a project by comparing the present value of all results obtained from the project with the present value of all project costs (Mangkoesoebroto, 2014). Cost benefit analysis is a method of policy appraisal that quantifies benefits and costs into monetary units, namely the value of all the effects of a policy on all members of the public concerned. In general, CBA is carried out on a policy, program, project, regulation and other forms of government intervention. The aggregate value of the policy is measured by the value of net social benefits or simply called net benefits (Wicaksono & Dewi, 2017).

Cost benefit analysis can be widely used to help policy making, with the aim of obtaining efficient use of community resources. Costs are the sacrifice of economic resources, measured in units of money, that have occurred or are likely to occur for a particular purpose. There are four main elements in the definition of the costs mentioned above:

1. Cost is a sacrifice of economic resources
2. Measured in units of money
3. What happened or potentially will happen
4. The sacrifice is for a specific purpose.

Benefits are the results obtained from a productive activity, for example the construction

of a project or rehabilitation or expansion in order to obtain greater results. The benefits to be gained may be the same for each period and may be different. So in the discipline of research and project appraisal, benefits are treated as fixed benefits and variable benefits, in addition to the benefits obtained from a project can be divided into benefits that are the main goal (direct benefits), and additional benefits or side (indirect benefits), benefits that are not the main goal (Purba, 1997).

Basic steps that can be done in a cost analysis benefits are as follows:

1. Determine a set of alternative projects
2. Determine and identify the calculated benefits and costs

Present Value Calculation Formulas According to Mangkoesoebroto (2014)

$$P_0 = \frac{U}{(1+s)t}$$

P_0 = present value
U = Benefits to be gained in the coming year
S = interest rate
t = years

RESULT AND FINDINGS

Surveillance is part of management carried out as a controller of the planning that has been done, M. Manulang in Aswati et al. (2018) agreed that surveillance is a process for carrying out work that has been carried out, discussed and repaired with the help needed. at first Sujamto in Aswati et al. (2018) states that surveillance is any effort or activity to understand and study what is meant by the suggestions and objects discussed. Surveillance is needed continuously as an antidote to desires that deviate from what they should. Without surveillance, deviations and tendencies will change to become more dependent on humans.

The self-assessment system gives full trust to the taxpayer, so it should be balanced with the existence of surveillance, so that the trust given is not misused. Apart from the self-assessment system. In this system, it is necessary to conduct intensive surveillance, without surveillance the taxpayer must support the amount of tax that must be paid. Surveillance is a very important tool in inserting large amounts of tax money into the state treasury, in accordance with statutory provisions that are not intended for human rights and human rights in the region (Aswati et al., 2018). Surveillance of tax revenues is part of the surveillance of state finances if classified according to the object. According to Bohari, surveillance of state finances based on their objects is distinguished in two ways, namely: surveillance of state revenue and surveillance of state expenditure. Surveillance of state finances is not only prioritized in terms of visits, but also in terms of revenue. So far, only approve of the state, while surveillance of acceptance received less attention. Functional oversight apparatus such as the Financial and Development Supervisory Agency (BPKP), surveillance is only focused on the aspect of renewal and not in terms of revenue (Bohari, 1992). The following explanation of surveillance of state revenue, can be done in the form of:

1. Examine all deposits from taxpayers, both deposits from individual taxpayers and corporate taxpayers.
2. Review the amounts that have been deposited by the taxpayer whether the amount is in accordance with the obligations that must be paid.
3. Examining the total amount that must go to the state treasury with the realization of existing taxes.
4. In non-tax revenue, surveillance is carried out by treasurers of each department or agency.

The digitalization era is a challenge that can turn into an opportunity for tax authorities to improve tax technology infrastructure, so that tax authorities will have new higher capabilities to support big tax data analysis and support the productivity of organizational operations and be able to position themselves better to help and guide taxpayers in providing tax services. According to Bird & Zolt (2008) tax administration in developing countries functions to collect revenue, process returns and information, limit tax smuggling, and provide services to

taxpayers. Information technology with the help of computers can be utilized to improve tax administration in the following areas :

1. Database of taxpayers and tax collectors;
2. Internal management and control of resources;
3. Structure and Procedure;
4. Systems that minimize tax compliance costs (compliance costs).

Bird & Zolt (2008) stated that the success of tax audits and various tax audit strategies is highly dependent on the quality of database information obtained by tax auditors (auditor) which is influenced by 3 factors, namely information from taxpayers, the ability of tax auditors (auditors) to process information and strategies used. The application of information technology is able to improve the tax authorities to obtain maximum audit results because it can have a wider scope of inspection strategies. One effort to supervise taxation on the implementation of self-assessment to increase tax revenue and tax compliance by implementing an online tax system through the installation of a tax surveillance tool, the workings of the online tax system is by connecting the taxpayer's payment information system with the regional income information network system at the tax authority. For example, in the province of Quebec the time required to audit a restaurant normally takes 70 hours, but after the introduction of their sales registration module, now it takes three hours. This allows the tax authority to significantly increase the number of inspections from 120 to 8000 per year. This can be useful for business, because audits can occur electronically and remotely than in business and require the production of hard copy document volumes, which means less time and disruption in business. While the transaction data are data / documents as proof of payment transactions from consumers to entertainment, hotel, parking, and restaurant providers or other data that can be used as a basis for taxation.

