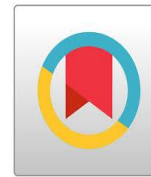


**The Effectiveness of Electronic Services for Land and Building Tax-Rural and Urban in Tuban Regency**



**Efektivitas Pelayanan Elektronik Pajak Bumi dan Bangunan Perdesaan dan Perkotaan di Kabupaten Tuban**

**Iis Yulisrowati<sup>1\*</sup>, Tukiman<sup>2</sup>**

<sup>12</sup> Universitas Pembangunan Nasional “Veteran” Jawa Timur, Kota Surabaya, Indonesia

<sup>12</sup> Jl. Rungkut Madya No.1, Gn. Anyar, Kec. Gn. Anyar, Surabaya, Jawa Timur 60294

iisyulisrowati28@gmail.com<sup>1\*</sup>; tukiman\_upnjatim@yahoo.com<sup>2</sup>;

Corosponding Author: iisyulisrowati28@gmail.com<sup>1\*</sup>;

ARTICLE INFORMATION	
<p><b>Keywords</b>                      Effectiveness;                      Electronic Services;                      E-PBB;</p>	<p><b>ABSTRACT</b>  <i>Taxes are one of the main revenues for the Indonesian State. Land and Building Tax-Rural and Urban (PBB P2) is a state tax imposed on land and buildings of a material nature, which the amount of tax payable is determined by the condition of the object, including land, funds or buildings. In improving the quality of services, Tuban Regency has implemented E-Government innovations in accordance with Tuban Regent Regulation Number 1 of 2019 concerning the implementation of non-cash transactions within the Tuban Regency Government, thus Tuban Regency has made an innovation called as Electronic Land and Building Tax-Rural and Urban (E-PBB P2) through the BPPKAD which aims to provide convenience for the public to find out information related to the E-PBB P2 and to be able to make payments independently through the Collecting Agents provided. The purpose of this research is to determine the effectiveness of Electronic services for Land and Building Tax-Rural and Urban implemented at the Regional Revenue, Financial and Asset Management Agency (BPPKAD) in Tuban Regency. The method used in this research was descriptive-qualitative method using data collection techniques in the form of interviews, observation and documentation, as well as applying Budiani's theory with 4 indicators, including (1) Program Targets (2) Program Socialization (3) Program Objectives, and (4) Program Monitoring. The research results show that the E-PBB P2 service in Tuban Regency has been running effectively but is still not optimal.</i></p>
<p><b>Kata Kunci</b>                      Efektivitas;                      Pelayanan Elektronik;                      E-PBB</p>	<p><b>ABSTRAK</b>                      Pajak adalah salah satu pendapatan utama bagi negara Indonesia. Pajak Bumi dan Bangunan Perdesaan dan Perkotaan (PBB P2) adalah pajak negara yang dikenakan terhadap bumi dan bangunan yang bersifat kebendaan, dalam arti besarnya pajak terutang ditentukan oleh keadaan objek yaitu bumi/ tanah, dana atau bangunan. Dalam meningkatkan kualitas pelayanan, Kabupaten Tuban telah melakukan inovasi <i>E-Government</i> sesuai dengan Peraturan Bupati Tuban Nomor 1 Tahun 2019 tentang pelaksanaan transaksi non-tunai di lingkungan Pemerintah Kabupaten Tuban, maka Kabupaten Tuban membuat inovasi yaitu Elektronik Pajak Bumi dan Bangunan Perdesaan dan Perkotaan (E-PBB P2) melalui BPPKAD dengan tujuan untuk mempermudah masyarakat dalam mengetahui informasi terkait E-PBB P2 dan dapat melakukan pembayaran secara mandiri melalui <i>Collecting Agent</i> yang telah disediakan. Tujuan dari penelitian ini adalah untuk mengetahui efektivitas pelayanan Elektronik Pajak Bumi dan Bangunan Perdesaan dan Perkotaan di Badan Pendapatan, Pengelolaan Keuangan dan Aset Daerah (BPPKAD) di Kabupaten Tuban. Metode yang digunakan dalam penelitian ini adalah metode kualitatif deskriptif menggunakan teknik pengumpulan data berupa wawancara, observasi dan dokumentasi, serta menerapkan teori Budiani dengan 4 indikator yaitu (1) Sasaran Program (2) Sosialisasi Program (3) Tujuan Program (4) Pemantauan Program. Hasil penelitian menunjukkan bahwa pelayanan E-</p>

		PBB P2 di Kabupaten Tuban sudah berjalan efektif namun masih kurang maksimal.
<b>Article History</b> Send 24 <sup>th</sup> November 2023 Review 7 <sup>th</sup> January 2024 Accepted 10 <sup>th</sup> February 2024		Copyright ©2024 Jurnal Aristo (Social, Politic, Humaniora) This is an open access article under the <a href="#">CC-BY-NC-SA</a> license. Akses artikel terbuka dengan model <a href="#">CC-BY-NC-SA</a> sebagai lisensinya.



## **Introduction**

Indonesia is one of the states that makes taxes as one of the main sources of income. State taxes are an important element in the country's economy. When talking about the role of taxes in the economy, it will be directly related to economic efficiency and income distribution, especially in infrastructure development, such as repairing highways, building toll roads, bridges, schools, hospitals and other infrastructure. According to Boedijono et al. (2019), the government has a role in public financial management, starting from central and regional financial governance. According to the Law on General Provisions and Tax Procedures Number 28 of 2007, it explains that tax is a mandatory contribution to the state owed by individuals or entities that are coercive based on the law, without receiving direct compensation and is used for state needs for the greatest prosperity of the people. The government of a country cannot run if there is no funds to finance the government activities. This also applies to the Indonesian State. State revenue from taxes almost certainly increases every year in accordance with existing economic developments (Kurnia & Tukiman 2022).

According to Putri in Sukiyarningsih (2020), tax is a form of people's contribution to the state in efforts to implement national financing and development, as well as the largest source of income in the composition of the State Budget (APBN) which is allocated as state expenditure for the prosperity of the people. According to Lubis (2018), Land and Building Tax is one of the potential revenue factors for the state and contributes to regional income (Herbert et al., 2023). This is because Land and Building Tax covers all land and buildings within the territory of the Republic of Indonesia. In accordance with Law Number 12 of 1985 concerning Land and Building Tax as amended by Law Number 12 of 1994, Land and Building Tax (PBB) is a state tax imposed on land and buildings of a material nature, which the amount of tax payable is determined by the condition of the object, including land, funds or buildings (Adenuga et al., 2014). The existence of Land and Building Tax as one type of tax is understandable, considering that land and buildings have provided benefits and a better socio-economic position for the people or entities that have rights or benefit from the land and buildings (Fox, 2014).

