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FISHERIES SUBSIDIES IN INDONESIA AND CHINA

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Abstract: The World Trade Organization (WTO) considers sustainable economic development. One of the regulations arranged is the unfair trade that several activities will be eliminated in the future, including the fisheries subsidies. The objectives of this research are (1) understanding the general descriptions about fisheries subsidies in Indonesia and China; (2) how large the impacts of fisheries subsidies that are linked with the policies; and (3) the opinion whether the fisheries subsidies must be stopped or not. This research uses the literature studies from several sources and the supplementary data are also included to strengthen this study. Based on the result and discussion, the fuel subsidies are the largest fisheries subsidies in both Indonesia and China. Although the fuel subsidies are harmful and burden the government budget, the policy of subsidies is still needed, especially in the developing countries, including Indonesia. Those subsidies contribute the positive effects to the fisheries sector performance. On the other hand, eliminating fisheries subsidies, particularly the fuel subsidies, is expected to provide the negative impacts. For the policy, the government regulates the programs in the fisheries sector. There are two feasible schemes in the fisheries market in case talking about the fisheries subsidies with the aim of a trade policy tool and sustainability. The author does not agree if the fisheries subsidies stopped. The government must evaluate the subsidy policies that can be connected with the fisheries sector performance indicators and must still prepare state budget for fisheries subsidies, especially subsidies for small-scale household, such as fishers. The fisheries subsidies should be continued with applied terms and conditions, so the subsidies will be used wisely by the fisheries business actors and will be appropriately monitored by the government.

Keywords: Fisheries Subsidies, Fuel Subsidies, Government Budget.

JEL Classification: G28; H25; H53.

Introduction

The World Trade Organization (WTO) is admitted as an international trade organization that sustains the liberalization of trade in the commodities and services. However, the WTO also reckons the sustainable economic development and the needs of developing countries. One of the WTO's regulations that want to be arranged is unfair trade. The subsidies is one of

the state policies considered as the practice of the unfair trade because it can harm the parties by the practice of subsidies.

Generally, the provisions on subsidies have been organized in Article VI and XVI of the General Agreement on Tariffs and Trade (GATT) 1994 and specifically regulated in the Agreement on Subsidies and Countervailing Measures (SCM Agreement) 1994. The subsidies, according to SCM Article 1.1 points a and b, is the financial aid from the government or public institutions in the territory of the member country. These forms of financial aid are divided into four types, namely; (1) direct cash assistance; (2) fiscal incentives, such as tax deductions; (3) assistance in the stock of commodities or services, besides infrastructure or buying commodities; and (4) paying the burden that must be compensated by the private agencies.

One of the subsidies issues that is often debated among WTO member countries is the practice in the fisheries sector. As one of the developing countries that have a large potential of fisheries resources, Indonesia has continuing importance to provide a budget for subsidies in the fisheries sector in order to protect national concerns and sustainable development (Putra & Aqimuddin, 2014).

On the other hand, China as the largest producer of capture fisheries in the world, has a meaningful influence on the sustainability fish stocks is not only domestic but also global scale. China is also a subsidizer country in the fisheries sector that has the second highest rank in the world. For fisheries subsidies in 2013, the Chinese central government expended RMB 40.383 billion or \$6.5 billion and the fuel subsidies was the most expenditure (Mallory, 2016).

The European Union (EU) that consists of many developed countries also have more attention in the fisheries sector, especially the aquaculture sector. They have invested €1.17 billion from 2000 to 2014 and have a future scheme to embed a further €1.72 billion between 2014 and 2020 via the European Maritime and Fisheries Fund (EMFF). These investments have a goal to render the EU aquaculture sector more competitive and successful (Guillen, Asche, Carvalho, Polanco, Llorente, Nielsen, & Villasante, 2019).

Most of the world's population choose fish as the main protein source. Fish is also an extensible resource, but it can collapse if not administered precisely. Nowadays, the fisheries resources over the world are endangered by overexploitation. The world fish production is usually supplied for human consumption immediately, more than 75 percent. In 2022, the fishmeal and fish oil in the world market will be estimated to reach USD 14.28 billion. Many fish now endure from a 'tragedy of open access', with widespread and serious stock depletion because human populations have extended and unmanaged fishing strain has increased significantly. Overexploitation has not only dropped overall fish stocks, but also converted fish stocks from huge communities to impoverished communities (Pezzey, Roberts, & Urdal, 2000).

