



Towards a sustainable blue economy: An evaluation of Indonesia's post-production non-tax state revenue policy using Dunn's criteria

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ABSTRACT

Background: The Government of Indonesia has regulated the Non-Tax State Revenue Policy in relation to the vision of developing a blue economy-based capture fisheries sector. The policy aims to make a substantial transformation in the fiscal policy landscape. This study attempts to evaluate the non-tax state revenue Post-Production policy using Dunn's three policy evaluation criteria. **Methods:** In relation to these objectives, the researcher uses a *post-positivist* approach to obtain research results. Data collection was conducted through qualitative methods with several stages, namely in-depth interviews, field observations, and literature studies. **Findings:** The results show that the Post-Production non-tax state revenue policy can provide benefits for payers and tax authorities because non-tax state revenue is levied on the weight of real catches, not on estimates as regulated by Pre-Production non-tax state revenue. However, the non-tax state revenue policy does not meet Dunn's three criteria related to effectiveness, efficiency, and fairness. Based on the efficiency criterion, the policy is burdensome for payers and tax authorities. non-tax state revenue policy when viewed from the criteria of justice has fulfilled the *benefit receive principle*. However, the tariff index has not fulfilled the principle of nondiscrimination due to the differentiation of tariffs between vessel sizes which is no longer relevant. **Conclusion:** The government needs to further evaluate the policy of the Non-Tax State Revenue Policy for Collection of Fishery Products (non-tax state revenue) in order to support the development of the capture fisheries sector based on the *blue economy*, at least the Post-Production non-tax state revenue policy must fulfill the three Dunn criteria. **Novelty/Originality of this article:** This research suggests the adoption of technology in each port that can meet the criteria of policy effectiveness and efficiency. In addition, it is necessary to reformulate the tariff index to meet the criteria of fairness.

KEYWORDS: policy evaluation; non-tax state revenue; post-production; capture fisheries; blue economy.

1. Introduction

Indonesia, as the largest archipelago in the world, has enormous marine biodiversity with fisheries resources spanning 6,159,032 km (Dewi et al., 2020). Considering the importance of marine resources for the lives of Indonesian people, the utilization of the sea and all the resources in it must be maximized and sustainable. This means that marine potential cannot only be seen from the economic side but must also be considered for its sustainability (Napitulu et al., 2022). This is important because a healthy ocean is at the core

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of human well-being, a healthy planet and a prosperous economy (OECD, 2021). Various efforts to balance the exploitation and conservation of marine resources, which have not been maximized, have led to the emergence of an innovative and new concept called the blue economy. Blue economy, first proposed by Pauli (2010), is a concept that seeks to balance the economic and ecological aspects of marine resource management. The blue economy concept seeks to promote economic growth, social engagement and improved livelihoods, while ensuring the sustainability of the marine environment and coastal areas (World Bank & United Nations, 2017). In simple terms, That 3 unified pillars of the blue economy consisting of economic, environmental, and social sustainability



Fig. 1. Blue economy pillars, concepts, tools and opportunities

This means that the blue economy concept not only emphasizes economic sustainability, but also environmental and social sustainability together. The blue economy concept is not simple because it is part of a macroeconomic concept that involves every aspect of national and global governance, economic development, environmental protection and sustainability and international communication (Wenhai et al., 2019). The ocean and the blue economy, as part of Sustainable Development Goal 14 (SDG 14), are critical in addressing the triple planetary crisis (UNDP, 2022). With its various advantages, blue economy-based development has become the focus of countries around the world. Countries such as Australia, South Korea and the People's Republics of China (PRC) have successfully capitalized on the vast opportunities of the blue economy niche. Its average contribution has reached 4.3%-9% of their total GDP (Novaglio et al., 2022; Park & Kildow, 2014; Xuemei et al., 2021). In Indonesia, the blue economy is an elaboration of the mandate of Indonesia's National Medium-Term Development Plan (RPJMN) 2020-2024, which emphasizes the urgency of good ocean management to achieve the sustainable development goals agenda

In line with this, the Ministry of Maritime Affairs and Fisheries of the Republic of Indonesia as the ministry in charge of the marine and fisheries sector formed the Policy Direction for the Development of the Marine and Fisheries Sector 2021-2024 Based on Blue

Economy with 5 policy pillars. One of the pillars is regulated in relation to the Non-Tax State Revenue policy which is one of the instruments to support the development of blue economy-based capture fisheries in Indonesia. The legal construction of Law of the Republic of Indonesia Number 9 of 2018 concerning Non-Tax State Revenue, essentially places non-tax state revenue as a supporting factor for the blue economy in Indonesia. This is because in Article 2 of the Law, the objectives of non-tax state revenue regulation are in line with the principles of economic, environmentally and socially sustainable utilization of marine resources. non-tax state revenue policy not only acts as a budget air but is also regulated in terms of improving people's welfare, increasing economic growth, improving income distribution, and preserving the environment for intergenerational sustainability (Eide, 2009).

Responding to the direction of the development policy of the marine and fisheries sector based on the blue economy and the mandate of the non-tax state revenue Law, through Government Regulation of the Republic of Indonesia Number 85 of 2021 concerning Types and Tariffs on Types of Non-Tax State Revenue Applicable to the Ministry of Maritime Affairs and Fisheries, one of which regulates the non-tax state revenue policy for fishery product levies (PHP) imposed based on post-production collection methods (hereinafter referred to as Post-Production non-tax state revenue). This policy shifts the point of collection of non-tax state revenue PHP, which in the previous regulation was at the time of applying for a sailing license (hereinafter referred to as Pre-Production non-tax state revenue), to after the landing of fishery products (post-production). In essence, this shift in the collection point is a substantial policy transformation so that this policy needs to be evaluated to ensure that the existing changes are in accordance with the conceptual and procedural non-tax state revenue and have a better impact on the development of the blue economy-based capture fisheries sector in Indonesia. The urgency to evaluate this policy is also supported by various information and data that show indications of problems related to the non-tax state revenue post-production policy.

According to the Kompas report, the change from pre-production non-tax state revenue to post-production non-tax state revenue has caused fishermen to be unable to cover their operational costs. In fact, due to the change in policy, fishermen are hostile to the port authority where fish are landed as happened in Ternate, North Maluku. Then the condition of marine resources in Indonesia still encounters various problems. Since its implementation from January 1, 2023, the Post-Production one, one of which is intended to help conserve marine resources, has not been able to overcome the phenomenon of Illegal, Unreported, and Unregulated Fishing (IUUF). Based on the IUU Fishing Risk Index report in December 2023, Indonesia ranked 6th worst out of 152 countries (Global Initiative Against Transnational Organized Crime, 2023). This ranking even decreased by 14 ranks from 2021 when the Non-Tax State Revenue Pre-Production policy was still being implemented.