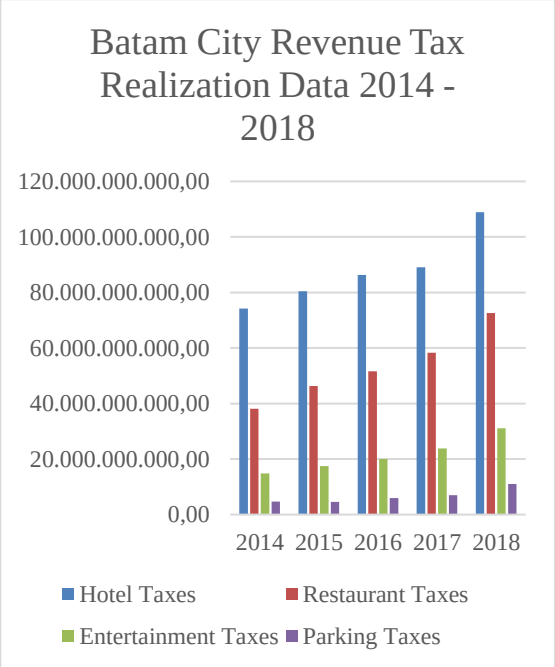
Each of these regions has the right and obligation to regulate and manage their own various government needs to improve efficiency and effectiveness governance and service to the community. The city of Surabaya and the city of Batam are cities that have great tax revenue potential considering the two cities are cities that have an important role in Indonesia where the city of Batam is a strategic city for aviation and shipping that is close to Singapore while the city of Surabaya is a megapolitan city which is the center the second economy in Indonesia after DKI Jakarta. This data is supported by the following data.

Tabel 3. Total of Taxpayers in Batam and Surabaya City Until October 2019

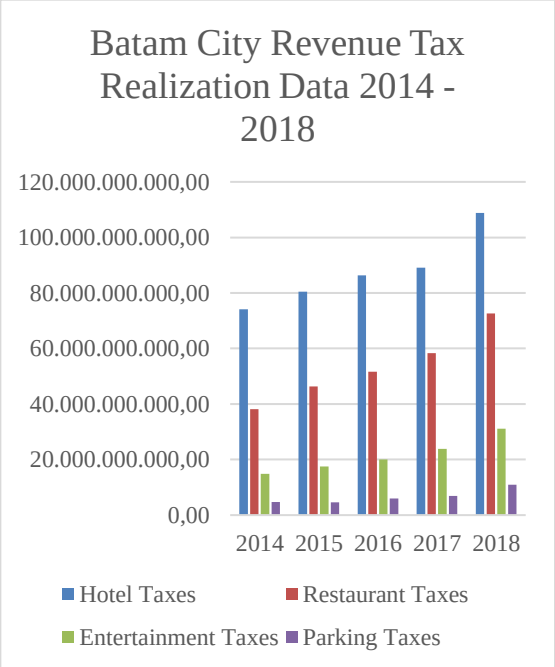
Number	Description	Total Of Taxpayers in Batam City In 2019*	Total Of Taxpayers in Surabaya City In 2019*
1	Hotels	82	1028
2	Restaurants	310	4257
3	Entertainments	56	425
4	Parking	9	2178
	Total	457	7888

Source: Surabaya City Regional Financial & Tax Management Agency, Batam City Regional Tax & Retribution Management Agency (2019)

Based on the data above it is known that this amount is very likely to continue to grow so that the management and supervision of tax revenues in the two cities must always be improved. Until 2018, the two cities have always experienced a fairly positive trend in the realization of local original revenues, especially the tax sector, as can be seen in the following figure.



Gambar 1. Batam City Revenue Tax Realization Data 2014 – 2018 (Source: Data Processed by Researchers (2019))



Gambar 2. Percentage of Growth of Batam City Tax Revenue in 2014 – 2018 (Source: Data Processed by Researchers (2019))