Based on the Food and Agricultural Organization (FAO) report on the 'State of World Fisheries and Aquaculture' in 2016, hundreds of million people in the world still chose the

fisheries sector as a prominent source of food, nutrition, revenues and livings. Furthermore, the report presents that most fish exports are produced by developing countries. This obviously represents that a greater contribution of the fisheries market is handled by the developing countries rather than the developed countries. For the least developed countries and developing countries, fish is not only just consumed by human, but also realizes works and yields value added by supplying processed goods. Other facts show emerging landlocked developing countries utilize fish as a raw ingredient to make medicines that are exported, such as pharmaceutical outputs including generics of fish oil.

Consequently, the supply side of fisheries sector will have been effectuated by any disciplines on fisheries subsidies, both production and consumption of high rate goods. In the WTO, member countries' have the similar goal on the fisheries subsidies for interpreting and allowing the subsidies classified by elimination and prohibition. For instance, the objective in the EU proposal is to ban capacity augmenting subsidies (Kumar, Kumar, Stauvermann, & Chakradhar, 2019).

The subsidies can cause overcapacity for the fisheries sector. The Head of the United Nations Environment Program (UNEP) Green Economy Initiative, Pavan Sukhdev, expressed that capacity of world fishing fleet is 50–60 percent greater than supposed because of the fisheries subsidies. Because of ever-larger fishing fleets hunting ever-smaller fish, the global fish stocks may be drained in 2048 (Mallory, 2016).

More than half of all subsidies in the world are unsafe. Those that drop fleet damages or broad fleet revenues rising activity rates, place pressure on stocks and twist trade, and effectuating on the communities and surroundings. The fisheries subsidies are worthwhile is only one-third of them; the others have an ambiguous or indistinct effect. The WTO has some negotiations to eliminate harmful subsidies or economic stimulus that assist for overcapacity and overfishing. The next ministerial conference agenda is achieving a multilateral agreement in the end of 2019. The United Nations Sustainable Development Goals (SDGs) have persisted for the new regulations on fisheries subsidies. Forbidding fisheries subsidies that are connected to overfishing and overcapacity, and stopping subsidies to illegal, unreported and unregulated fishing in 2020 is the one of target 14.6 of SDGs mentions.

The fish supplies and social justice can be saved by eliminating particular subsidies, but this will not can be the only solution. This does not mean that environmentally harmful subsidies should not be prohibited or eliminated, but the analysis must insert distributive effects and create possible trade-offs clear to help those policymakers decide whether to execute complementary or compensatory measurements to alleviate any damage (Merayo, Porras, Harper, Steele, & Mohammed, 2019).

Although subsidies are confronted by many parties because they have a consideration to burden the government budget, this policy is still needed, especially in developing countries such as Indonesia. For this reason, the provision of fisheries subsidies must be executed carefully and on target, and it needs to be joined by the fisheries management schemes because several fisheries subsidies have a high potential to cause overfishing.

Furthermore, the condition of Indonesian fishers is still very alarming and still needs government assistance to raise their standard of living. Therefore, the appropriate fisheries subsidies policies are needed so that the subsidies given have a positive impact, both economically and ecologically (Muchlisin, Fadli, Nasution, & Astuti, 2013).

The objectives of this research are (1) understanding the general descriptions about fisheries subsidies in Indonesia and China; (2) how large the impacts of fisheries subsidies that are linked with the policies; and (3) the opinion whether the fisheries subsidies must be stopped or not. The previous researches just concerned the fisheries subsidies in the one country or region. This research studies the comparison of fisheries subsidies between Indonesia and China.

Hopefully, the results of this study are the important things for stakeholders and policy makers, especially in Indonesia. The government can use the results to evaluate and arrange the future planning and subsidies policies that are suitable for the development and sustainability of the fisheries sector.