According to Hapsari et al. (2019), objects of Land and Building Tax-Rural and Urban are land and buildings owned, controlled, and/or utilized by private individuals or entities, except areas used for plantation, forestry and mining business activities (Sahoo & Biswal, 2016). Each region in Indonesia certainly has a revenue target for Land and Building Tax-Rural and Urban as one of its respective regional sources of income. This is also done by one of the districts in East Java Province, Tuban Regency, in order to carry out development at the

regional level. A source of income in the form of funds is needed to support development activities. The funds are obtained from the Regional Original Revenue (PAD) collected by the Regional Revenue, Financial and Asset Management Agency (BPPKAD) of Tuban Regency (Sharkey et al., 2020). Regional tax is a tax whose collection authority is carried out directly by the Regional Revenue Agency (Estarla & Kumar, 2021). The results of regional tax collection are accumulated and included in the Regional Revenue and Expenditure Budget (APBD). In an effort to increase the Regional Original Revenue (PAD) especially in the Land and Building Tax sector and as a form of implementing good public services, regional governments must certainly improve the quality of information systems and the internet in the Industrial Era 4.0 which has become an important thing for the government (Saha et al., 2021). Various conveniences can be accessed by the public quickly through information technology that has been equipped with various service features in it (Adjaoud et al., 2023).

The government as a provider of public services in the bureaucracy as well as policy makers should take advantage of these technological developments by digitizing various policies to provide good public service management to achieve good governance. According to Thoha in Sellfia et al. (2021), Public service is a service directed to the community as an effort made by an individual, group or certain agencies to provide assistance and convenience to the community in order to achieve a goal. According to Law Number 25 of 2009 concerning Public Services, public services refer to the activities or series of activities carried out by every citizen and resident for goods, services and/ or administrative services provided by public service providers in accordance with laws and regulations (Boer et al., 2023). This is also explained in article 2 Paragraph 2 of the Government Regulation of the Republic of Indonesia Number 38 of 2017 which states that the purpose of regional innovation is to accelerate the realization of community welfare through improving public services, community empowerment and participation, as well as increasing regional competitiveness (Ali et al., 2023).

According to Tuban Regent Regulation Number 1 of 2019 concerning the implementation of non-cash transactions within the Tuban Regency Government, the Tuban Regency Government through the Regional Revenue, Financial and Asset Management Agency (BPPKAD) has launched an innovation called as the Land and Building Tax-Rural and Urban (PBB P2) payment system. E-PBB P2 or Electronic Land and Building Tax-Rural and Urban began to exist in February 2019 which can be used by the public to check the data on Land and Building Tax-Rural and Urban or PBB P2 online which contains the nominal amount of tax to be paid by taxpayers and the status of payment through the website

<https://pbb.tubankab.go.id/>. The public can also find out their tax status for the last few years whether it has been paid off, delinquent or fined. At a press conference conducted by Tuban Regency, the Regent explained that in 2022, they developed an online payment system for Land and Building Tax-Rural and Urban through Collecting Agent (CA) and E-Billing. Furthermore, the Regent of Tuban also explained that this activity was a form of collaboration between the Tuban Regency Government and Bank Jatim (East Java Provincial Bank) at the Central and Regional branch.

The established innovation is expected to be able to reduce the inefficiency of public servants. Moreover, non-cash transactions will also provide convenience for the community and save their time. Payments in cash or those paid through collecting officers should also reduce corruption as officers must deposit with the bank, yet with the application of PBB-P2 payments on a regular basis. Collecting Agents (CA) are including Mobile Banking of Bank Jatim, Indomaret, Dana, Tokopedia and Blibli (Khan, 2020). The current government is required to work even harder in efforts to meet regional needs in order to get maximum results. Thus, the government of Tuban Regency is also trying to continue to improve the quality of services to make the management of PBB-P2 in Tuban Regency runs well (Abeykoon et al., 2021). However, in recent years, the amount of regional revenues in Tuban Regency, especially in the PBB-P2 sector, has tended to decrease. This can be explained through the table of data below:

Table 1 Tuban Regency Government Revenue

Description	Tuban Regency Government Revenue (ID Rupiah)		
	Year 2021	Year 2022	Year 2023
Regional Revenue	566. 077. 757 668,16	614 733 285 905,09	587 641 750 164,81
PBB-P2 Tax	37.033.945.594	34.408.981.147	32.104.429.662
Regional Levies	31. 534 164 145,	55. 579 430 221,	43. 551 887 692
Others legitimate PAD	212. 821 701 083,27	231. 245 324 957,73	230. 227 367 148,47

Source: BPPKAD processed by the researcher

Based on the data above, it can be explained that the Regional Original Revenue, especially in the Land and Building Tax-Rural and Urban (PBB P2), has decreased significantly in the last three years. As we can see in 2021, taxes in the PBB-P2 sector reached 37,033,945,594 billion rupiah. However, in the following years, the amount continued to decrease until in 2023, the amount of the PBB-P2 revenue was only around 32,104,429,662

billion rupiah. This indicates that the use of E-PBB, which is expected to be able to increase the amount of regional revenues in Tuban Regency, still does not show appropriate results. The Regent of Tuban through his statement explains that online utilization can increase the number of PBB-P2 objects and will also ensure transparency in government administration as well as be able to increase the Regional Original Revenue (PAD) of Tuban Regency. However, in facts, not all people can access the online services because of network and smartphone controls. This matter shall be the concern of the regional government since the purpose of the E-PBB existence is to make it easier for people to pay taxes. Things that must be considered include the limitations experienced by the people that prohibit them to access the online services and also the fact that there are still many people who have no idea about the E-PBB services. This can be seen from the following data:

Table 2 Realization of PBB-P2 Tuban Regency in 2022 - 2023

Sub-District	Realization of PBB-P2		Realization of PBB-P2	
	SPPT	Percentage	SPPT	Percentage
	Year 2022		Year 2023	
Parengan	32.754	100,00 %	33.187	100,01 %
Kenduruan	20.332	100,01 %	20.581	100,00 %
Senori	25.071	100,04 %	25.309	100,00 %
Bangilan	25.455	100,01 %	24.930	97,80 %
Bancar	41.792	100,01 %	40.878	96,77 %
Merakurak	36.625	100,00 %	36.086	96,08 %
Grabagan	29.880	100,00 %	29.084	95,51 %
Plumpang	51.481	100,00 %	48.945	94,71 %
Rengel	37.436	100,01 %	34.921	93,39 %
Jatirogo	33.670	100,01 %	30.600	91,37 %
Widang	36.876	100,00 %	33.311	89,59 %
Kerek	35.933	100,00 %	33.276	89,54 %
Tuban	25.987	91,68 %	24.979	88,03 %
Soko	58.092	100,03 %	51.850	87,51 %
Semanding	71.454	87,66 %	72.556	86,28 %
Montong	33.823	100,00 %	27.993	84,30 %
Tambakboyo	21.808	100,00 %	19.032	82,96 %
Singgahan	21.381	100,00 %	17.623	82,68 %
Palang	41.878	100,00 %	33.716	79,18 %
Jenu	29.821	90,61 %	23.009	74,94 %
<b>Total</b>	<b>711.549</b>	<b>97,05 %</b>	<b>761.873</b>	<b>83,31 %</b>

Source: BPPKAD processed by the researcher

Based on the table above, the realization of PBB-P2 from 2022 to 2023 in Tuban Regency tends to decrease, as evidenced by several regions in Tuban Regency in 2023 experiencing a decrease in PBB-P2. For example, the realization of PBB-P2 in Jenu Sub-

district in 2022 was 97.05%, however in 2023, the realization of PBB-P2 became 74.94%. This should not happen because September 30<sup>th</sup>, 2023 was the due date for PBB-P2 payments to be paid by the taxpayers. In addition, similar thing also happened in Palang District which in 2022, the number of PBB-P2 realization reached 100%, but in 2023, the PBB-P2 realization decreased significantly to 79.18%. As viewed from these data, the total number of PBB-P2 realization in Tuban Regency has not been able to achieve the 100% target. It is proven that in 2022, the number of PBB-P2 realization was 97.05% and the number of SPPT was around 711,549, however in 2023, the realization of PBB-P2 decreased to 83.31% and the number of SPPT was around 761,873.

This matter becomes a research problem, because when the number of SPPT increases, the number of PBB-P2 realization should also increase, but on the contrary, the PBB-P2 realization in Tuban Regency decreases. Moreover, Montong, Jatirogo and Merakurak Sub-districts are the sub-districts with the fastest PBB repayment. However, this is not in accordance with the data on the table above, which explains that the realization of the PBB in Montong Sub-district in 2022 reached 100%, but in 2023 it dropped to 84.30%. Then, in Jatirogo Sub-district, the number of PBB realization in 2022 was 100.01%, yet in the following year in 2023, it decreased to 91.37%. Merakurak Sub-district experienced similar thing with realization amount in 2022 reached 100%, yet in 2023, it decreased to 96.08%.

If we look in more detail at the online services of tax payment system (E-PBB P2) implemented by the Tuban Regency government, there are still several obstacles in its implementation. One of the obstacles is that not all people understand the online payment system, which is a challenge for the Tuban Regency government in developing the quality of public services, especially in the land and building tax revenue sector in Rural and Urban areas. Moreover, the existence of an online payment system that is expected to be able to increase the effectiveness of Tuban Regency revenue, especially the tax revenue, is still unable to show significant results. To overcome these problems, the researcher uses the effectiveness theory proposed by Budiani in Arifin & Widiyarta (2021) which explains that program effectiveness can be measured through 4 indicators, including the accuracy of program targets, program socialization, program objectives, as well as program monitoring. These aspects need to be implemented in government agencies, especially in public services (Misra 2009).

Seeing the problems that exist and occur, this is what makes the researcher interested in researching the issues to be able to find out the effectiveness of the E-PBB P2 service in Tuban Regency. Moreover, the online service is still unfamiliar to the people of Tuban. The public still does not know about the existence of the E-PBB P2 service, thus it is hoped that the

research conducted by the researcher can provide insight and knowledge for the people in Tuban Regency.

This research examines the effectiveness of electronic services for land and building tax-rural and urban, which will be explained based on the principles regulated in Tuban Regent Regulation Number 1 of 2019 concerning the implementation of non-cash transactions within the Tuban Regency Government and Budiani's theory which has 4 factors in measuring the effectiveness of a program, including (1) program targets, (2) program socialization, (3) program objectives, and (4) program monitoring.

This research is in line with the research conducted by Wijayanti et al. (2021) entitled 'Analysis on the Implementation of Electronic Land and Building Tax-Rural and Urban (E-PBB P2)', which aims to analyze the implementation of Electronic Land and Building Tax-Rural and Urban (E-PPB P2) at the Regional Revenue, Financial and Asset Management Agency of Magetan Regency. It used descriptive-qualitative research method. The research results show that the E-PBB implementation in Magetan Regency has been maximized from data collection, assessment, determination, billing, payment and services. Although there are still several obstacles such as application networks, non-optimal system and also low taxpayer participation, yet still, there is an increase in the payment time of PBB by the taxpayers which is faster. This happens due to the use of an integrated online system, thus the taxpayer payments in real time are included in a faster repayment process by the local government.

Another similar research was conducted by Sulistiana et al. (2022) entitled 'Analysis on the Effectiveness of Land and Building Tax-Rural and Urban (PBB P2) Revenue and Its Contribution to the Regional Original Revenue in Garut Regency', with the aim of measuring the effectiveness of land and building tax-rural and urban revenue and its contribution to the regional revenues in Garut Regency. This research used qualitative method and descriptive approach using both primary and secondary data. It also applied Miles and Huberman's analysis model started with data reduction, data display, and then conclusion drawing/verification. The results of this research show that the effectiveness of the PBB-P2 revenue in Garut Regency for the 2016-2020 period is in the very effective category, which is 104.17%. The contribution of land and building tax-rural and urban revenue to the regional revenues in Garut Regency for the 2016-2020 period is in the very less category, which is 7.83%. The Regional Original Revenue (PAD) in Garut Regency fluctuate from year to year and are not well realized. Although in 2018-2019, its effectiveness decreased, yet in 2020, its effectiveness increased to 123.16% and can be classified as very effective.



This research will try to complement previous studies by providing facts from the field that have been collected through interviews as a data collection technique. This research will look at subjects only to explain the gap between real conditions in the field and ideal conditions that have not been analyzed by any research previously. Thus, the researcher considers that to see a "rule of thumb" which has not yet worked, it is necessary to look at "facts" (Hirawan et al., 2023).

The researcher focuses on finding facts about the effectiveness of electronic services for land and building tax-rural and urban implemented at the Regional Revenue, Financial and Asset management Agency in Tuban Regency. This is for the reason that the focus of this research is to find facts through the BPPKAD with the assumption that BPPKAD is the service provider of electronic land and building tax-rural and urban. Hence, the researcher draws a formulation of the problem on "How is the Effectiveness of Electronic Services for Land and Building Tax-Rural and Urban Implemented at the Regional Revenue, Financial and Asset Management Agency in Tuban Regency?".

