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## **Digital Innovation for Economic Growth: An Evaluation of the PAN-G Denbukit Program in Increasing Regional Original Revenue in Buleleng**

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### ***Abstract:***

*Local Original Income is the income obtained by a region from sources within its own territory which is collected based on regional regulations in accordance with applicable laws and regulations. The purpose of this study is to measure the extent to which the Pan-G Denbukit application can achieve its goals in increasing efficiency and ease of access to regional tax services. The evaluation is also intended to identify the positive impacts given to the community and efforts to improve weaknesses in the implementation of this application. This research method uses an evaluative approach, while data collection is carried out using an instrument in the form of a questionnaire with a semantic differential scale model. The results of this study indicate that the Pan-G Denbukit application is quite effective in increasing the efficiency of managing Local Original Income, and is worthy of continued use and further development in order to improve the quality of regional financial management as a whole.*

**Keywords:** *Public Services, Local Revenue; Economic Growth*

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## **1. Introduction**

Public service is an activity or series of activities in order to fulfill service needs in accordance with laws and regulations for every citizen and resident for goods or administrative service services provided by public service providers (Paputungan, Wisiastini, & Telagawati, 2023). There, the fulfillment of the implementation of the obligations and promises of the organizers to the community regarding quality, fast, easy, affordable and measurable services is tested (Aryandono, Heryanda, & Telagawathi, 2024). Law Number 25 of 2009 concerning Public Services regulates the principles of good governance which are very important to ensure the effectiveness and efficiency of government functions. Assessment of the quality of government can be reflected in the performance of service providers when providing good public services and always focusing on the interests of the community. Through optimal quality of public service, the community is able to provide feedback and direct

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evaluation of the effectiveness of the performance of government apparatus providing services.

Therefore, one of the important parameters for assessing the success of effective and efficient governance is to measure the level of public satisfaction with public services provided by the government (Adnyani, Sinarwati, & Yudiatmaja, 2023). The government always strives to ensure the fulfillment of the needs of its citizens while carrying out superior and prime quality public services, especially in terms of fulfilling the basic needs and rights of Indonesian citizens through the government system. Article 1 Paragraph 7 of Law Number 25 of 2009 concerning public services explains that service standards are benchmarks used as guidelines for the implementation of services and references for assessing the quality of services as obligations and promises of organizers to the community in the context of quality, fast, easy, affordable, and measurable services. The effectiveness of public services can be measured through the convenience provided to the community through a fast, accurate, efficient, and satisfying process.

The quality of service is not based on the perspective or perception of the service provider and/or service but rather on consumer perception and rules or provisions regarding service quality (Paputungan, Wisiastini, & Telagawati, 2023). Public service is a very vital factor for a significant contribution as an effort to improve the reputation of an agency that has a very close relationship with the community which is a comparison between expectations and facts about what has been provided by the agency (Adnyani, Sinarwati, & Yudiatmaja, 2023). The same applies to regional tax services as one aspect of service needed by the community. Taxes are currently the largest source of revenue in the State Budget (Yasa, Kesawa, & Dewi, 2020). Taxes are one source of income for the state, where these taxes are used by the government to finance national development and to improve the welfare of the community (Yasa, Kesawa, & Dewi, 2020).

Regional Original Income is income obtained by regions from sources within their own territory which is collected based on regional regulations in accordance with applicable laws and regulations (Pradiska & Prayudi, 2021). Regional Original Income based on Law Number 1 of 2022 is an accumulation of Tax Revenue Posts containing hotel tax, restaurant tax, entertainment tax, advertising tax, street lighting tax, parking tax, groundwater tax, non-metallic mineral and rock tax, land and building acquisition fees. The regional income sector plays a very important role, because through this sector it can be seen to what extent a region can finance government activities and regional development. Efforts to increase Regional Original Income are by maximizing the process of efficiency of very limited resources and equipment and making efforts to increase in terms of the effectiveness of collection by optimizing existing potential and always seeking and exploring new sources of income with the consideration of having potential, all of these things are possible so that taxes and levies can be taken (Pradiska & Prayudi, 2021). Based on this, an innovation is needed that can support public services in the field of taxation by prioritizing efficiency and effectiveness. Effectiveness is a fundamental element or

measurement in the process of achieving goals or targets previously set by the organization (Pradiska & Prayudi, 2021).

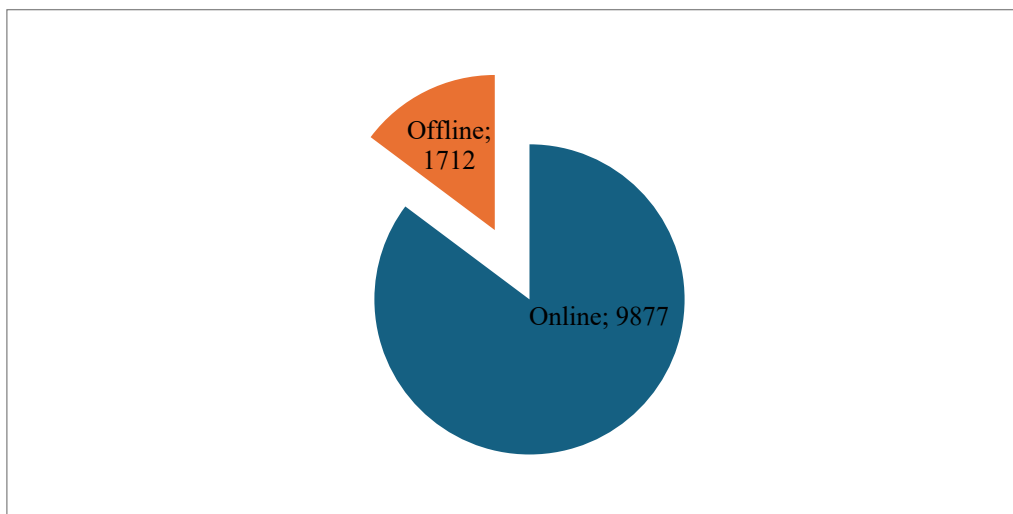
Based on the data on regional tax realization for the 2019-2023 period, it can be seen that the regional tax revenue of Buleleng Regency has begun to increase from year to year after experiencing the Covid-19 pandemic in 2019-2021, in general there has been an improvement in achieving regional tax targets over time. Although initially there was a shortfall in achieving the target, there was a positive trend that was seen in recent years, namely in 2023. Given the large source of state revenue from the tax sector, the government has taken various measures to secure the potential for state revenue from the tax sector (Yasa, Kesawa, & Dewi, 2020). Therefore, all forms of governance and development activities must be transparent and controlled comprehensively. This encourages many organizations including public sector organizations to innovate in providing services, providing benefits to the community, and providing them to the general public (Paputungan, Wisiastini, & Telagawati, 2023). In the era of rapid development of information technology today and in line with digital transformation efforts. The existence of information technology can help tax authorities in creating a more efficient and effective administration system with better services (Adnyani, Sinarwati, & Yudiatmaja, 2023).