Research Method

This research uses the literature studies from several sources, both domestic and international journals. The supplementary data are also included from BPS-Statistics Indonesia/ Badan Pusat Statistik (BPS) and The Ministry of Marine Affairs and Fisheries/ Kementerian Kelautan dan Perikanan (KKP). The case study in Indonesia and China is chosen to represent the implementation of the fisheries subsidies.

The analysis in this research uses qualitative data analysis with a descriptive and interpretive approach to be flexible in discovering the clues about the problems and phenomena. The descriptive analysis is a simple method to provide an overview of the object based on the data and information. This analysis can be presented in the form of tables, figures, mean, or standard deviation.

There are several operational definitions in this research. First, the fisheries subsidies are a financial transfer both direct and indirect transfers from public institutions to the fisheries sector, so these can provide more benefits to the sector. The FAO defines that the fisheries subsidies are the government actions or inactions outside of regular practices that transform by increasing or decreasing— the potential benefits by the fisheries industry in the short-term, medium-term, or long-term (Putra & Aqimuddin, 2014).

Second, the fuel subsidies is the government activities aiming the reduction of the cost of fuel energy production, the increase of price obtained by energy producers, or the decrease of the price paid by energy consumers (Oil Change International, 2019). Last, the government budget is the government activities on the revenues and spendings for a fixed period. In the national finance, a budget involving the period is usually a year, known as a fiscal year, whether it matches with the calendar year or not (Due, Poole, Lindbeck, Morris, & Kay, 2019).

Result and Discussion

The Indonesian government has provided several types of fisheries subsidies. Ghofar in Putra and Aqimuddin (2014) classifies the type of capture fisheries subsidies carried out by Indonesia with the risk level in Table 1. From nine (9) subsidies given, most subsidies have a negative risk. Only the conservation and fisheries resource management has a positive one.

The Head of the Fiscal Policy Agency, Suahasil Nazara, said that the fuel and LPG subsidies in the Draft of State Budget/ Rancangan Anggaran Pendapatan Belanja Negara (RAPBN) 2019 are IDR 100.7 trillion. The allocation increased significantly by around 114.7 percent from the State Budget/ Anggaran Pendapatan Belanja Negara (APBN) 2018, which only amounted to IDR 46.9 trillion. Suahasil detailed that for the fuel subsidies, it was targeted to be accepted for IDR 33.36 trillion consisting of kerosene subsidies IDR 4.3 trillion including Value Added Tax/ Pajak Pertambahan Nilai (PPN) and diesel oil IDR 29 trillion (Sicca, 2018).

The fuel subsidies are also subsidies needed by Indonesian fishers. In Suryawati, Ramadhan, Zamroni, and Purnomo (2013), Indonesian fishers spend most operational costs of fishing for fuel expenditure (Table 2). With the existence of fuel subsidies, it is expected that operational costs can be reduced significantly. Consequently, fishers can get a more significant surplus of business to meet their daily needs and improve household welfare.

The subsidies also occur in the aquaculture fisheries, although the amount of subsidies is not as much as in the capture fisheries. One of them is the Aquaculture Rural Community Development Program of Aquaculture Fisheries/ Program Pengembangan Usaha Masyarakat Perdesaan (PUMP) Perikanan Budidaya. The PUMP social assistance is a government effort to increase aquaculture production. With the aquaculture production, the presence of fish consumption for the domestic market will be fulfilled so that there is no need to import excessive fisheries products (Putra & Aqimuddin, 2014).

Table 1 The Types of Subsidies and The Risk Levels

No.	The Subsidies Form	The Type of Risk	The Risk Level
(1)	(2)	(3)	(4)
1	Procurement and modernization of vessels and fishing gears	Negative	Very High
2	Provision of operational costs	Negative	Very High
3	Provision of modal access	Negative	High
4	Procurement of infrastructures	Negative	High
5	Promotion and market aids	Negative	Medium
6	Introduction of skills and techniques	Negative	Medium
7	The other social aids	Negative	Medium
8	Introduction of making value added	Negative	Low
9	Introduction of conservation and fisheries resources management	Positive	-