## **Method**

The method used in this research was qualitative method. Qualitative methods emphasize more on observing phenomena and examines more the substance of the meaning of these phenomena. According to Lincoln in Fadli (2021), qualitative research is a research that uses a natural setting with the intention of interpreting phenomena occurred and is carried out by involving various existing methods. According to Setiawan in Adlini et al. (2022), qualitative-descriptive type of research has the aim of providing description, explanation, and validation of the phenomenon being studied. The choice of location for this research was decided based on the situation that became the context of the research, and based on the correlation between theories and phenomena that have been described in the previous discussion. Therefore, the researcher was interested in taking the research location at the Regional Revenue, Financial and Asset Management Agency (BPPKAD).

The research focus can be presented in several important points which refer to the core of the problem and will be explored in depth. Therefore, if the research focus is determined according to the objectives and problems of the researcher, then the research can be directed and successfully run well. In line with the problem formulation and the research objectives, the focus of the researcher is to find out about the effectiveness of electronic services for land and building tax-rural and urban implemented at the Regional Revenue, Financial and Asset Management Agency. The data sources used were primary data sources and secondary data sources. For

secondary data, the researcher collected data from previous studies, and for primary data, the researcher collected data from field observations by conducting interviews at the Regional Revenue, Financial and Asset Management Agency (BPPKAD) in Tuban Regency.

This research applied interactive model analysis techniques. Regarding data analysis in qualitative research according to Sugiyono in Ramdhani (2018), qualitative research is carried out at the time of data collection, and after completion of data collection within a certain period and at the time of interview, the researcher then conducts an analysis of the interviewee's answers. If the answers interviewed after analysis are deemed unsatisfactory, the researcher will continue the questions again, up to a certain stage, and obtain data that is considered credible.

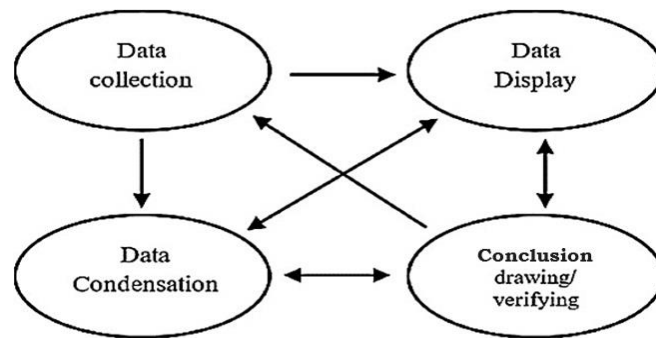


Figure 3. Data Analysis Techniques According to Miles and Huberman (2014)

Miles and Huberman in Rijali (2019) suggests that activities in qualitative data analysis are carried out interactively and take place continuously until complete, thus the data is saturated. Regarding data analysis in qualitative research according to Sugiyono in Sofwan et al. (2020), qualitative research is carried out at the time of data collection and after completion of data collection within a certain period and at the time of interview. Data condensation is the process of selecting, focusing, simplifying, abstracting data results from field notes, interviews, transcripts, various documents and field notes. By applying data condensation, the data will become stronger. Conclusions and validations are the final steps in the data analysis process. Qualitative analysis begins with data collection and then inferring meaning by tracing and cataloging themes, hypotheses, and causal chains, as well as sampling and analyzing the results. Conclusions lead to answers based on the questions raised in the research and reveal what and how based on the findings taken, thus conclusions can be drawn. Data validation is important in conducting research to review the data that has been obtained. The data validity tests taken by qualitative research according to Sugiyono (2023) include credibility test (internal validity), transferability test (external validity), dependability test (reliability), and confirmability test (objectivity).

## **Result and Discussion**

In this section, the researcher will describe the research results and discussion on the effectiveness of electronic services for land and building tax-rural and urban in the Tuban Regency Regional Revenue, Financial and Asset Management Agency. The results of this research are in accordance with the focus and objectives of the research study related to the implementation of the program 'Together Protect Children' in protecting victims of child violence. To determine the effectiveness of electronic services for land and building tax-rural and urban in the BPPKAD, it refers to the research focus according to Budiani's theory in Widiyarta (2021) which has 4 factors in measuring the effectiveness of a program, including (1) program targets, (2) program socialization, (3) program objectives, and (4) program monitoring.

### **Program Targets**

Program targets are the targets of the government used as participants in the program of Electronic Land and Building Tax-Rural and Urban (E-PBB P2) in Tuban Regency with the intention that the existence of E-PBB P2 has high benefits for the convenience of both village officials and village community (Doggart et al., 2020). Budiani in Widiyarta (2021) explains that a program certainly has a certain goal for the common good and has a mutual agreement, thus the program's goals are good and in line with expectations. In the implementation of the program, there are actors or implementing actors and targets of the implementers. The implementation of a program will be carried out by individuals or groups formed from implementation supported by policies, procedures and resources intended to bring results to achieve predetermined goals and objectives. Implementation of the use of the E-PBB P2 website to make payments can be done by village officials or village operators using smartphones or computers, and the public can access the E-PBB website via <https://pbb.tubankab.go.id/> on Smartphones/ computers. Data for those who have made payments and related to the use of this website will also be recorded and managed directly by E-PBB officers at the Tuban Regency Revenue, Financial and Asset Management Agency (Hirvonen 2022).

Electronic Land and Building Tax-Rural and Urban was formed because previously, the service was still manual and the payments deposited to Bank Jatim were still in log form (PBB P2 revenue for more than one tax object with one proof of payment) or not in accordance with the Tax Object Number (NOP) causing input errors in the community for those who have not or have paid PBB tax. It is for the reason that this log payment is only in the order of the

leading NOP, not according to the payments made by the community to the Village/Village apparatus (Puppala et al., 2023). Thus, with this E-PBB program, E-PBB payments can be clearly accessed by the community to find out how much must be paid, debts or arrears owned, and can check the status of payments. Meanwhile, the village officials/ E-PBB P2 operators are also highly facilitated because they can check according to the NOP, and payments are clearer and more transparent. For the BPPKAD, with the existence of this website, they no longer have to do manual checking and recording which takes a long time. Through this innovation, it is certainly very easy to monitor and evaluate in a short time (Janota et al., 2023).