In addition, Indonesia, based on the Indonesia Blue Economy Index (IBEI) framework, still has an uneven IBEI value. Based on the IBEI map of provinces in Indonesia in 2023, the highest IBEI value is 80.86% which is far from the lowest IBEI value of only 11.47%. In addition, non-tax state revenue, which should be able to contribute to increasing state revenues to be managed for the greatest benefit of fishermen and the public, instead experienced a decrease in realization in the first year of implementing the Post-Production non-tax state revenue policy. The trend of non-tax state revenue realization is illustrated in the following table.

Table 1. Realization of non-tax state revenue from fisheries levies

No.	Year	Realization non-tax state revenue
1	2019	IDR 521,800,000,000
2	2020	IDR 600,400,000,000
3	2021	IDR 708,100,000,000
4	2022	IDR 1,192,000,000,000
5	2023	IDR 636,890,000,000

It can be seen in the table above that the realization of non-tax state revenue in the first year of the implementation of Post-Production non-tax state revenue decreased dramatically compared to the previous year. In line with this, this paper is devoted to determining the effectiveness, efficiency, and fairness of the Post-Production non-tax state revenue policy, especially in relation to supporting the development of the blue economy-based capture fisheries sector in Indonesia (Silverwood-Cope, & Ling, 2021). Based on the previous explanation, the author formulates the following research objectives. First, to evaluate the Post-Production Non-Tax State Revenue policy in supporting the development of the blue economy-based capture fisheries sector in Indonesia in terms of Dunn's (2018) evaluation criteria type of effectiveness. Second, evaluating the Post-Production Non-Tax State Revenue policy in supporting the development of the blue economy-based capture fisheries sector in Indonesia in terms of Dunn's (2018) evaluation criteria of efficiency type. Third, evaluating the post-production non-tax state revenue policy in supporting the development of the blue economy-based capture fisheries sector in Indonesia in terms of Dunn's (2018) evaluation criteria of the type of justice.

2. Methods

This research uses a quantitative approach with a postpositivist paradigm (philosophical worldview). This is in accordance with the research topic of researchers who want to conduct research related to the evaluation of post-production non-tax state revenue policy with related theories in relation to supporting the development of the Blue Economy concept capture fisheries sector in Indonesia. Furthermore, Creswell & Creswell (2018) explain that the knowledge developed from the postpositivist paradigm is based on careful observation and measurement of objective realities that exist in the world. Therefore, it is important for researchers to be able to perform qualitative data collection techniques.

The analysis model used is qualitative analysis with a deductive mindset. This model is an approach that aims to develop or confirm a theory that starts with abstract concepts and theoretical relationships and moves to more concrete empirical evidence (Neuman, 2014). In this study, researchers departed from the government's initiation in developing the blue economy concept and continued with a discussion related to the evaluation of non-tax state revenue as one of the indicators that can support its implementation more concretely. Based on data collection techniques, this research is included in qualitative research with the support of observation and quantitative data. Neuman (2014) defines qualitative research as research that presents data in words or visuals. In this study, researchers will present data using words and visuals. The following are the data collection techniques used in this research are literature study and field study. In this study, researchers will conduct field studies in the form of in-depth interviews that refer to interview guidelines and direct observation of the implementation of Post-Production non-tax state revenue at one of the ports in Indonesia.

Then, this research uses qualitative data analysis techniques. According to Neuman (2014), there are 2 stages in qualitative data analysis techniques, namely 1) coding and 2) memo-ing. In the first stage, researchers will group various raw data into conceptual categories. This will eventually form a theme and concept. In the second stage, researchers will record, describe, and explain the concepts that have been obtained from the coding stage.

3. Results and Discussion

3.1 Evaluation of post-production non-tax state revenue policy in supporting the development of blue economy-based capture fisheries sector in Indonesia

In simple terms, fisheries management means all efforts directed at achieving sustainable productivity of marine resources. First, the Post-Production non-tax state

revenue policy in improving fisheries governance in terms of data collection governance. Pre-Production non-tax state revenue is paid before the shipsails and is calculated based on the following formula.

$$\text{Tariff Index} \times \text{Vessel Productivity} \times \text{Fish Benchmark Price} \times \text{Vessel GT Size} \quad (\text{Eq. 1})$$

Conceptually, fish catch data will be more real with the application of the Post-Production non-tax state revenue. According to Heaps and Helliwell (1985), taxes on fish landings are generally imposed on gross volume or output value. Consequently, more accurate data is needed to be able to measure the exact gross volume caught. In fact, improvements in data management due to the Post-Production non-tax state revenue can ultimately help improve the overall governance of capture fisheries (Fischer, 2023).

In practice, data collection on the weight of caught fish is still done "traditionally. However, it should be noted that prior to the implementation of non-tax state revenue BP Post-Production, many unlicensed vessels and regional permit vessels violated the provisions (mark down practice). Based on research by Firdaus et al. (2018), the practice of mark down has caused depletion, in 2015 the value of depletion reached Rp9.83 trillion and is projected to increase to Rp14.55 trillion in 2020. The measure of the success of the Post-Production non-tax state revenue in overcoming vessel mark downs is reflected in the number of vessels migrating from regional permits to central permits. The number of ship migrations proves how the Post-Production non-tax state revenue policy can encourage improved governance, especially in terms of licensing. It can be concluded that the effectiveness of the Post-Production non-tax state revenue policy related to the first objective has not been fully effective.

The second objective is to provide a sense of justice for fisheries business actors in Indonesia. Basically, the non-tax state revenue Post-Production policy is part of the environmental conservation policy. Policies related to conservation not only concern the environment, but also the social and human conditions themselves (Friedman et al., 2018). Therefore, Friedman et al. synthesized from various researchers that justice involves three components, namely distribution, procedures, and recognition.