Entering the era of the industrial revolution 4.0, an era where digital technology disruption is increasingly massive. Industry 4.0 or the fourth industrial revolution is a term generally used for the level of development of the technology industry. Focusing on digital technologies in this era, digital technologies and systems such as cloud computing, the internet of things, and artificial intelligence are used as tools that can help facilitate daily activities. Information technology has innovations that can help provide information widely (Yoga & Yasa, 2023). In the current era of rapid development of information technology and in line with digital transformation efforts (Adnyani, Sinarwati, & Yudiatmaja, 2023). In this era, people want all administration to be done quickly, effectively, and efficiently. That is why public service implementers are also required to be able to provide excellent service. This means that public participation has a major impact on the potential for innovation carried out by service providers and the demands of the community who want easier, cheaper, and faster public services, the government must make a public policy. Improving the quality of public services is an effort that must be patterned, sustainable and implemented by all levels of government officials (Paputungan, Wisiastini, & Telagawati, 2023).

Pan-G Denbukit is a regional tax application for Buleleng Regency that accommodates all types of regional tax services ranging from PBJT reporting, registration of BPHTB applications by PPAT, and PBB services. In addition, there is also the latest information regarding regional tax services and there are also complaint and complaint services for those who have criticism or suggestions regarding the implementation of regional tax services provided. This application began to be implemented on March 30, 2022 which coincided with the anniversary of the city of Singaraja. This application can be accessed via the

website [www.pangdenbukit.citigov.id](http://www.pangdenbukit.citigov.id) and can also be downloaded on the Playstore on Android and the AppStore on IOS. The Pan-G Denbukit application is a commitment of the Buleleng Regency government to create effective and efficient governance and can increase public satisfaction with the services provided. The success of the implementation of information technology is highly dependent on the acceptance by users as users of technology (Adnyani & Julianto, 2021). And understanding the characteristics of the target group is very important for the adoption of an innovation (Adnyani, Sinarwati, & Yudiatmaja, 2023).

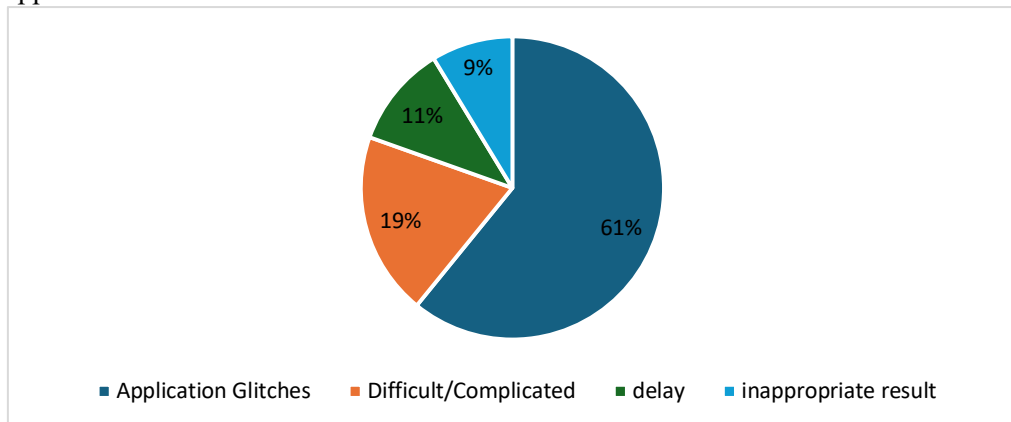
The services carried out by the Financial Management and Regional Revenue Agency of Buleleng Regency are almost entirely carried out through digital-based services, which shows that the Pan-G Denbukit application has been adapted and implemented well by the Financial Management and Regional Revenue Agency of Buleleng Regency. However, the fact is that the public or taxpayers are still found to visit the Financial Management and Regional Revenue Agency of Buleleng Regency directly to apply for offline services or come with physical files. Lack of socialization or information received by the public or even lack of access to the application and unstable networks and less easy to use may cause the public to prefer to visit the Financial Management and Regional Revenue Agency of Buleleng Regency directly. The following is a table of services carried out online and offline related to regional tax services by the Financial Management and Regional Revenue Agency of Buleleng Regency in 2024.



**Figure 1. Comparison of Online and Offline Regional Tax Services at the Financial Management and Regional Revenue Agency (BPKPD) of Buleleng Regency in 2024**

*Source: Internal Data of the Financial Management and Regional Revenue Agency of Buleleng Regency, 2024*

From the description of the service survey conducted online and offline, there is a discrepancy between the objectives and the conditions that occur in the use of the Pan-G Denbukit application where the existence of this digital regional tax service should be able to reduce community mobility because the purpose of this application is the ease of providing services anywhere and anytime, based on the data above it can be seen that there are still taxpayers who carry out services offline or come directly to the BPKPD office. In addition, there are many complaints submitted by the community or application users regarding the performance of the Pan-G Denbukit application.