According to Mr. Didik as Head of the Regional Revenue Agency, the E-PBB website has existed and been unveiled since 2019, yet is running and being used effectively starting in 2022. With the existence of this E-PBB now, checking payment data can be easier and faster. Unlike in the past where everything related to E-PBB was still manual, people also don't need to queue for payments at the villages or Bank Jatim (East Java Provincial Bank), since the E-PBB P2 has also collaborated with several agencies to provide several payment places that are easily accessible to the public. Apart from that, to make reports, the officials can now find out and easily access data on all sub-districts in Tuban which consist of villages or wards, see the standard accuracy and the PBB realizations, which sub-districts are lacking or which villages have not made payments. In using the E-PBB P2, the more active ones are villages and wards since there are many features available to villages, such as seeing the amount of the determination (the amount of tax to be paid), the realizations, and the amount that has been paid or has not been paid with the village apparatus knowing it. Villages can also print billing codes for more than 1 Tax ID, while the general public can only check outside of it, including looking at data related to the amount of tax to be paid, or checking previous arrears. Sub-districts can also access it, but their task is only monitoring (Kashef & El-Shafie 2020).

In addition, the obstacle to its implementation lies in having errors and opening the data takes quite a long time because the data is very large. There are around 700 thousand NOPs and the infrastructure is still standard. Starting from the network, the server is still standard and not very sophisticated, thus it takes almost 15 minutes to open the entire data (Mugisha et al., 2023). Currently, it could be said that 80% of the community still pay in the village, due to several factors such as only applicable to Bank Jatim and perhaps there are still many people who don't have M-Banking, maybe even the village community still can't access it themselves because of inadequate networks or smartphones. However, the community has been given many options to pay such as through Indomaret, Blibi, Tokopedia, and Dana. Another thing is that there are still people who have no awareness regarding this program, especially people in

rural areas, compared to the people in cities who already make their own payments and use E-PBB (Wang et al., 2023). The advantage of this program is that it is faster than before to find out all payment and unpaid data, easier to make reports, accountable, more transparent, as well as saves human resources (Aditya et al., 2021).

According to the community, the target of the E-PBB program in Tuban Regency is still not appropriate, because there are still many obstacles in the field such as the network when accessing the website. Moreover, not all people can access the website because not all of them have smartphones nor access to make payments using the various media provided. Nevertheless, the advantage of this online program is that it can print more billings for more than one NOP and makes the payment data more clearly, unlike the previous manual system which was still stagnant and caused uncertainty regarding proof of payment. With the existence of the E-PBB, monitoring can also be easily conducted to the citizens who have not made payments and have made payments. Besides, the realizations can also be known. The existence of the E-PBB makes everything very convenient, however, there are still obstacles such as error network occurred sometimes and a long time of website opening. Furthermore, there are still many people who have no knowledge regarding the E-PBB P2 program as well as the lacking of public awareness to pay, that makes the village officers go directly to the field at the people's homes. Even though there are people who make payments independently and to the village, but it is only a few of them (Yan & Wang, 2023).

Based on these results, it can be seen that the program of Electronic Land and Building Tax- Rural and Urban implemented at BPPKAD in Tuban Regency is targeted at all Villages / Village officials in Tuban Regency and the general public, with the aim of facilitating services related to E-PBB P2 payments. Thus, the payments are clearer, easier, transparent and not in logs, because prior to the E-PBB P2 innovation, payments were still very inefficient such as depositing Logs (PBB P2 revenue of more than one tax object with one proof of payment) or according to the NOP serial number from the top, not according to who has paid or has not paid the tax, which is also detrimental to the community. In addition, the existence of E-PBB P2 makes it very easy for the public to obtain information related to E-PBB P2, without being bound by time and place since it is online, making it easier for the village/ village officials to make collective payments of more than 1 NOP as well as to monitor and see taxpayer arrears (Garvin et al.,2021).

## **Program Socialization**

According to Budiani in Widiyarta (2021), program socialization is the starting point that determines the success of the program in achieving goals. Therefore, program socialization must be carried out in a planned and systematic way and empower the resources owned by an organization with goals that have been planned in advance and achieved well as expected. To analyze in terms of socialization, there are indicators of program socialization and factors inhibiting socialization. The need for socialization of employees regarding the E-PBB P2 has also been understood by the Regional Revenue, Financial and Asset Management Agency (BPPKAD). Socialization will run well if there is a good cooperation between the socialization givers and recipients. In disseminating information on the BPPKAD socialization, it can be done directly and through mass media. Socialization can be delivered directly to the Village/Village Apparatus in each sub-district consisting of two Village Apparatus and officials from the sub-district itself, as well as through mass media to the community. In conducting socialization, it needs to be carried out evenly to all employees, thus the implementation of the program can run well and according to expectations (Fitriyah & Rinawati, 2023).

According to Mr. Didik as Head of the Regional Revenue Agency, the agency has carried out socialization to all Villages/ Village officials in Tuban Regency. Actually, they have conducted socialization from 2019 even before, however the program of E-PBB began to be used by the whole in 2022 because previously, the introduction was carried out once a year, usually at the beginning of the month with a system per sub-district. For example, in the socialization conducted in Semanding Sub-district, they gathered at the Sub-district Hall with each village/ward sent 2 representatives to become E-PBB officers and was also followed by sub-district officers who would carry out monitoring in the region. Meanwhile, socialization to the community is also carried out through mass media such as Instagram, radio, and directions are also given to the village apparatus to also provide socialization to their residents. This is relevant to the statement from the people of Tuban Regency who said that regarding the E-PBB, the community had received socialization from the BPPKAD at the beginning of the year, along with other village/ward officials who were given socialization at the sub-district office, with the employees from the sub-district office also participate in the socialization related to this E-PBB. However, in this case, there are still people who do not know about the socialization (Abdullah et al 2021).

Then, regarding the aspect of how far employees understand the socialization carried out to the community, Mr. Didik as Head of the Regional Revenue Agency explained that so far, the Villages/ Village officials have really understood what was conveyed from the

socialization about how the management of the E-PBB P2. This can also be seen from all villages in Tuban Regency from 2022 until now that have used E-PBB P2 and the results are also good. No one has had difficulty using the E-PBB P2. Meanwhile, the officers or employees from the sub-district also understand and are able to help monitor the E-PBB. However, currently, not everyone understands the E-PBB P2 because of socialization to the public through mass media. However, we have appealed to the Villages/ Village officials to also provide socialization to the community regarding the use of the E-PBB. Yet, this must be improved further to be more optimal.