Article 7 paragraph (2) of the non-tax state revenue Law, as the legal basis for PP 85/2021 which regulates the Post-Production non-tax state revenue policy, mandates that tariffs on types of non-tax state revenue derived from the utilization of natural resources are prepared, among others, by considering aspects of justice. Thus, the non-tax state revenue calculation formula must also be based on aspects of justice. In Article 2 paragraph (4) letter b of PP 85/2021, the tariff on the type of non-tax state revenue PHP is calculated based on the following post-production withdrawal formula.

$$\text{Tariff Index} \times \text{Value of Fish Production at Time of Landing} \quad (\text{Eq. 2})$$

Overall, the effectiveness of the Post-Production non-tax state revenue policy related to the second objective (providing a sense of justice for fisheries business actors in Indonesia) has not been fully effective. This is because although the distribution component is conceptually fair, the procedures and recognition of the non-tax state revenue Post-Production policy have not shown aspects of justice. To be able to support the development of blue economy-based capture fisheries, the fairness gap in the Post-Production non-tax state revenue policy needs to be improved because the inclusiveness aspect is an important determinant in shaping the blue economy concept. According to Bochel and Evans (2007), inclusion essentially means the ability to participate in society and having the opportunity to be involved. According to Bochel and Evans, this can be operationalized by facilitating meetings and feedback. Inclusivity should be the bare minimum in policy making.

The third goal is to maintain the sustainability of marine resources in Indonesia. It should be noted that in the non-tax state revenue Pre-Production policy, fisheries business actors have a tendency to catch as much fish as possible. This is because business actors feel that they already have the right to catch as many fish as possible because they have paid

non-tax state revenue at the beginning. Basically, Post-Production non-tax state revenue is part of fisheries management, especially in maintaining the sustainability of marine resources. Gordon (1954) proposed the use of effort taxation (input) or harvest taxation (output) to reduce effort and recover rents. Then, Wisudo (2023) described 5 aspects to achieve good capture fisheries management. These consist of input control, output control, technical measures, indirect economic instruments, and ecosystem base management (Figure 2).



Fig. 2. Illustration of capture fisheries management

Post-production non-tax state revenue is located as part of output control, which is a control to limit the amount of fish caught (FAO, 2002). Although in theory non-tax state revenue Post-Production is part of the output, researchers cannot ascertain how far the effectiveness of this policy is to reduce the rate of damage to marine resources. Thus, there is no data that can prove the direct relationship between the non-tax state revenue Post-Production policy and its effectiveness in maintaining the sustainability of marine resources. However, it can be seen that since its implementation on January 1, 2023, the Post-Production non-tax state revenue, which is intended to help conserve marine resources, has not been able to do much in overcoming the Illegal, Unreported, and Unregulated Fishing (IUUF) phenomenon. It can be concluded that the effectiveness of the non-tax state revenue Post-Production policy related to the third objective cannot be measured precisely. This is evident in the report from the Global Initiative Transnational Organized Crime in December 2023 which placed Indonesia as the 6th worst in IUUF score. However, the policy is in accordance with existing theory to be able to support the sustainability of marine resources.

The fourth objective is to achieve optimum benefits and sustainability for fisheries businesses. From the perspective of fisheries business actors, benefits and sustainability are closely related to the business being run. It should be noted that in the Pre-Production non-tax state revenue policy regime, there is a dichotomy in terms of profit or loss for fisheries business actors. From those who feel benefited, the non-tax state revenue Pre-Production policy provides a loophole in reporting the size of the vessel that is not true. On the other hand, those who feel disadvantaged consider that the Pre-Production non-tax state revenue can burden their business if in the end the fish caught is less than the costs incurred.

According to Sabatier and Mazmanian (1980), sufficient financial resources are a necessary prerequisite for the success of a policy. In addition to profit, a factor that must be considered in measuring benefits for fisheries businesses is the cost factor. From the

perspective of business actors, of course, the costs incurred should be minimized. This is in order to increase the competitiveness of business actors, as stated by representatives of fisheries business actors as follows.

"These kinds of levies, yes non-tax state revenue, can actually weaken our competitiveness because one fish that we take from the sea is subject to three levies. In the past, we paid for pre-production before going to the sea, we haven't taken the fish yet, then when we return home, we are subject to regional retribution, PAD. The third one is PBB of the sea, the sea is subject to PBB." (MB, Representative of the Indonesian Tuna Association)

It can be concluded that the effectiveness of the non-tax state revenue Post-Production policy related to the fourth objective (reaching the optimum point of benefits and sustainability for fisheries business actors) has not been fulfilled. This is because this policy distorts profits and becomes one of the cost components for fisheries businesses. The fifth objective is to increase the realization of non-tax state revenue SDA Capture Fisheries. Non-tax state revenue with its nature similar to tax (quasi tax), of course, also functions in increasing state revenue (budgetary function). This is emphasized in the explanation of the non-tax state revenue Law which states that non-tax state revenue has a budgetary function and is one of the pillars of state revenue. This statement is based on data that was successfully obtained from 2015-2020 as listed below

Table 2. Target vs realization of non-tax state revenue capture fisheries

Year	Target	Realization
2015	578.8 billion	79.27 billion
2016	693 billion	362.12 billion
2017	950 billion	491.03 billion
2018	600 billion	448.73 billion
2019	625 billion	522 billion
2020	900 billion	600.4 billion

The realization is even lower when compared to the development of national capture fisheries production as shown in Fig. 3. The low realization of non-tax state revenue is also one of the bases for changing the Pre-Production non-tax state revenue policy to Post-Production non-tax state revenue. This is as stated in the academic paper of Post-Production non-tax state revenue. It is stated that the low realization of non-tax state revenue is due to the non-tax state revenue determination formula that does not match the reality of fish catches in the field.