**Figure 2. Types and Frequency of Complaints Reported by Users of the Pan-G Denbukit Application**

*Source: Complaint Data Collected by the Financial Management and Regional Revenue Agency of Buleleng Regency, 2024*

Based on the complaint data of Pan-G Denbukit application users, it can be seen from several complaints submitted by application users that application disruption is the main complaint, then difficulty in using it is also the main complaint which is likely caused by a lack of user knowledge or even less than optimal socialization from the government. Therefore, the urgency of this study is regarding the Evaluation of public policy to see the extent to which the program is running well, whether the objectives of implementing Pan-G Denbukit can be achieved or not, and to see the good impact on services to the community. Furthermore, the evaluation aims so that regional tax services through Pan-G Denbukit can operate more efficiently and provide convenience to the community in taking care of all regional tax matters by using digital technology to speed up the bureaucratic process and prevent complicated services and avoid mistakes that often occur in the application submission process at Pan-G Denbukit so that the hope in the future can provide better changes and have the greatest impact on Regional Original Income. The purpose of this study is to measure the extent to which the Pan-G Denbukit application can achieve its goals in increasing efficiency and ease of access to regional tax services. The evaluation is also intended to identify the positive impacts given to the community as well as efforts to improve weaknesses in the implementation of this application.

## **2. Theoretical Background**

### **Program Evaluation**

Program evaluation is a planned and systematic process that utilizes data aligned with reality to assess the level of success of a program being implemented or one that has already been completed. Evaluation plays a crucial role in determining the most appropriate alternatives in decision-making. It serves to provide critical information for managers and policymakers to improve program outcomes. In the context of the digital economy, evaluation models have increasingly incorporated intelligent computing approaches to assess regional innovation and development programs (Shan & Pan, 2022).

### **Public Policy**

Policy evaluation is an integral part of the policy process, serving as a means to analyze whether a policy or program has achieved its intended outcomes. In today's digital era, policy evaluation is also concerned with the broader implications of technological change on public welfare. As noted by Qi and Yang (2024), the digital economy contributes significantly to enhancing regional innovation capacity, highlighting the importance of policy evaluations that consider knowledge flow and digital infrastructure. Moreover, digital economic development introduces new variables for assessing the value and impact of public policies on social equity and innovation (Song, Hu, & Yang, 2023).

### **Local Original Revenue (PAD)**

Local Original Revenue (Pendapatan Asli Daerah/PAD) is a key indicator of a region's capacity to manage its own governance and finances independently. Sufficient financial autonomy enables regions to deliver services and pursue development initiatives more effectively. In the context of digital economic transformation, regions that successfully harness digital finance and innovation demonstrate stronger PAD growth and more resilient economic outcomes (Salas-Guerra, 2021). Furthermore, narrowing the income gap between urban and rural areas through digital development contributes to more balanced and inclusive revenue generation (Shang & Wang, 2023).

### **Public Service**

Public services, particularly in a digital era, are no longer confined to physical interactions between consumers and providers. They are increasingly mediated through digital platforms that aim to enhance accessibility, efficiency, and citizen satisfaction. The transformation of public service delivery has been greatly influenced by technological advancements and the adoption of digital systems. According to Song, Hu, and Yang (2023), the expansion of digital finance plays a crucial role in enabling high-quality economic and social development, which in turn elevates the standard of public services. Furthermore, regional innovation efficiency driven by digital tools leads to service improvements that are more responsive to public needs (Qi & Yang, 2024).

### 3. Methodology

This study uses an evaluative approach. Epistemologically, in data collection, an objective and subjective approach is used, because in addition to being guided by data that has been available in a document that has been compiled, it is also based on interviews with research subjects. In this study, the effectiveness of the program is analyzed by analyzing the role of each factor in accordance with the theory put forward by Bridgman & Davis, (2000). Measurements regarding public policy evaluation generally refer to four main indicators, namely: (1) input indicators, (2) process indicators, (3) output indicators and (4) outcome indicators. Quantitatively, the evaluation process is carried out by emphasizing the aspects of objectivity, reliability and validity, measurements are focused on data in the form of numbers and using T-Scores. For this reason, data collection is carried out using an instrument in the form of a questionnaire with a semantic differential scale model.

### 4. Empirical Findings/Result

An overview of the characteristics of the raw score distribution of each, along with descriptive statistics on the highest score, lowest score and standard deviation.

**Table 1. Descriptive Statistics**

| <b>Descriptive</b>    | <b>Input</b> | <b>Process</b> | <b>Ouput</b> | <b>Outcome</b> |
|-----------------------|--------------|----------------|--------------|----------------|
| <i>Mean</i>           | 31.29        | 24.20          | 37.58        | 44.11          |
| <i>Range</i>          | 20           | 15             | 21           | 31             |
| <i>Minimum</i>        | 15           | 13             | 21           | 18             |
| <i>Maximum</i>        | 35           | 28             | 42           | 49             |
| <i>Std. Deviation</i> | 4.438        | 3.834          | 4.822        | 5.622          |
| <i>Variance</i>       | 19.699       | 14.698         | 23.253       | 31.602         |
| <i>Sum</i>            | 4569         | 3533           | 5486         | 6440           |

Based on the table above, it can be explained that the input aspect of the data tendency is centered on a score of 31.29, this means that the average score obtained by all respondents is 31.29. The minimum and maximum values obtained are 15 and 35 with a difference or range of 20, the score deviation (standard deviation score) with an average of 4.438 with a variance value of 19.699. And the total value of the input aspect questionnaire is 31182.