From these results, it can be seen that the socialization to the BPPKAD employees and users of E-PBB P2, including the village governments and communities, has been carried out evenly and conducted for several times. Prior to the existence of E-PBB, socialization had been conducted, meanwhile after the existence of E-PBB, there have been socialization for 5 times to the Villages/ Village officials as well as officers from sub-districts. Moreover, it was also carried out to the community online by the BPPKAD through mass media such as Instagram and radio, and also through the Villages / Village officials that are given an appeal. However, it still needs to be improved in the future, especially for the socialization to the community, thus many people are able to recognize this program. In addition, the implementation of socialization to employees/Villages/Village Officials, sub-districts and the community has been well conveyed. However, it needs to be improved further, especially socialization to the community, because currently, not many people know about and utilize this E-PBB. Good socialization will also have a good impact toward its implementation, and it will be run as expected if the socialization is provided well and can be understood by the intended targets.

### **Program Objectives**

According to Budiani (2007) quoted by Muhammad Arifin & Widiyarta (2021), program objectives are the extent of compatibility between the results of program implementation and the program objectives that have been previously determined. In order for the final goals to be guaranteed, it is necessary to carry out a good process in achieving it. Every organization has goals that want to be achieved and implemented well (Sciences, n.d.). Goals are things that will be achieved or produced in a program. Objectives are a major factor in determining whether a pre-planned program is successful or not. The purposes of the E-PBB P2 program are to improve the performance of the implementing apparatus in serving the community and for the community to directly obtain information related to the E-PBB P2, as

well as can assist and organize activities systematically, be directed and effective for excellent service and can overcome problems that generally occur such as:

- a) less optimal service to the community;
- b) data processing delays due to increased information and work volume; and
- c) low data integrity and quality of information presentation.

The objectives of the E-PBB P2 program in the BPPKAD Tuban Regency are to:

- a) make it easier for the public to obtain information related to E-PBB P2;
- b) not bound by time and place since it is online;
- c) facilitate the regional apparatus in monitoring the delivery of E-PBB P2;
- d) make it easier for the Villages/Village officials to know the PBB P2 bills, pay the PBB P2 taxes collectively, know arrears and realize tax revenues;
- e) make it easier for the people to make payments in various places easily and quickly;
- f) facilitate the regional apparatus, including Villages/Districts and the BPPKAD to monitor the PBB P2 revenue targets and arrears;
- g) make it easier for the regional apparatus to print copies related to the E-PBB P2 data;
- h) increase taxes on the PBB sector; and
- i) increase awareness of taxpayers in paying PBB P2 because it is easier to find out information on how much the PBB P2 bills are.

According to Mr. Didik as Head of the Regional Revenue Agency, the objective of the E-PBB P2 is to make it easier for the apparatus to monitor directly by simply looking at the website, easily and also avoid lump payments as before, thus the community is also no longer harmed by this. All villages/wards in Tuban have used and applied the E-PBB P2, and other facilitating objectives have been carried out well according to Mr. Didik. Regarding the inhibiting factors, Mr. Didik also said that the website often has errors and the process to open the data takes quite a long time because of the large amount of data, and explained that it still has to be introduced to taxpayers because the regional tax receivables, one of which is the PBB P2, are still high (Dey et al., 2023).

Based on these results, the objectives of the E-PBB P2 program have been effective because it brings many positive impacts to facilitate both the community and Regional Apparatus, including the BPPKAD as well as the Sub-district Apparatus and Village officials. However, further improvements need to be made in the future, as stated by employees from the BPPKAD that this website still takes a long time to open and is often hampered by errors. Moreover, there is also a need to advise the public regarding the amount of PBB P2 receivables, which is the highest amount compared to other tax receivables.



## **Program Monitoring**

According to Budiani (2007) quoted by Muhammad Arifin & Widiyarta (2021), program monitoring is an activity carried out after the implementation of the program as a form of attention to participants. Monitoring of the program will also be carried out continuously by making reports every month and conducting evaluations afterwards. The purpose of monitoring becomes the basis for calculations related to appropriate realization, and the community also receives monitoring from the Villages/ Village apparatus related to E-PBB and will get a reprimand if they have not made payments and will be assisted if they have difficulty accessing the E-PBB P2 (Maas et al., 2016).

According to Mr. Didik as Head of the Regional Revenue Agency, the program monitoring is conducted by monitoring both online and offline. Online monitoring is carried out via the website to know the realization of income for each sub-district or even village/ward in Tuban Regency. If there are villages/wards whose achievements are still far from the target, the BPPKAD will monitor them and visit the location directly to ask about the obstacles they are experiencing. Evaluations are also routinely carried out every day to see the progress of realization and if there are problems with the website, the BPPKAD also immediately provides information to the community and the village/ward officials. Meanwhile, monitoring on the income realization per village/ward is carried out every 2 weeks received by users.

Based on these results, it can be known that the BPPKAD conducts monitoring to the sub-district apparatus and the village/ ward officials twice a month by online and offline. According to Dr. Harry Hikmat, monitoring is a data collection process followed by analysis and then improvements are made, thus the activity program can be perfected in the future. This E-PBB service is monitored directly from the website by looking at its realization. If the realization is far from the predetermined standard, the BPPKAD will continue to evaluate it by monitoring both online and/or even offline by coming directly to the village where the realization is far from the accuracy that have been set. The BPPKAD will conduct a recap every month to see the realization of E-PBB in Tuban Regency.

## **Conclusion**

Based on the research results and discussion that have been carried out, it can be concluded that for the first indicator, the program targets, it has been executed effectively but is not yet optimal, because the program targets of the BPPKAD Tuban Regency are all villages and the general public. The E-PBB P2 program has existed since 2019, but is running and being used effectively starting in 2022 by having been utilized by 328 Villages/Wards in Tuban

Regency. However, there are only few people who use and know about the existence of the E-PBB P2 service. For the program socialization, it cannot yet be said to be effective because even though the Sub-district Apparatus and the Villages/Village Officials have been maximally involved, including 328 villages/wards in Tuban Regency, there are still very few people in Tuban Regency who recognize and utilize the E-PBB P2 service.

Regarding the program objectives, it can be said as effective because it has many positive impacts to facilitate both the community and the Regional Apparatus, including the BPPKAD and the Sub-district Apparatus and the Villages/ Village Officials. However, another improvement is required in the future as revealed by employees from the BPPKAD that the website still takes a long time to open and is often constrained by errors. Besides, there is also a need to advise the public regarding the amount of PBB P2 receivables, which is the highest amount compared to other tax receivables. The fourth or the last one is regarding the program monitoring. Monitoring for the program of Electronic Land and Building Tax-Rural and Urban (E-PBB P2), can be said as effective because the BPPKAD has routinely conducted evaluation and monitoring 2 times every month both online and offline.