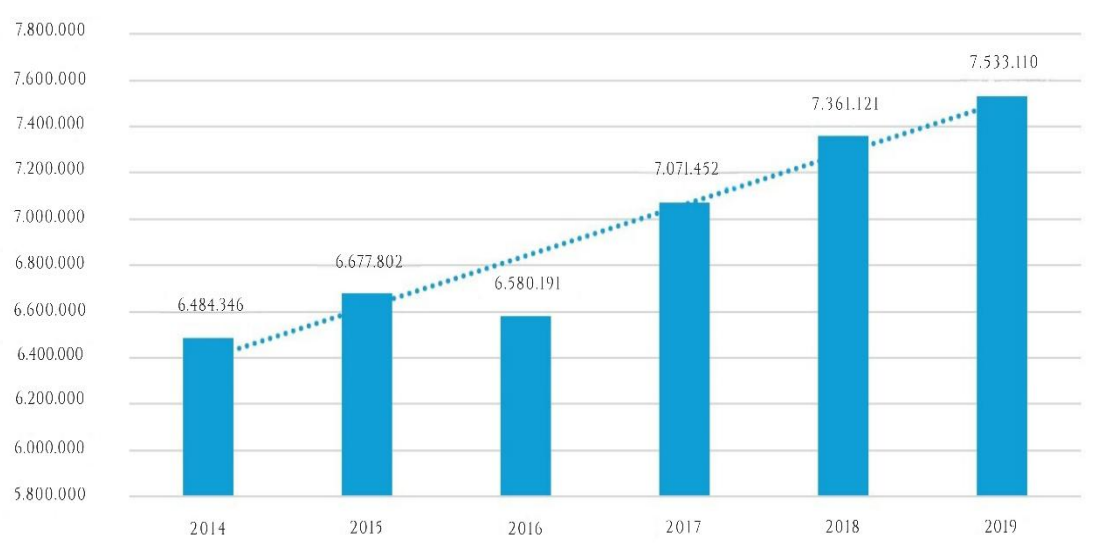


Fig. 3. Development chart of national capture fisheries production 2014-2019

Based on the data obtained, in the first year of implementing the Post-Production non-tax state revenue policy, the realization of Capture Fisheries non-tax state revenue decreased from the previous year. The decline is basically a common implication of the transition period of a policy change. For example, in 2015 the realization of Capture Fisheries non-tax state revenue decreased when there was a moratorium policy on foreign vessels.

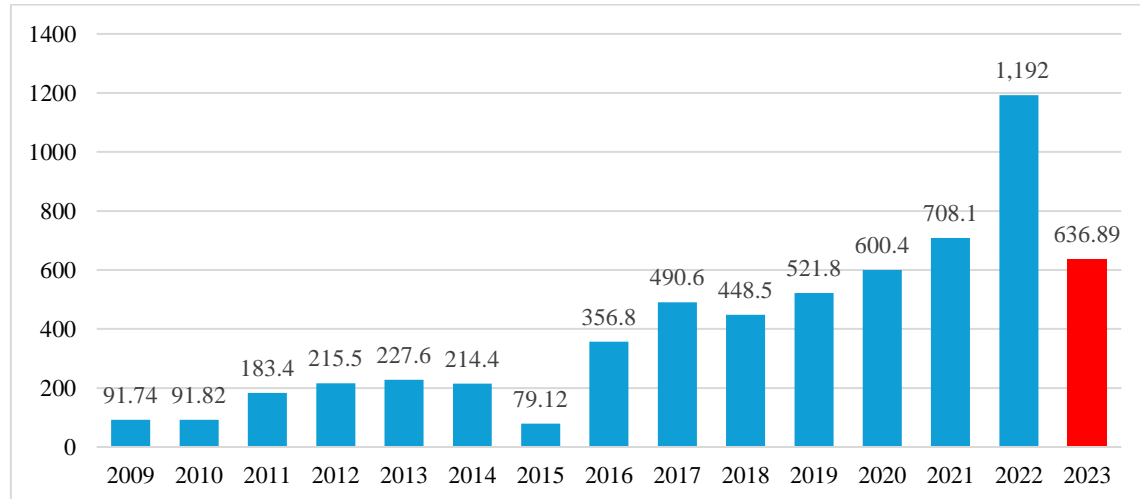


Fig. 4. Graph of non-tax state revenue realization of capture fisheries SDA 2009-2023

In the context of policy changes to Post-Production non-tax state revenue, the decline in the realization of Capture Fisheries non-tax state revenue in the first year of implementation was due to the fact that there were still vessels with Pre-Production permits that were not yet required to pay Post-Production non-tax state revenue. The existence of these permits is due to the duration of the Pre-Production non-tax state revenue license which has a period of 1 year from 2022 to 2023. However, vessels with Pre-Production non-tax state revenue permits gradually decreased every month in 2023 and were accompanied by an increase in vessels with Post-Production non-tax state revenue permits as illustrated in the following graph.

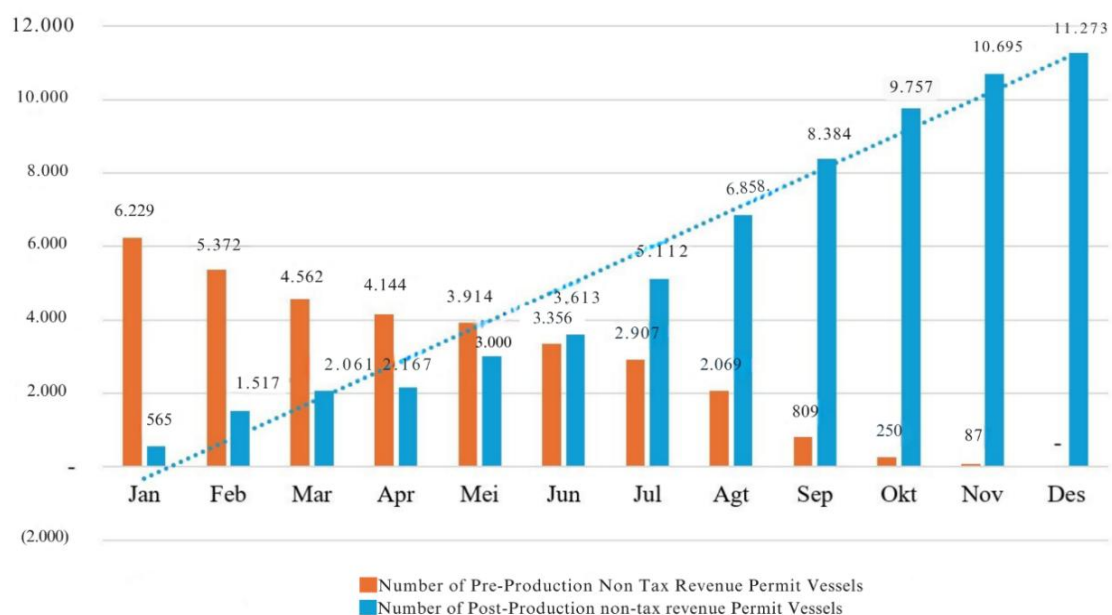


Fig. 5. Trend chart of decrease in number of vessels with pre-production non-tax state revenue permits and increase in number of vessels with post-production non-tax state revenue permits

Along with the increase in the number of vessels with Post-Production non-tax state revenue permits month overmonth as shown in Fig. 6., the realization of Capture Fisheries non-tax state revenue SDA also gradually increases every month as can be seen in Fig. 7. Even if we look at the year-over-year comparison from January to April, the realization rate of Capture Fisheries non-tax state revenue has increased up to 15 times because many vessels have migrated to the Post-Production non-tax state revenue permit.