For the process aspect, the data tendency is centered on a score of 24.20, this means that the average score obtained by all respondents is 24.20. The minimum and maximum values obtained are 13 and 28 with a range difference of 15, the score

deviation (standard deviation score) with an average of 3.834 with a variance value of 14.698. And the total value of the process aspect questionnaire is 3533.

For the output aspect, the data tendency is centered on a score of 37.58, this means that the average score obtained by all respondents is 37.58. The minimum and maximum values obtained are 21 and 42 with a difference or range of 21, the score deviation (standard deviation score) with an average of 4.822 with a variance value of 23.253. And the total value of the output aspect questionnaire is 5486.

For the outcome aspect, the data tends to be centered on a score of 44.11, this means that the average score obtained by all respondents is 44.11. The minimum and maximum values obtained are 18 and 49 with a range difference of 31, the score deviation (standard deviation score) with an average of 5.622 with a variance value of 31.602. And the total value of the process aspect questionnaire is 6440.

### **Perception of the Use of the Pan-G Denbukit Application Program in Efforts to Increase Local Original Income Reviewed from the Input Aspect**

Input indicators in this study focus on assessing whether supporting resources and basic materials are needed to implement the policy. These indicators can include human resources, money or other supporting infrastructure. To find out the perception of Pan-G Denbukit application users on the input aspect, it can be seen in the table.

**Table 2. Perception of the Use of the Pan-G Denbukit Application Program in Efforts to Increase Local Original Income Reviewed from the Input Aspect**

| Aspect  | Answer Score |      |      |      |       |       |       | Total Score | Average | Score |
|---------|--------------|------|------|------|-------|-------|-------|-------------|---------|-------|
|         | 1            | 2    | 3    | 4    | 5     | 6     | 7     |             |         |       |
| X1.1    | 0            | 1    | 2    | 4    | 8     | 27    | 58    | 918         | 6.29    | 89.82 |
| X1.2    | 0            | 0    | 1    | 5    | 12    | 32    | 49    | 903         | 6.18    | 88.36 |
| X1.3    | 0            | 1    | 2    | 5    | 13    | 30    | 49    | 890         | 6.10    | 87.08 |
| X1.4    | 0            | 0    | 1    | 5    | 11    | 32    | 51    | 913         | 6.25    | 89.33 |
| X1.5    | 0            | 0    | 1    | 5    | 7     | 32    | 55    | 918         | 6.29    | 89.82 |
| Average | 0.00         | 0.27 | 1.51 | 4.93 | 10.27 | 30.55 | 52.33 | 908.40      | 6.22    | 88.88 |

The perception of application users towards the use of the Pan-G Denbukit application based on the input aspect is 88.88 percent with an average value of 6.22, this value can be included in the "high" category. The highest level of perception is in 2 (two) aspects, namely related to the ease of filling in personal data and the appearance and layout of data input that is easy to understand with a value of 89.82 percent with an average of 6.29, this shows that the perception of application users towards the ease of inputting data into the Pan-G Denbukit application is very helpful in carrying out the tasks they usually do, as well as the appearance of the application that is easy to understand causes application users to easily adapt to the appearance of the application. Then the lowest level of perception is in the aspect of the functionality of the search option in the application with a value of 87.08 with an average of 6.10, with this value the perception of application users is still categorized as high towards the use of the Pan-G Denbukit application.

### Perception of the Use of the Pan-G Denbukit Application Program in Efforts to Increase Local Original Income Reviewed from the Process Aspect

Process indicators focus on assessing how a policy is transformed into direct service to the community. This indicator includes aspects of effectiveness and efficiency of the methods or methods used to implement certain public policies. To find out the perception of Pan-G Denbukit application users on the process aspect, see the table.

**Table 3. Perception of the Use of the Pan-G Denbukit Application Program in Efforts to Increase Local Original Income Reviewed from the Process Aspect**

| Aspect  | Answer Score |      |      |      |       |       |       | Total Score | Average | Score |
|---------|--------------|------|------|------|-------|-------|-------|-------------|---------|-------|
|         | 1            | 2    | 3    | 4    | 5     | 6     | 7     |             |         |       |
| X2.1    | 0            | 1    | 1    | 11   | 16    | 36    | 35    | 857         | 5.87    | 83.86 |
| X2.2    | 0            | 0    | 1    | 9    | 11    | 36    | 44    | 890         | 6.10    | 87.08 |
| X2.3    | 0            | 0    | 1    | 9    | 14    | 33    | 44    | 885         | 6.06    | 86.59 |
| X2.4    | 0            | 1    | 3    | 7    | 14    | 27    | 48    | 879         | 6.02    | 86.01 |
| Average | 0.00         | 0.51 | 1.37 | 8.90 | 13.70 | 32.88 | 42.64 | 877.75      | 6.01    | 85.89 |

The perception of application users towards the use of the Pan-G Denbukit application based on the process aspect is 85.89 percent with an average value of 6.01, this value can be included in the "high" category. The highest level of perception is in the aspect of the navigation process between features in the application (eg previous, next, etc. buttons) with a perception value of 87.08 percent with an average of 6.10, this shows that with clear navigation it can make it easier for Pan-G Denbukit application users to interact within the application so that it can increase effectiveness and efficiency in completing work. Then the lowest value in user perception from the input aspect with a value of 83.86 percent with an average of 5.87 is the speed of the application in running the main process, in this case there is a tendency for poor application stability which causes the application speed to be less than optimal in processing data.

### Perception of Evaluation of the Use of the Pan-G Denbukit Application Program in Efforts to Increase Local Original Income Reviewed from the Output Aspect

Output indicators focus the assessment on the results or products that can be produced from the public policy system or process. These outcome indicators include how many people have successfully followed a particular program or how satisfied users of a policy or application are. To find out the perception of Pan-G Denbukit application users on the output aspect, see the table.