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Halaman 17820-17828
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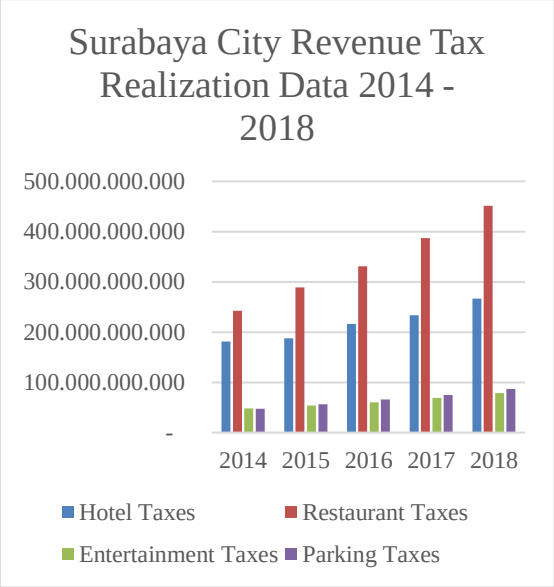
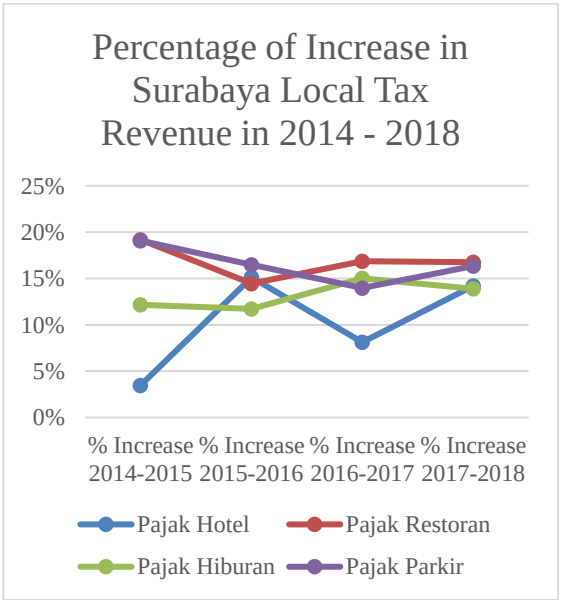


Gambar 3. Surabaya City Revenue Tax Realization Data 2014 – 2018 (Source: Data Processed by Researchers (2019))



Gambar 4. Percentage of Growth of Batam City Tax Revenue in 2014 – 2018 (Source: Data Processed by Researchers (2019))

Based on the data obtained it is known that there was a more significant increase in 2017 to 2018 wherein that year tax surveillance in both cities had been implemented. This shows that the existence of the program has positive implications on local tax revenues in the two cities. Besides, to find out the real benefits obtained, the calculation of benefit-cost analysis is performed as follows. Based on the data obtained, the calculation is obtained as follows.

Tabel 3. NPV of Tax Surveillance Practice in Batam and Surabaya City

Number	Period	Batam City Benefit	Cost	Net Benefit	Discount Factor (1+*S*)T	Present Value	Surabaya City Benefit	Cost	Net Benefit	Discount Factor (1+*S*)T	Present Value
1	2	4	5	6=4–5	7	8 = 6 x 7	4	5	6=4–5	7	8 = 6 x 7
3	2017	Rp 14,290,582,450.64	Rp-	Rp 14,290,582,450.64	0,94117647706	Rp 13,449,959,953.54	Rp 14,290,582,450.64	Rp-	Rp 764,478,085,407.31	0,94117647706	Rp 724,554,341,638.38
4	2018	Rp 45,348,562,854.09	Rp-	Rp 45,348,562,854.09	0,65418025008	Rp 29,666,134,221.31	Rp 45,348,562,854.09	Rp-	Rp 884,304,790,820.00	0,65418025008	Rp 578,494,729,842.26
		TOTAL				Rp 43,116,094,174.85			**TOTAL**		Rp 1,303,049,071,480.64

According to Devas in Anggoro (2017) there are five local tax benchmarks considered good, including the following.

1. As a result, the cost of collection must be lower than revenue productivity;
2. Justice, tax collection should be done fairly, not arbitrary;
3. Economic efficiency, tax collection must pay attention to economic factors;
4. Ability to Implement, taxes must be able to be implemented, from the standpoint of political will and administration; and
5. Compatibility, taxes are required to be suitable as a source of regional revenue.

Based on the results of cost-benefit analysis conducted, it is known that the NPV value = Rp 70,891,188,260.25 or NPV> 1 for Batam City while for Surabaya City it is known that the NPV value = Rp 1,303,049,071,480.64 or NPV> 1 which indicates that the benefits generated are greater than the costs incurred so that there is a tax surveillance has met the results aspect and needs to be continued continuously because it brings a positive impact. In addition, the tools used can be made simpler for Batam City as it is done by Surabaya City so as to make Taxpayers more willing to participate in participating in this tax surveillance program and to optimize the existence of tax surveillance technology by providing convenience and comfort because existing tools do not disturb the appearance of the receptionist.

CONCLUSION

The results showed implementation of tax surveillance in Surabaya and Batam increasing local tax revenue as one of the supporting elements of regional independence had positive implications in increasing tax revenue in the two cities. This is indicated by a graph of tax revenue experiencing a positive trend and NPV value> 1 in both cities (NPV value = IDR 70,891,188,260.25 for Batam City and Surabaya City NPV value = IDR 1,303,049,071,480.64) which shows that the benefits generated are greater than the costs incurred. Therefore, tax surveillance needs to be continued on an ongoing basis to optimizing local tax revenue.

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