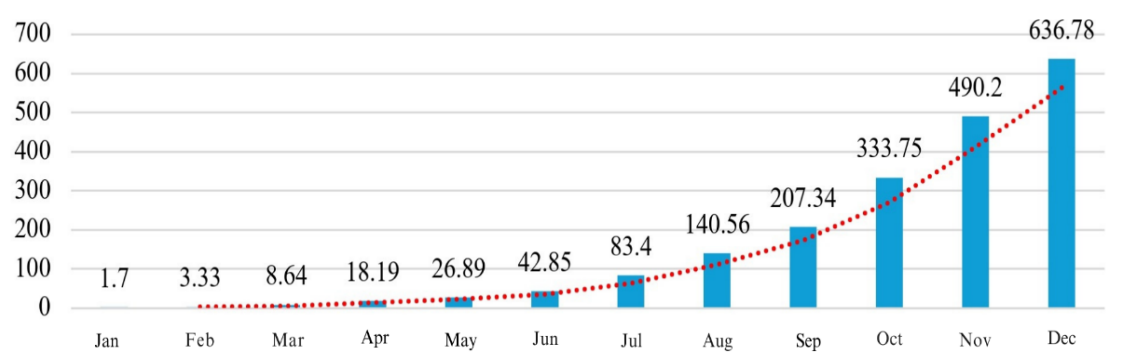


Fig. 6. Non-tax state revenue realization of capture fisheries SDA in trend chart 2023

This chart shows the monthly increase in data throughout the year. The value starts at 1.7 in January and continues to grow each month until it reaches 636.78 in December. The trend of the dashed red line illustrates an exponential growth pattern, with the increase becoming more significant in the second half of the year. Then, for this graph compares data between 2023 and 2024, with the blue line representing 2024 and the orange line for 2023. It can be seen that in 2024, the initial data (January-April) is higher compared to 2023, which started at 1.7 in January. The year 2023 experiences the same exponential growth as 2024, but with lower values in the early months

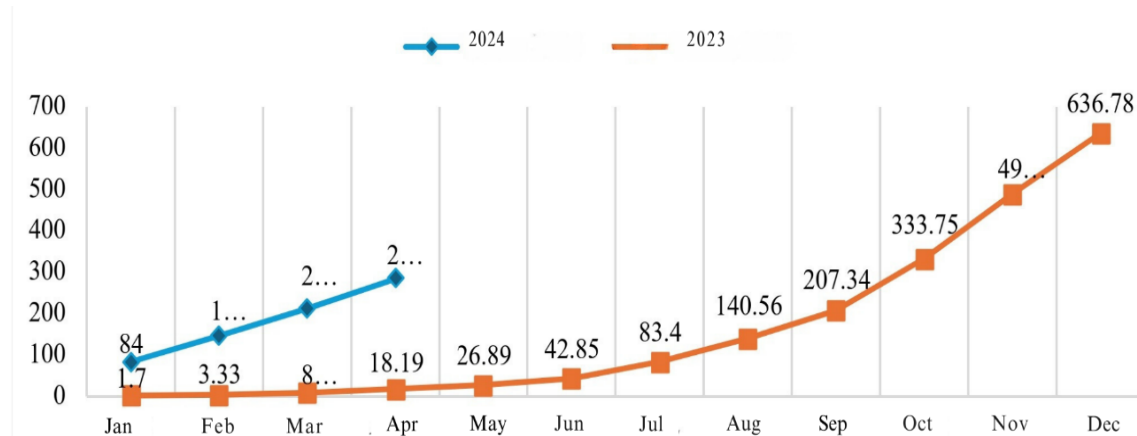


Fig. 7. Non-tax state revenue realization of capture fisheries SDA in 2023 and 2024

For information, it should be noted that the components that form the realization figure of non-tax state revenue Capture Fisheries consist of revenue from fisheries levies and revenue from fisheries exploitation levies. PHP revenue is revenue derived from the Post-Production non-tax state revenue policy. On the other hand, PPP revenue is revenue derived from license payments to obtain a SIUP.

Table 3. Components and portion of non-tax state revenue from natural resources utilization

Type of non-tax state revenue	Non-tax state revenue classification	Realization
Utilization of natural Resources	Fisheries levy revenue	590.82 billion
	Fisheries levy revenue	46.06 billion

This information needs to be known because there is no data separating PPP revenue and PHP revenue from year to year. Even so, PHP revenue is the largest contributor to Capture Fisheries SDA non-tax state revenue as shown in the table of realization of Capture Fisheries SDA non-tax state revenue in 2023 below. To get the right information about the effectiveness of the Post-Production non-tax state revenue policy in increasing the realization of non-tax state revenue of Capture Fisheries SDA, a valid year over year comparison is needed. Although Post-Production non-tax state revenue has been implemented since 2023, the realization figures in 2023 cannot be used as a reference in determining whether the policy is effective or not. This is because in 2023, the Post-Production non-tax state revenue policy was still in the transition stage. Meanwhile, the realization figures in 2024 are still not comparable until the end of the year.

It can be concluded that the effectiveness of the Post-Production non-tax state revenue policy related to the fifth objective (increasing the realization of Capture Fisheries non-tax state revenue) cannot be known with certainty. However, it can be seen that the trend of increasing non-tax state revenue continues to increase every month. In the context of supporting the development of the blue economy-based capture fisheries sector, the realization of non-tax state revenue is an important factor. This is because the blue economy requires the contribution of the marine sector, including capture fisheries, to the Indonesian economy.

3.2 Efficiency criteria in post-production non-tax state revenue policy

Efficiency criteria refer to the amount of effort required to produce a certain level of effectiveness (Dunn, 2018). This means that the efficiency criterion in relation to the evaluation of the non-tax state revenue Post-Production policy aims to assess the efficiency of the efforts made to achieve the effectiveness of the 5 objectives mentioned earlier. This can be done using the cost of state levies theory. In short, the cost of state levies means the costs related to the collection of non-tax revenues borne by both payers and tax authorities (Zhang & Huang, 2019). From the payer, costs related to tax collection are commonly referred to as compliance costs. From the side of the tax authorities, costs related to tax collection are commonly referred to as collection costs. Both compliance cost and collection cost are further categorized into three groups, namely direct money cost, time cost, and psychological cost (Rosdiana, 2013).

First, describe the direct money costs incurred by the obligor. Costs that can be measured by the value of money that must be borne by the payer are related to the process of implementing obligations and rights related to Post-Production non-tax state revenue. In general, based on various in-depth interviews conducted, researchers synthesize that the costs that need to be prepared by fisheries business actors before sailing consist of the cost of fuel oil (BBM), the cost of crew supplies, the cost of crew salaries, and the cost of non-tax state revenue levies (including non-tax state revenue payments for SIUP, SIPI, mooring, and so on). This is as explained by marine and fisheries academics.