**Table 4. Perception of Evaluation of the Use of the Pan-G Denbukit Application Program in Efforts to Increase Local Original Income Reviewed from the Output Aspect**

| Aspect | Answer Score |   |   |   |    |    |    | Total Score | Average | Score |
|--------|--------------|---|---|---|----|----|----|-------------|---------|-------|
|        | 1            | 2 | 3 | 4 | 5  | 6  | 7  |             |         |       |
| X3.1   | 0            | 0 | 0 | 5 | 11 | 33 | 51 | 915         | 6.27    | 89.53 |
| X3.2   | 0            | 0 | 1 | 3 | 7  | 28 | 61 | 936.00      | 6.41    | 91.59 |
| X3.3   | 0            | 1 | 1 | 5 | 8  | 28 | 58 | 919.00      | 6.29    | 89.92 |

|         |      |      |      |      |      |       |       |        |      |       |
|---------|------|------|------|------|------|-------|-------|--------|------|-------|
| X3.4    | 0    | 0    | 1    | 4    | 8    | 34    | 54    | 923.00 | 6.32 | 90.31 |
| X3.5    | 5    | 2    | 1    | 6    | 8    | 32    | 46    | 850.00 | 5.82 | 83.17 |
| X3.6    | 0    | 0    | 1    | 3    | 12   | 37    | 47    | 909.00 | 6.23 | 88.94 |
| Average | 0.83 | 0.46 | 1.03 | 4.22 | 8.68 | 31.85 | 52.85 | 908.67 | 6.22 | 88.91 |

The perception of application users towards the use of the Pan-G Denbukit application based on the output aspect is 88.91 percent with an average value of 6.22, this value can be included in the "high" category. The highest level of perception is in the aspect of the quality of the display of product results (eg SSPD BPHTB, SPTPD, SPPT, etc.) with a value of 91.59 percent with an average of 6.41, this indicates that the products received by Pan-G Denbukit application users have a quality that is in accordance with the expectations and needs of application users so that there is a sense of user satisfaction in using the Pan-G Denbukit application. Then the lowest perception value is in the aspect of the diversity of types of output produced by the Pan-G Denbukit application with a value of 83.17 percent with an average of 5.82, this allows for a tendency for the output results produced to be less varied, for example when submitting a BPHTB application and a BPHTB reduction letter must go through a different process so that application users must register files 2 times.

#### **Perception of Evaluation of the Use of the Pan-G Denbukit Application Program in Efforts to Increase Local Original Income Reviewed from the Aspect of Outcomes**

The outcomes indicator focuses on the question of the impact received by the wider community or parties affected by the policy. In this aspect, the main objective is how big the impact is caused by this application, whether there are negative impacts and how big the positive impacts are. To find out the perception of Pan-G Denbukit application users on the outcome aspect, see the table.

**Table 5. Perception of Evaluation of the Use of the Pan-G Denbukit Application Program in Efforts to Increase Local Original Income Reviewed from the Aspect of Outcomes**

| Aspect  | Answer Score |      |      |      |       |       |       | Total Score | Average | Score |
|---------|--------------|------|------|------|-------|-------|-------|-------------|---------|-------|
|         | 1            | 2    | 3    | 4    | 5     | 6     | 7     |             |         |       |
| X4.1    | 0            | 1    | 1    | 3    | 9     | 34    | 53    | 920.00      | 6.30    | 90.02 |
| X4.2    | 0            | 1    | 0    | 5    | 10    | 31    | 54    | 918.00      | 6.29    | 89.82 |
| X4.3    | 0            | 1    | 0    | 3    | 12    | 31    | 53    | 918.00      | 6.29    | 89.82 |
| X4.4    | 0            | 0    | 2    | 3    | 10    | 35    | 49    | 908.00      | 6.22    | 88.85 |
| X4.5    | 0            | 0    | 1    | 3    | 14    | 29    | 53    | 914.00      | 6.26    | 89.43 |
| X4.6    | 0            | 0    | 1    | 3    | 13    | 36    | 48    | 911.00      | 6.24    | 89.14 |
| X4.7    | 0            | 1    | 0    | 3    | 13    | 32    | 51    | 912.00      | 6.25    | 89.24 |
| Average | 0.00         | 0.39 | 0.59 | 3.33 | 11.55 | 32.49 | 51.66 | 914.43      | 6.26    | 89.47 |

The perception of application users towards the use of the Pan-G Denbukit application based on the outcome aspect is 89.47 percent with an average value of 6.26, this value can be included in the "high" category. The highest level of perception is in the aspect of the Application helping to achieve user goals or needs with a value of 90.02 percent

with an average of 6.30, which indicates that application users feel that the Pan-G Denbukit application can help achieve user tax service goals or needs. Then the lowest level of perception is in the aspect of satisfaction felt after using the application with a value of 88.85 percent with an average of 6.22, although getting a high value, in the outcome aspect the level of application user satisfaction still needs to be considered again, considering that satisfaction is the overall end result of using the application.

### Evaluation Analysis of the Use of the Pan-G Denbukit Application Program

To answer the research problem, the data from each variable that has been processed is then analyzed descriptively. To find the level of effectiveness of the Pan-G Denbukit application program, an analysis of the input, process, output and outcome variables is carried out through Glickman quadrant analysis. The quality of the score on each variable is positive and negative which is calculated using T-score. The calculation steps start from changing the raw score of each variable (Context, Input, Process and product) into a Z-score. The Z-score of each variable is then changed to a T score with the formula:  $T \text{ score} = 10 Z + 50$ . Finally, the T score value of each variable is consulted with the criteria to determine whether the T score value of each variable calculated is included in the Positive (+) or Negative (-) category. To find out the results of each variable, it is calculated by adding up the positive scores (+) and negative scores (-). If the number of positive scores is more or equal to the negative score, the result is positive (+). If the number of positive scores is less than the negative score, the result is negative (-). The following table summarizes the results of the T-score calculations from this study.