Based on the research results, discussion and conclusion, the researcher provides suggestions related to the E-PBB P2 program. The first is regarding the program targets that can be improved further by providing door prizes for the public to increase awareness and enthusiasm in paying the E-PBB P2. Furthermore, regarding the program socialization, the Regional Revenue, Financial and Asset Management Agency of Tuban Regency needs to increase socialization more intensively, which can be done by conducting socialization at the Village Hall or through brochures distributed to the entire community, as well as be able to provide advice to the people living in Tuban City through social media such as Instagram, YouTube and other media in a more creative and interesting way. Meanwhile for the program objectives, the researcher provides suggestions to the BPPKAD Tuban Regency to provide supporting facilities in fulfilling the PPB P2 payment obligations, including the availability of Bank Jatim branch in each sub-district in Tuban Regency. Moreover, it is also necessary to provide supporting facilities in each village such as devices, including computers or iPads which contain applications for payments such as Dana, Blibli, and Tokopedia, thus people can access them easily. Furthermore, in the program monitoring, the researcher provides suggestions for the Regional Revenue, Financial and Asset Management Agency of Tuban Regency to improve monitoring by directly visiting the community. It can be conducted directly or reminded through Short Message Service (SMS).

## Acknowledgments

The author would like to deliver her deepest gratitude to all parties who have contributed to the publication of this journal article, especially to the Regional Revenue, Financial and Asset Management Agency (BPPKAD) of Tuban Regency for helping to provide precise, fast and accurate information, as well as all parties who have assisted in the production of this journal article. The author is grateful and hopes that this journal article can be used to make policies that prioritize client welfare, community safety, and surely, the people of Tuban Regency.

## References

- Abdullah, L. O., Christan, Y., Hartono, H., & Febryanti, R. (2021). *Identification of the Effectiveness of Regional Tax Factors on Original Income in Indonesia in 2016-2019*. 84.
- Abeykoon, C., Mcmillan, A., Dasanayaka, C. H., Huang, X., & Xu, P. (2021). *Remanufacturing using end-of-life vehicles and electrical and electronic equipment polymer recyclates - a paradigm for assessing the value proposition*. 4.
- Adenuga, I., Akinyede, O., & Akinsowon, O. (2014). *Development of a Cost-Effective Telemedicine Services for People Affected with Cardio-Vascular Diseases in the Rural Area : A Case Study of Iwo Local Government*. 11(6), 129–135.
- Aditya, T., Santosa, P. B., Yulaikhah, Y., Widjajanti, N., Atunggal, D., & Sulistyawati, M. (2021). Validation and collaborative mapping to accelerate quality assurance of land registration. *Land Use Policy*, 109, 105689.
- Adjaoud, A., Puchot, L., & Verge, P. (2023). Polybenzoxazine-based covalent adaptable networks : A mini-review. *Polymer*, 287(October), 126426.
- Adlini, M. N., Dinda, A. H., Yulinda, S., Chotimah, O., & Merliyana, S. J. (2022). Metode Penelitian Kualitatif Studi Pustaka. *Edumaspul: Jurnal Pendidikan*, 6(1), 974–980.
- Kurnia, Tukiman. (2022). *Efektivitas Program E-TLE Dalam Menangani Pelanggaran Lalu Lintas di Kota Surabaya*. 8(September), 339–346.
- Ali, M. A., Farooqi, R., Akhtar, M. A., Alam, W., & Haque, S. (2023). *Impact And Significance of CRM in Rural Banking – A Comprehensive Study*. February.
- Boedijono, B., Wicaksono, G., Puspita, Y., Bidhari, S. C., Kusumaningrum, N. D., & Asmandani, V. (2019). Efektifitas Pengelolaan Dana Desa Untuk Pembangunan Dan Pemberdayaan Masyarakat Desa Di Kabupaten Bondowoso. *Jurnal Riset Manajemen Dan Bisnis (JRMB) Fakultas Ekonomi UNIAT*, 4(1), 9–20.

- Boer, J. De, Dijk, R. Van, Abalos, M., & Abad, E. (2023). Chemosphere Persistent organic pollutants in air from Asia , Africa , Latin America , and the Pacific. *Chemosphere*, 324(February), 138271.
- Dey, S., Veerendra, G. T. N., Shanmukha, S., & Babu, A. (2023). Green Analytical Chemistry Recycling of e-waste materials for controlling the environmental and human health degradation in India. *Green Analytical Chemistry*, 7(October), 100085.
- Doggart, N., Ruhinduka, R., Meshack, C. K., Ishengoma, R. C., Morgan-Brown, T., Abdallah, J. M., Spracklen, D. V., & Sallu, S. M. (2020). The influence of energy policy on charcoal consumption in urban households in Tanzania. *Energy for Sustainable Development*, 57, 200–213.
- Estarla, K., & Kumar, P. (2021). *Citizens ' Response Towards E-Governance And Its Initiatives In The Sri Potti Sriramulu Nellore District , ( A . P )*. 18(2), 1673–1687.
- Fadli, M. R. (2021). Memahami desain metode penelitian kualitatif. *Jurnal Humanika*, 21(1), 33–54.
- Fakhroni, Z., & Utami, R. T. (2022). The Influence of Socialization on Usefulness: Antecedent and Moderation Effect. *International Journal of Social Science And Human Research*, 05(11), 4867–4876.
- Fitriyah, R., & Rinawati, R. (2023). Land and Building Tax Calculation Application (E-PBB). *Electronic, Business, Management and Technology Journal*, 1(1), 12–27.
- Fox, W. F. (2014). *Investing in Rural Infrastructure. February 2000*.
- Garvin, L. A., Hu, J., Slightam, C., McInnes, D. K., & Zulman, D. M. (2021). Use of Video Telehealth Tablets to Increase Access for Veterans Experiencing Homelessness. *Journal of General Internal Medicine*, 36(8), 2274–2282.
- Hapsari\*, N. R. P. D. (2019). *Analisis Efektivitas dan Kontribusi Pajak Bumi dan Bangunan Pedesaan dan Perkantoran (PBB-P2) Terhadap Pendapatan Asli Kota Tangerang*. 7(3), 145–152.
- Herbert, J., Schumacher, T., Brown, L. J., Clarke, E. D., & Collins, C. E. (2023). Delivery of telehealth nutrition and physical activity interventions to adults living in rural areas : a scoping review. *International Journal of Behavioral Nutrition and Physical Activity*, 1–13.
- Hirawan, Z., Nurasiatin, D., Pustaka, S., & Pembayaran, A. (2023). *Mekanisme Pembayaran Pajak Bumi Dan Bangunan Perdesaan Dan Perkotaan ( PBB-P2 ) Pada Badan Pendapatan Daerah ( BAPENDA ) Kabupaten Subang*. 5(1).
- Hirvonen, J., Saari, A., Jokisalo, J., & Kosonen, R. (2022). Socio-economic impacts of large-scale deep energy retrofits in Finnish apartment buildings. *Journal of Cleaner Production*, 368(June), 133187.