"...This post-production efficiency makes it easier for entrepreneurs to manage their business. So basically he no longer needs a lot of capital up front but adjusts to the fish season and so on. So when it's fish season, the price will be a lot, but when there are few fish, the payment is small. So the point is not to make gambling to pay in advance." (SHW, IPB University Fisheries and Marine Academician).

Even so, there are inefficiencies felt by fisheries business actors due to the Post-Production non-tax state revenue policy. Inefficiency is related to late payment penalties for Post-Production non-tax state revenue as stipulated in article 15 paragraph (1) of the Regulation of the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia Number 2 of 2023 concerning Requirements and Procedures for Imposing Tariffs on Types of Non-Tax State Revenue Applicable to the Ministry of Maritime Affairs and Fisheries Derived from Utilization of Fisheries Natural Resources (Permen KP 2/2023). The article

regulates the obligation to pay Post-Production non-tax state revenue 7 days from the date the ship arrival report certificate (STBLKK) is issued.

Furthermore, the existence of a fine mechanism imposed in the chain of Post-Production non-tax state revenue implementation processes that still do not have infrastructure readiness (not due to the fault of the payer), certainly creates inefficiencies in direct money costs from the side of the payer. However, the non-tax state revenue payment deadline is calculated from the calculation of the Self-Calculation Report (LPM) which is carried out after the weighing of the catch is carried out. Meanwhile, researchers did not find a legal basis that regulates the payment deadline of 7 days from the issuance of the LPM.

It can be concluded that there is an efficiency of direct money costs incurred by the obligatory payer because non-tax state revenue is collected after the obligatory payer has landed the catch. However, on the other hand, there is an inefficiency of direct money costs due to the existence of a fine mechanism that is not inline with the readiness of regulations in implementing the Post-Production non-tax state revenue policy.

Second, researchers will describe the time costs incurred by the obligor. In the context of the research, time costs mean the costs in the form of time required by payers to carry out obligations and rights related to Post-Production non-tax state revenue. It should be noted that in the Pre-Production non-tax state revenue policy, the time that must be allocated by the payer after landing the fish is relatively short. The shortness of time is because the weighing carried out after landing can be done with a relatively faster estimate. On the other hand, in the Post-Production non-tax state revenue policy, the time allocated by the payer in weighing is relatively longer because the weighing must be done precisely and in detail according to the type of fish.

"So there is a waiting time when waiting for the SIUP letter, there is also a waiting time. Then when post-production, when landing there is also a waiting time. So we are still looking for a balance point where this efficiency can be achieved." (FN, Research Manager of Destructive Fishing Watch Indonesia)

The length of time that must be allocated by payers in the Post-Production non-tax state revenue policy is recognized by representatives of fisheries business actors. The unpreparedness of facilities and infrastructure at the port is the main cause of the amount of time costs that need to be borne by the mandatory payer. In other words, it can be concluded that there are inefficiencies in time costs that need to be incurred by payers in carrying out obligations in implementing the Post-Production non-tax state revenue policy. This occurs due to the unpreparedness of facilities and infrastructure at the port.

Third, describe the psychological costs incurred by the obligor. In the context of the research, this means the psychological costs (such as stress, insecurity, anxiety, and uncertainty) felt by the obligor in the process of implementing Post-Production non-tax state revenue obligations and rights. Through the Post-Production non-tax state revenue policy, weighing is carried out more thoroughly and takes a long time. The accuracy and long time is because both the payer and the tax authorities want the results of the scales to be in accordance with reality (no more and no less) in order to benefit the interests of each party.

Based on the researcher's observation, the weighing carried out can cause psychological costs from the side of the obligatory payer. This is because the weighing in the context of calculating the Post-Production non-tax state revenue payable is carried out after the fishery business actors go to sea with various conditions they have just experienced at sea. It can be concluded that the Post-Production non-tax state revenue policy can cause psychological costs on the part of fisheries business actors because the levy is made after the fisheries business actors spend energy, time, and money to go to sea. From these three costs, it is concluded that the Post-Production non-tax state revenue policy in terms of compliance costs borne by payers has not met the efficiency criteria. This is because both in terms of direct money costs, time costs, and psychological costs borne by payers are not fully efficient.

From the fiscal side, policy changes related to state levies in any form, including Post-Production non-tax state revenue, will essentially change the way of working, increase the workload of the tax authorities, and add facilities to support the policy. It should be noted that under the Pre-Production non-tax state revenue regime, the fiscus relatively did not need to spend a large burden because the levy was based on estimates made before going to sea. However, the change in policy to Post-Production non-tax state revenue creates various costs to implement the policy, which will be explained below.

First, the Post-Production non-tax state revenue policy requires more officers because weighing and data collection of fish catches is a central process in determining non-tax state revenue payable. In fact, based on data obtained from Ministry of Marine Affairs and Fisheries, there are up to 68 data collection officers and 6 detachment officers at PPS Nizam Zachman Jakarta to support the implementation of the Post-Production non-tax state revenue policy. The addition of these officers does not only occur at PPS Nizam Zachman, but also at various other base ports that have met the requirements for the withdrawal of Post-Production non-tax state revenue as stipulated in KP Decree 187/2023. The following are some examples of ports that have added officers in order to support the implementation of the Post-Production non-tax state revenue policy.

Table 4. Number of detachment officers and data collection officers in some ports

No	Port	Detachment officer	Data collection officer
1	VAT Nizam Zachman Jakarta	6	68
2	Pelabuhan Perikanan Nusantara (PPN) Ambon	5	43
3	VAT Pekalongan	17	60
4	VAT Pengambengan	2	30
5	VAT Sibolga	1	18

In addition to implementing the Post-Production non-tax state revenue policy, which is full of real calculations of fishcatch volume, the number of officers needed is also to accommodate the size of the port and the vessels that arrive every day. Furthermore, in addition to the cost of additional officers, considering that Post-Production non-tax state revenue requires determining the reference price of fish, the tax authorities also incur costs to conduct fish price surveys. Then, there are also costs related to facilities and infrastructure that must be prepared in order to optimize the implementation of Post-Production non-tax state revenue. Based on information obtained from the CTF, there are at least 5 things that are optimized in the implementation of the Post-Production non-tax state revenue policy. In more detail, based on data obtained from Ministry of Marine Affairs and Fisheries, the following is the realization and budget of priority activities to support the implementation of Post-Production non-tax state revenue in 2023.