**Table 6. Evaluation Analysis of the Use of the Pan-G Denbukit Application Program**

| Component | Frequency  |    | Percentage |        | Category | Quadrant      |
|-----------|------------|----|------------|--------|----------|---------------|
|           | Percentage |    | F+ Reduced |        |          |               |
|           | F-         | F+ | F-         | F+ (%) |          |               |
| Input     | 65         | 81 | 16         |        | +        | Quadrant<br>2 |
| Process   | 74         | 72 | -2         |        | -        |               |
| Output    | 69         | 77 | 8          |        | +        |               |
| Outcome   | 60         | 86 | 26         |        | +        |               |

Based on the data in the table above, it means that the Input variable has a T-score value of 16 so that the result is positive (+), the Process variable has a T-score value of -2 so that the result is negative (-), the Output variable has a T-score value of 8 so that the result is positive (+), and the Outcome variable has a T-score value of 26 so that the result is positive (+), if formulated in the Glickman quadrant formula = ++-+. For more details, it is shown in the quadrant as follows:

| II |   |    |    | I |   |    |    |
|----|---|----|----|---|---|----|----|
| I  | P | Op | Oc | I | P | Op | Oc |
| +  | + | +  | -  | + | + | +  | +  |
| +  | + | -  | +  |   |   |    |    |

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| (Quite Effective)                                                                                                                                                                                                                                                                                                                               |          |          |          |          |   |   |    |    |   |   |   |   |               |   |   |   |                                                                                                                                                                                                                                                                                                                                                       |     |   |   |                   |   |   |    |                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                  |  |  |  |
| <table><tr><td colspan="4">IV</td></tr><tr><td>I</td><td>P</td><td>Op</td><td>Oc</td></tr><tr><td>-</td><td>-</td><td>-</td><td>-</td></tr><tr><td colspan="4">(Ineffective)</td></tr></table>                                                                                                                                                  | IV       |          |          |          | I | P | Op | Oc | - | - | - | - | (Ineffective) |   |   |   | <table><tr><td colspan="4">III</td></tr><tr><td>I</td><td>P</td><td>Op</td><td>Oc</td></tr><tr><td>+</td><td>-</td><td>-</td><td>-</td></tr><tr><td>-</td><td>+</td><td>-</td><td>-</td></tr><tr><td>-</td><td>-</td><td>+</td><td>-</td></tr><tr><td>-</td><td>-</td><td>-</td><td>+</td></tr><tr><td colspan="4">(Less Effective)</td></tr></table> | III |   |   |                   | I | P | Op | Oc               | + | - | - | - | - | + | - | - | - | - | + | - | - | - | - | + | (Less Effective) |  |  |  |
| IV                                                                                                                                                                                                                                                                                                                                              |          |          |          |          |   |   |    |    |   |   |   |   |               |   |   |   |                                                                                                                                                                                                                                                                                                                                                       |     |   |   |                   |   |   |    |                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                  |  |  |  |
| I                                                                                                                                                                                                                                                                                                                                               | P        | Op       | Oc       |          |   |   |    |    |   |   |   |   |               |   |   |   |                                                                                                                                                                                                                                                                                                                                                       |     |   |   |                   |   |   |    |                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                  |  |  |  |
| -                                                                                                                                                                                                                                                                                                                                               | -        | -        | -        |          |   |   |    |    |   |   |   |   |               |   |   |   |                                                                                                                                                                                                                                                                                                                                                       |     |   |   |                   |   |   |    |                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                  |  |  |  |
| (Ineffective)                                                                                                                                                                                                                                                                                                                                   |          |          |          |          |   |   |    |    |   |   |   |   |               |   |   |   |                                                                                                                                                                                                                                                                                                                                                       |     |   |   |                   |   |   |    |                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                  |  |  |  |
| III                                                                                                                                                                                                                                                                                                                                             |          |          |          |          |   |   |    |    |   |   |   |   |               |   |   |   |                                                                                                                                                                                                                                                                                                                                                       |     |   |   |                   |   |   |    |                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                  |  |  |  |
| I                                                                                                                                                                                                                                                                                                                                               | P        | Op       | Oc       |          |   |   |    |    |   |   |   |   |               |   |   |   |                                                                                                                                                                                                                                                                                                                                                       |     |   |   |                   |   |   |    |                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                  |  |  |  |
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| (Less Effective)                                                                                                                                                                                                                                                                                                                                |          |          |          |          |   |   |    |    |   |   |   |   |               |   |   |   |                                                                                                                                                                                                                                                                                                                                                       |     |   |   |                   |   |   |    |                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                  |  |  |  |

Figure 1. Glickman quadrant

Therefore, the effectiveness of using the Pan-G Denbukit Application Program is included in "Quadrant 2" with the category "Quite Effective".

## 5. Discussion

### Evaluation Results of the Use of the PAN-G Denbukit Application Program in Efforts to Increase Regional Original Income Reviewed from the Input Aspect

The Pan-G Denbukit application is a technology solution designed to help increase Regional Original Income by accelerating and simplifying the process of managing data related to regional taxes and levies. One important aspect that needs to be considered in evaluating the use of this application is the input aspect which based on the analysis results shows that this aspect is in the "Positive" or "Effective" range, which includes ease of filling in personal data, availability of instructions, functional search options, availability of various display input formats, and easy-to-understand data input layouts. The following is a discussion of these aspects, namely Ease of Filling in Personal Data, Availability of Instructions, Functionality of Search Options, Availability of Various Input Formats and Displays and Easy-to-Understand Data Input Layouts.

Evaluation of input aims to identify and examine system capabilities, alternative program strategies, and design procedures where the strategy will be implemented. In the implementation of information services, evaluation of input can be in the form of the number of human resources, support for facilities and infrastructure. The success of an institution is also greatly influenced by the condition of existing facilities and infrastructure and how to manage and utilize them (Cheng & Huang, 2022). This is in accordance with the opinion of Li (2024) where the government must always strive to create programs based on social problems that occur, in this case public service programs.