- Janota, L., Vávrová, K., & Bízková, R. (2023). Methodology for strengthening energy resilience with SMART solution approach of rural areas: Local production of alternative biomass fuel within renewable energy community. *Energy Reports*, 10, 1211–1227. <https://doi.org/10.1016/j.egy.2023.07.057>
- Kashef, M., & El-Shafie, M. (2020). Multifaceted perspective on North American urban development. *Frontiers of Architectural Research*, 9(2), 467–483.
- Khan, M. M. (2020). *IoT Based Smart Healthcare Services for Rural Unprivileged People in Bangladesh : Current Situation and Challenges* †. 2–7.
- Lubis, P. K. D. (2018). Analisis Penerimaan Pajak Bumi dan Bangunan Pada Dinas Pendapatan Daerah Kota Medan. *Jurnal Akuntansi, Keuangan Dan Perpajakan Indonesia (JAKPI)*, 6(1).
- Maas, N. A. T. Van Der, Donken, R., Wierik, M. J. M., Swaan, C. M., & Hahne, S. J. M. (2016). *Performance of a bedside test for tetanus immunity : results of a cross-sectional study among three EDs in the Netherlands in 2012 – 2013*. 763–768.
- Misra, H. (2009). *Managing Rural Citizen Interfaces in e-Governance Systems : A Study in Indian Context*. 155–162.
- Mitropoulos, L., Karolemeas, C., Tsigdinos, S., Vassi, A., & Bakogiannis, E. (2023). A composite index for assessing accessibility in urban areas: A case study in Central Athens, Greece. *Journal of Transport Geography*, 108(February 2022), 103566.
- Mugisha, J., Kombe, W. J., Babere, N. J., & Uwayezu, E. (2023). Uncovering ‘sleeping beauty’: Land readjustment for self-financing urbanisation in developing countries. *Social Sciences and Humanities Open*, 8(1), 100539.
- Muhammad Arifin, & Widiyarta, A. (2021). Efektifitas Absensi Online dalam Disiplin Kerja di Kantor Imigrasi Khusus TPI Surabaya Saat Pandemi Covid-19. *Sawala : Jurnal Administrasi Negara*, 9(1), 35–57.
- Profile, S. E. E. (2022). *E-service Delivery of Union Digital Center ( UDC ) in Rural Bangladesh : Challenges and Way out . February*.
- Puppala, H., Peddinti, P. R. T., Tamvada, J. P., Ahuja, J., & Kim, B. (2023). Barriers to the adoption of new technologies in rural areas: The case of unmanned aerial vehicles for precision agriculture in India. *Technology in Society*, 74(July), 102335.
- Ramdhani, F. I. (2018). Analisis Pengelolaan Alokasi Dana Desa Di Desa Uraso Kecamatan Mappedeceng Kabupaten Luwu Utara. *Jurnal Ekonomi Dan Bisnis Universitas Negeri Makassar*, 3(113), 1–22.
- Redding, G. J. (n.d.). 26 - Bronchiectasis and Chronic Suppurative Lung Disease. In *Kendig's Disorders of the Respiratory Tract in Children* (Ninth Edition). Elsevier Inc.
- Rijali, A. (2019). Analisis Data Kualitatif. *Alhadharah: Jurnal Ilmu Dakwah*, 17(33), 81.

- Saha, L., Kumar, V., Tiwari, J., & Rawat, S. (2021). Environmental Technology & Innovation Electronic waste and their leachates impact on human health and environment : Global ecological threat and management. *Environmental Technology & Innovation*, 24, 102049.
- Sahoo, K., & Biswal, R. (2016). *Effectuality of Ess System in Evaluation of Performance Management : An Empirical Study of OMC in India. August 2014.*
- Sciences, T. (n.d.). *Guidelines For Expansion Of Broadband Internet Access In Rural Croatia.* 87–96.
- Sellfia, N. R., Dayat, U., & Aryani, L. (2021). *Inovasi Pelayanan Publik Berbasis E-Government Dalam Aplikasi Sampurasun Kabupaten Purwakarta.* 18(4), 590–598.
- Sharkey, M., Harrad, S., Abdallah, M. A., Drage, D. S., & Berresheim, H. (2020). Phasing-out of legacy brominated flame retardants : The UNEP Stockholm Convention and other legislative action worldwide. *Environment International*, 144(June), 106041.
- Sofwan, S. V., & Octaviyanti, S. (2020). pengaruh pendapatan asli daerah dan sisa lebih pembiayaan anggaran terhadap belanja modal badan badan pengelolaan keuangan dan asset kota Bandung periode 2010-2018. *Jurnal Ilmiah Akuntansi Fakultas Ekonomi UNIBBA, Vol. 11(3)*, 115–130.
- Sukiyarningsih, T. W. (2020). Studi Penerapan E-System dan Pelaksanaan Self Assesment System terhadap Kepatuhan Wajib Pajak. *Jurnal Akuntansi Dan Manajemen*, 17(01), 61–72.
- Sulistiana, E., Alkautsar, M., & Hamdah, D. F. L. (2022). Analisis Efektivitas Penerimaan Pajak Bumi dan Bangunan Perdesaan dan Perkotaan (PBB P2) dan Kontribusinya terhadap Pendapatan Asli Daerah di Kabupaten Garut. *Jurnal Wacana Ekonomi*, 21(2), 089.
- Wang, W. T., Yang, H., & Xiang, C. Y. (2023). Green roofs and facades with integrated photovoltaic system for zero energy eco-friendly building – A review. *Sustainable Energy Technologies and Assessments*, 60(June), 103426.
- Wijayanti, P. F., Nuraina, E., & Astuti, E. (2021). Analisis Penerapan Elektronik Pajak Bumi dan Bangunan Pedesaan dan Perkotaan (E-PBB P2). *Jurnal Akuntansi Dan Ekonomika*, 11(2), 233–240.
- Yan, G., & Wang, S. (2023). Coexistence and transformation from urban industrial land to green space in decentralization of megacities: A case study of Daxing District, Beijing, China. *Ecological Indicators*, 156(35), 111120.