Tabel 5. Realization and budget of priority activities to support post-production non-tax state revenue policy implementation

Activities	Realization	Budget
Implementation of detachment of DJPT employees	142 employees	6.1 billion
Provision of production data collection officers	500 officers	4.2 billion
Procurement of operational support facilities for fishing ports	4 locations	6.1 billion
Business licenses issued for the fishing/transportation sub-sector	10,808 SIPI	1.4 billion

The data cannot be compared with the realization of Post-Production non-tax state revenue that was successfully obtained. This is because the Post-Production non-tax state revenue realization figures are obtained based on figures from all ports in Indonesia, while the expenditures presented in table 4.5 above cannot describe the cost of development carried out at all ports in Indonesia. Therefore, researchers cannot provide a cost collection efficiency ratio (CCER) calculation. However, representatives from admitted that the Post-

Production non-tax state revenue policy was inefficient in its initial implementation. It can be concluded that the Post-Production non-tax state revenue policy causes inefficiency in direct money costs from the side of the tax authorities. The inefficiency arises because in implementing the policy there are many things that need to be installed and prepared.

Second, researchers will describe the fiscal time costs. In the context of the research, this means the time costs required by the tax authorities to prepare and implement the Post-Production non-tax state revenue policy. It should be noted that in the Pre-Production non-tax state revenue policy, the time that needs to be allocated by the tax authorities is relatively faster because weighing can be done by estimation. With the Post-Production non-tax state revenue policy, the time costs that must be incurred by the tax authorities are greater. In fact, according to a representative of the martyrdom staff, the time taken in order to collect Post-Production non-tax state revenue can take at least 3 days due to the long unloading process.

Third, researchers will describe the psychological costs of tax authorities. In the context of the research, this means the psychological costs (such as stress, insecurity, anxiety, and uncertainty) felt by the tax authorities in the process of preparing and implementing the non-tax state revenue Post-Production policy. In this analysis, researchers will focus on the psychological costs arising from the pressure on tax authorities from two sides. First, the pressure due to the setting of a large target for Capture Fisheries non-tax state revenue. Second, pressure due to direct interaction with fisheries business actors who have their own interests.

The researcher analyzed the psychological costs arising from setting a large target for Capture Fisheries non-tax state revenue. Based on data obtained from Ministry of Marine Affairs and Fisheries, the target realization of Capture Fisheries non-tax state revenue in 2024 increased 3 to 5 times compared to the realization of Capture Fisheries non-tax state revenue in 2023. This is as illustrated in the table below.

Tabel 6. Target realization of capture fisheries non-tax state revenue policy in 2024 compared to the realization of capture fisheries non-tax state revenue policy in 2023

Port	Realization of non-tax state revenue policy capture fisheries 2023	Capture fisheries non-tax state revenue policy realization target 2024
PPS Nizam Zachman	IDR 167,551,243,227	IDR 573,254,889,558
PPN Ambon	IDR 64,922,421,255	IDR 243,902,837,201
PPN Pekalongan	IDR 107,091,316,631	IDR 241,534,809,656
PPN Pengambengan	IDR 45,697,068,276	IDR 166,397,723,695
PN Sibolga	IDR 18,616,073,257	IDR 80,348,218,601

Basically, the variables that form the Post-Production non-tax state revenue figure per vessel consist of the tariff index multiplied by the production value per type of fish. The production value per type of fish is formed from the Fish Reference Price component multiplied by the weight of the fish caught. Even so, the Fish Reference Price is still determined based on market price surveys and considers the aspirations of the community.

Then, researchers will analyze the psychological costs arising from direct interaction between tax authorities and fisheries businesses. The Post-Production non-tax state revenue policy changes the business as usual of the tax authorities, who previously did not need to interact much with fisheries businesses, but are now obliged to meet directly with fisheries businesses. The high interaction between tax authorities and fisheries business actors often causes social friction.

Despite the various pressures that exist, both due to the size of the target setting and the high level of social interaction, representatives of the martyrdom staff assessed that integrity remains the thing that is prioritized by the tax authorities in the collection of Post-Production non-tax state revenue. Integrity is the main thing so that the collection is carried out based on existing policies and not based on personal or group interests. It can be concluded that the Post-Production non-tax state revenue policy can cause psychological

costs for the tax authorities due to the setting of large targets that are not accompanied by adequate facilities and infrastructure.

3.3 Fairness criteria in post-production non-tax state revenue policy

The criterion of fairness refers to the distribution of results and efforts among various groups in society (Dunn, 2018). In the tax perspective, fairness is part of The Four Maxims (equity, certainty, convenience, and efficiency) introduced by Adam Smith as the basic foundation of tax policy. The principle of equity states that taxes must be fair and equitable (Rosdiana & Irianto, 2012). Taxes are imposed on individuals in proportion to their ability to pay the tax and also in accordance with the benefits they receive (Rosdiana & Irianto, 2012).

The principle of justice is often seen as abstract and subjective so that it is then attached to a morereal context, one of which is the benefit principle (Darussalam et al., 2024). The benefit principle stands on the understanding that tax subjects pay taxes to the government for the benefits obtained (Darussalam et al., 2024). Referring to the benefit principle theory, the "benefit" that justifies the application of the principle of justice in the non-tax state revenue Post-Production policy is the fish itself. This is rooted in the mandate of Article 33 paragraph (3) of the 1945 Constitution of the Republic of Indonesia.

In the context of the research, the article implies that the sea and fish essentially belong to the state and need to be managed for the general benefit of the people. Departing from this mandate, the non-tax state revenue Law 85/2021 regulates that the utilization of fisheries natural resources is an object of non-tax state revenue. Justification for the imposition of PBJT on the benefits in the form of access to catch fish as stated by the Ministry of Marine Affairs and Fisheries representative.

It should be noted that in the non-tax state revenue Pre-Production policy, the principle of justice in the form of the benefit principle is not fulfilled. This is because PNB non-tax state revenue P levies are not based on benefits in the form of fish catches. The Pre-Production non-tax state revenue policy bases levies on estimates without knowing the actual benefits that will be obtained by fisheries business actors. In contrast to the Post-Production non-tax state revenue policy that collects non-tax state revenue is actually based on the number of fish catches which is a benefit for fisheries business actors themselves.

However, the benefit principle in the context of non-tax state revenue related to fisheries levies cannot stop at the benefits in the form of catches alone. This is because in the context of non-excludable public goods, such as fish in the sea, the benefits are not easily measured and allocated appropriately to tax subjects (Stiglitz & Rosengard, 2015). Therefore, it is also necessary to examine the benefits provided by the government in the form of public goods and services as a form of reciprocity for the levies made to be able to strengthen the principle of justice in the collection of Post-Production non-tax state revenue.