**Evaluation Results of the Use of the Pan-G Denbukit Application Program in Efforts to Increase Regional Original Income Reviewed from the Process Aspect**

The Pan-G Denbukit application is one of the systems designed to support the management and monitoring of Regional Original Income in order to improve the efficiency and transparency of regional fund collection. Evaluation of the use of this application is seen from several important aspects related to system performance, especially from the process side, where based on the results of the analysis, the results of the evaluation of the use of the Pan-G Denbukit application program in an effort to increase Regional Original Income reviewed from the Process aspect, can be concluded in the range of "Ineffective" or "Negative". Process aspects include the speed of the application in running the main process, the navigation process between features, the availability of clear feedback, and error notifications.

The results of the study indicate that the implementation of the Pan-G Denbukit Application program in an Effort to Increase Regional Original Income is considered effective and requires coordination and cooperation between parties and facilities and infrastructure for the smooth running of the program. This is in accordance with the opinion of Mei & Cheng (2024) if the evaluation process is actually used to be able to assess and provide early warnings that can spur the goodness of the program in the future.

**Evaluation Results of the Use of the PAN-G Denbukit Application Program in Efforts to Increase Regional Original Income Reviewed from the Output Aspect**

The Pan-G Denbukit application is expected to make a major contribution to increasing Local Revenue by facilitating the management, monitoring, and reporting of relevant data. Evaluation of the output results based on the analysis results can be concluded in the range of "Effective" or "Positive". This application is viewed from several important aspects, including the suitability of the results received, the quality of the display of the results, readability and ease of understanding the results, ease of exporting or saving, the diversity of types of output that can be produced, and the suitability of the information displayed. The following is an in-depth discussion of these aspects, namely the Suitability of the Results Received, the Quality of the Display of Results, Readability and Ease of Understanding Results, Ease of Exporting or Saving, the Diversity of Types of Output that Can Be Produced and the Suitability of the Information Displayed.

The output or results provided by the use of the Pan-G denbukit application are in accordance with the needs desired by the user. According to Niranga et al., (2022) that the effectiveness of a program can be measured by looking at the achievement of the objectives of the application program, this can be seen from the quality of the display of the product results provided, the suitability of the results with the input data and the ease of storing the resulting product to be archived.

**Evaluation Results of the Use of the Pan-G Denbukit Application Program in Efforts to Increase Regional Original Income Reviewed from the Outcomes Aspect**

The Pan-G Denbukit application is designed to support the management and monitoring of Regional Original Income, in order to simplify the administration process and increase the efficiency of revenue management. Evaluation of the results of using this application from the outcomes aspect focuses on the extent to which the application helps achieve the desired goals, based on the results of the analysis, the results of the evaluation of the use of the Pan-G Denbukit application program in an effort to increase Regional Original Income reviewed from the Outcomes aspect, can be concluded in the range of "Effective" or "Positive". Some of the main aspects that need to be evaluated are the extent to which this application helps achieve goals, expected results, effectiveness in supporting document registration, user satisfaction levels, and their impact on time and quality of work results. The following is an in-depth discussion of these aspects, namely the Application Helps Achieve Goals, the Application Provides Expected Results, the Application is Effective in Supporting Document Registration, Satisfaction Felt After Using the Application, Use of the Application Reduces Time, the Application Improves the Quality of Work Results and the Application Ensures Data Storage.

The results of the study indicate that users of the Pan-G Denbukit application feel that it can reduce the time required to complete the registration of application documents, and is effective in supporting the registration of submitted application documents. With the Pan-G Denbukit application, it will be able to change the habits of application users so that they no longer provide offline services or come directly to government agencies. In general, evaluation at the outcomes stage can be used to measure the level of awareness, changes in attitudes, and changes in behavior (Qi & Yang 2024). An evaluation is said to be good if it has criteria. The criteria for a good evaluation according to Shan & Pan (2022) are "validity, Objectivity, Practicability".

## **6. Conclusions**

Based on the results of the research conducted on the Pan-G Denbukit application program, it can be concluded that this application shows a fairly good level of effectiveness in supporting the increase in Regional Original Income (PAD). The analysis was carried out through the evaluation of input, process, output, and outcome variables calculated using T-scores and categorized through the Glickman quadrant. Based on the Glickman quadrant analysis, the overall results show that the use of the Pan-G Denbukit application is included in "Quadrant 2" with the category "Quite Effective". This means that this application has been quite successful in meeting the expected objectives in increasing PAD, providing the desired results, and having a fairly positive influence on the process of managing and monitoring regional income as a whole, but there are still a few notes on the process aspect to maximize the use of this Pan-G Denbukit application. Thus, it can be concluded that the Pan-G Denbukit application is quite effective in increasing the efficiency of managing Regional Original Income, and is quite feasible to continue to be used and developed further in order to improve the quality of regional financial management as a whole.

## **References:**

- Adnyani, K. W., & Julianto, I. P. (2021). Pengaruh Sistem Pengendalian Internal, GCG, dan Keberadaan Awig-Awig terhadap Kinerja Lembaga Perkreditan Desa dengan Tri Hita Karana sebagai Variabel Moderasi (Studi Empiris pada LPD di Kecamatan Mendoyo, Kabupaten Jembrana). *JIMAT (Jurnal Ilmiah Mahasiswa Akuntansi) Undiksha*, 12(2), 413–424.
- Adnyani, N. M. S., Sinarwati, N. K., & Yudiatmaja, F. (2023). The Effect of Digital Literacy and Innovation Resistance to Use Digital Payment for Taxpayers Enhance Capabilities and Innovation Performance. *Jurnal Manajemen, Strategi Bisnis Dan Kewirausahaan*, 17(1), 83–95.
- Aryandono, K. K. T., Heryanda, K. K., & Telagawathi, N. L. W. S. (2024). Analisis Penerapan Prinsip Good Governance pada Pelayanan Publik di Badan Kesatuan Bangsa dan Politik Kabupaten Buleleng. *JMBI UNSRAT (Jurnal Ilmiah Manajemen Bisnis dan Inovasi Universitas Sam Ratulangi)*, 11(1).
- Bu, Y., Yu, X., & Li, H. (2024). Digital Economy and Regional Innovation: Unveiling the Spatial Dynamics and Human Capital Influence in China. *Digital Policy, Regulation and Governance*, 26(5), 583–599. <https://doi.org/10.1108/DPRG-12-2023-0178>
- Chen, Z., & Sun, Y. (2022). Digital Economy, R&D Innovation and Regional Integration: A Study Based on Three Chinese Urban Agglomerations. *International Journal of Economics, Finance and Management Sciences*, 10(3), 83–91. <https://doi.org/10.11648/j.ijefm.20221003.11>
- Cheng, C., & Huang, H. (2022). Evaluation and Analysis of Regional Economic Growth Factors in Digital Economy Based on the Deep Neural Network. *Mathematical Problems in Engineering*, 2022, 1121886. <https://doi.org/10.1155/2022/1121886>
- Li, Y. (2024). Digital Economy and the Urban-Rural Income Gap: Theoretical Mechanism and Empirical Study. In *Proceedings of the 5th International Conference on Economic Management and Model Engineering (ICEMME 2023)*. EAI. <https://doi.org/10.4108/eai.17-11-2023.2342717>
- Liu, D., Guang, L., & Li, X. (2022). Research on the Impact of Digital Finance on the Improvement of Regional Innovation Capabilities: An Empirical Test Based on the Yangtze River Delta Urban Agglomeration. In *Proceedings of the International Conference on Information Economy, Data Modeling and Cloud Computing (ICIDC 2022)*. EAI. <https://doi.org/10.4108/eai.17-6-2022.2322688>
- Mei, P., & Cheng, X. (2024). Research on the Impact of Digital Financial Inclusion on Regional Economic Growth. In *Proceedings of the 4th International Conference on Economic Management and Big Data Applications (ICEMBDA 2023)*. EAI. <https://doi.org/10.4108/eai.27-10-2023.2342020>
- Niranga, M., Sedera, D., & Sorwar, G. (2022). Does IT Matter (Now)? A Global Panel Data Analysis of 7 Regions from 2018–2020 on Digitalization and Its Impact on Economic Growth. *arXiv preprint*. <https://arxiv.org/abs/2212.03071>
- Paputungan, M., Wisiastini, N. M. A., & Telagawati, N. L. W. S. (2023). Analisis Manajemen Pelayanan Terpadu Satu Pintu (PTSP) dalam Meningkatkan

- Kualitas Pelayanan. Publik: *Jurnal Manajemen Sumber Daya Manusia, Administrasi dan Pelayanan Publik*, 10(2), 446–456.
- Pradiska, K. I., & Prayudi, M. A. (2021). Analisis efektivitas kebijakan pemerintah daerah Kabupaten Buleleng terkait pemungutan PBB-P2 pada masa pandemi Covid-19. *JIMAT (Jurnal Ilmiah Mahasiswa Akuntansi) Undiksha*, 12(3), 920–931.
- Qi, X., & Yang, C. (2024). The Digital Economy Drives the Improvement of Regional Innovation Capacity: Intermediary Test Based on “Three-stage” Knowledge Flow. In *Proceedings of the 4th International Conference on Economic Development and Business Culture (ICEDBC 2024)*. Atlantis Press. [https://doi.org/10.2991/978-94-6463-538-6\\_22](https://doi.org/10.2991/978-94-6463-538-6_22)
- Salas-Guerra, C. R. (2021). Impact of Digital Economic Activity on Regional Economic Growth: A Case Study from Northern Minas Gerais between 2009 to 2018. *arXiv preprint*. <https://arxiv.org/abs/2105.02849>
- Shang, C., & Wang, Y. (2023). An Empirical Study on the Impact of Digital Economy on the Income Gap between Urban and Rural Areas. In *Proceedings of the 2023 4th International Conference on Big Data and Social Sciences (ICBDSS 2023)*. Atlantis Press. [https://doi.org/10.2991/978-94-6463-276-7\\_9](https://doi.org/10.2991/978-94-6463-276-7_9)
- Shan, S., & Pan, J. (2022). The Effectiveness Evaluation Method of Regional Digital Economy Innovation Model Based on Intelligent Computing. *Mathematical Problems in Engineering*, 2022, 8136437. <https://doi.org/10.1155/2022/8136437>
- Song, P., Hu, Y., & Yang, Q. (2023). Study on the Influence of Digital Finance on High-quality Economic Development: Based on the Mediation Effect of Regional Innovation Efficiency. In *Proceedings of the 3rd International Conference on Internet Finance and Digital Economy (ICIFDE 2023)* (pp. 27–35). Atlantis Press. [https://doi.org/10.2991/978-94-6463-270-5\\_4](https://doi.org/10.2991/978-94-6463-270-5_4)
- Xu, J., & Li, W. (2023). Study on the Impact of Digital Economy on Innovation Output Based on Dynamic Panel Data Model. *European Journal of Innovation Management, ahead-of-print*. <https://doi.org/10.1108/EJIM-03-2023-0193>
- Yasa, I. N. P., Kesawa, A. P., & Dewi, N. M. P. (2020). Kepatuhan Memediasi Pengaruh Kesadaran, Reformasi dan Persepsi atas Sanksi terhadap Penerimaan Pajak Daerah. *JIA (Jurnal Ilmiah Akuntansi)*, 5(1), 106–129.
- Zheng, R., & Huang, H. (2024). An Empirical Study on the Digital Economy, Fiscal Policy, and Regional Sustainable Development—Based on Data from Less Developed Regions in China. *Sustainability*, 16(22), 10057. <https://doi.org/10.3390/su162210057>