Although in the context of the Post-Production non-tax state revenue policy the type of levy refers more to the concept of quasi-taxes and levies on natural resource wealth, it is also necessary to know the nature of the policy. Thus, benefits in the form of goods and public services also become the basis of justice in this policy. Although the Post-Production non-tax state revenue levy is managed and returned in the form of various goods and public services provided, researchers cannot assess whether the benefits provided are the result of the Post-Production non-tax state revenue levy specifically or not. This is because the programs carried out by Ministry of Marine Affairs and Fisheries for the development of the capture fisheries sector come from various sources.

Although there is no specific allocation of Post-Production non-tax state revenue for certain goods/services (earmark), various goods and public services provided by the Ministry of Marine Affairs and Fisheries to fisheries business actors are a form of effort given by the government in managing various levies made. However, the benefits provided by the government have not been fully targeted. The inaccuracy of targeting is also felt by the

fisheries business actors. In addition, there are no specific benefits given to those who have paid the Post-Production non-tax state revenue.

Then, the development of equitable tax principles also recognizes the principle of non discrimination (Darussalam et al., 2024). In the context of the Post-Production non-tax state revenue policy, researchers need to reiterate that one component of the formula is based on the size of the vessel to determine the tariff index. This is of course irrelevant because in essence Post-Production non-tax state revenue is levied on the weight of fish caught (gross).

In contrast to the Pre-Production non-tax state revenue policy, which still requires differentiation of vessel size because the amount of levies payable is based on estimates alone. The academics also implied their disagreement with the determination of the tariff index for the calculation of Post-Production non-tax state revenue which still distinguishes between ship sizes. According to the fiscal policy academics, if there is still a tariff differentiation between ship sizes because of the destruction level, the collection system will return to the Pre-Production non-tax state revenue.

"The basis is not the fish caught, because it's actually a bit funny, because actually, for example, the argument is that the bigger the ship, the more destructive it is, so then it's not the catch basis, just the type of ship." (I, Fiscal Policy Academician)

In considering the determination of an equitable tariff for Post-Production non-tax state revenue, it is necessary to know the characteristics of Post-Production non-tax state revenue itself. Post-production non-tax state revenue is a gross-based levy because the tariff index is multiplied by the weight of the fish catch. Therefore, researchers compared the determination of Post-Production non-tax state revenue rates with one type of levy that has a gross basis in the calculation of levies.

Income tax on business income received by tax payers who have a certain gross turnover as stipulated in Government Regulation of the Republic of Indonesia Number 55 of 2022 concerning Adjustment of Regulations in the Income Tax Sector (PP 55/2022) or commonly called Income Tax for Micro, Small and Medium Enterprises (PPh UMKM) is one type of gross-based levy. Based on Article 56 paragraph (2) of PP 55/2022, the final Income Tax rate on certain gross turnover is 0.5%. This means that there is no difference in rates between levels within MSMEs. Whereas PP 55/2022 classifies the gross turnover of MSMEs subject to the 0.5% rate as businesses with gross turnover of more than IDR 500,000,000 to IDR 4,800,000,000, a wide range of income differences.

However, there is no difference in rates within this wide range of gross turnover. This is because the regulation emphasizes the principle of non discrimination among MSMEs. Therefore, the same principle should also be applied in the tariff index of the Post-Production non-tax state revenue policy in order to provide the principle of justice for the fisheries business actors. It can be concluded that the Post-Production non-tax state revenue policy has not met the criteria of justice. This is because although non-tax state revenue Post-Production has fulfilled the benefit principle, non-tax state revenue Post-Production has not fulfilled the principle of non discrimination. In the context of supporting the development of the capture fisheries sector based on the blue economy, the principle of justice is important because the concept of blue economy also requires attention to the social side.

4. Conclusions

Based on the information and data that have been analyzed with various theories in the previous chapter, researchers can conclude that the overall evaluation of the non-tax state revenue Post-Production policy in supporting the development of the blue economy-based fisheries sector based on Dunn's (2018) three policy evaluation criteria is as follows. First, the non-tax state revenue Post-Production Policy has not fully met the effectiveness criteria. This policy has not been fully effective in achieving the 5 objectives that have been set and in line with the blue economy concept. In general, the policy has shown its potential

effectiveness in achieving the set goals based on conceptual and observations of statistical trends. However, the effectiveness is distorted by inadequate infrastructure.

Second, the Post-Production non-tax state revenue Policy has not fully met the efficiency criteria. From the payer's side, levies that are carried out after going to sea can reduce the costs that must be prepared before going to sea. However, the high time allocation and psychological costs incurred make this policy not fully efficient. From the fiscal side, the Post-Production non-tax state revenue policy is inefficient both from direct money costs, time costs, and psychological costs because this policy requires a greater allocation of human resources and time. Third, the non-tax state revenue Post-Production Policy has not fully met the criteria of justice. This policy fulfills the theory of the benefit receive principle, but the lack of counter party to the paying party weakens the principle of justice in the policy. In addition, the tariff set based on the type of vessel is not in accordance with the principle of nondiscrimination.

Furthermore, the author proposes suggestions to improve and refine the post-production non-tax state revenue policy in supporting the development of the blue economy-based capture fisheries sector in Indonesia. First, further research is needed to be able to measure the effectiveness of the Post-Production non-tax state revenue policy in terms of maintaining the sustainability of marine resources and increasing the realization of non-tax state revenue SDA Capture Fisheries. Second, the need to adopt technology such as electronic monitoring (EM) in every port that collects Post-Production non-tax state revenue in Indonesia. In the electronic monitoring (EM) program, fishing activities and catches are recorded remotely using cameras and activity sensors on fishing vessels to generate reliable, high-resolution data on spatial and temporal patterns in effort and catch composition and volume (Gladju et al., 2022). The adoption of technology such as EM is important to speed up and ease the weighing process and improve accuracy of data collection of captured fish in the context of calculating non-tax state revenue Post-Production payable. That way the effectiveness and efficiency of both the payer and the tax authorities can be achieved. Greater funding (as well as stricter supervision) is needed for Ministry of Marine Affairs and Fisheries and various ports. Third, a formulation is needed regarding the tariff index from the previous progressive tariff based on the size of the ship to one tariff regardless of the size of the ship. The reformulation is aimed at achieving the principle of non-discrimination of fairness.

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Author Contribution

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