Source: Putra & Aqimuddin (2014)

Table 2 The Fuel Price and Its Proportion by The Vessel Size in Indonesia, 2013

Vessel Size (GT)	Purchasing Price (IDR)	Annual Fuel Cost (IDR)	Annual Operational Cost (IDR)	Ratio of Fuel Cost to Operational Cost (%)
< 5	5,500	23,760,000	36,864,000	64
5-10	5,500	15,840,000	37,362,000	42
10-20	4,500	40,680,000	82,280,000	49
20-30	4,500	148,500,000	190,260,000	78
30-50	8,200	524,800,000	699,560,000	75
50-100	8,200	492,000,000	667,440,000	74
100-200	8,200	3,926,790,000	5,599,365,000	63

Source: Suryawati et al., (2013)

Table 3 Chinese Fisheries Fuel Subsidies, 2006-2013 (Millions of RMB)

	2006	2007	2008	2009	2010	2011	2012	2013
Domestic	2,890	5,107.54	11,754.18	9,383	15,070	20,630	N/A	N/A
DWF	281	326.77	883.46	815	1,608	2,680	N/A	N/A
HK, Macau	-	-	-	245	487	680	N/A	N/A
Total	3,171	5,434.31	12,637.64	10,443	17,165	23,990	35,113	38,132.72

Source: Mallory (2016)

The Chinese Ministry of Agriculture informs a series of fisheries yearbook including the investment in the fisheries sector. The government categorizes these spendings into three sections: (1) basic infrastructure developments, (2) specialized expenditure schemes, and (3) fuel subsidies in both capture and aquaculture fisheries. In 2013, the Chinese Central Government give subsidies to the fisheries sector around RMB 40.383 billion or \$6.5 billion and the most spending was the fuel subsidies, that is RMB 38.133 or \$6.14 billion (Table 3).

Based on the China Fisheries Yearbook 2012–2014, the government expenditures was used to perform the risk profile of fisheries subsidies in China. After comprehending the data, the fisheries subsidies in China could be divided into five parts, namely harmful, likely to harm, ambiguous, likely to benefit, and beneficial (Table 4). There are many spendings including in the red zone (harmful) and the warning zone (likely to harm).

As a result, there was evidence that 96 percent of fisheries subsidies in China are dangerous because of the most expenditure for the fuel subsidies. If the fuel subsidies were not included, the groups of subsidies get somewhat more equal (Figure 1).

On the other hand, the fisheries subsidies provide the multiplier effects on the fisheries sector performance indicators. The role of the fisheries sector in the Indonesian economy shows an increasing trend, particularly on the economic output, household income, and employment absorption.

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Table 4 The Chinese Central Government Expenditure in Fisheries Sector, 2011-2013 (Millions of Yuan)

Harmful	Likely to Harm	Ambiguous	Likely to Benefit	Beneficial	Aquaculture		
Central Government Expenditures in Millions of Yuan	2011	2012	2013	Central Government Expenditures in Millions of Yuan	2011	2012	2013
(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Basic Infrastructure				Quality control systems	12.5	12.5	12.5
Aquatic breeding farms	100	116.5	107.29	Fisheries administrative management	67.6	86	117.61
Epidemiology stations	97	97.7	15	Fisheries production loss assistance	23	23	43
Fisheries administration and harbors (including fisheries administration vessels)	237.91	4,363.69	300	Pilot projects on fisheries insurance	10	10	10
Fishing harbors	353.3	211.91	0	Antarctic resources exploration program	20	20	20
Protected areas/reserves	20	20	20	Fisheries assessment and exploratory catch	22	22	24.1
Capacity building	60.66	60.7	82.71	Fisheries breeding quality protection	89.5	117.4	121.4
Comprehensive agriculture development	26.2	27.9	45.2	Supplementary budgeting	2.15	1	0
Fishing vessel renovation	0	4,034.4	200	<i>Subtotal Ministry of Agriculture</i>	276.95	325.4	380.31
Converting boats to homes	0	0	500	Central Government Budget Transfer			
<i>Total Basic Infrastructure</i>	895	8,932.8	1,270.2	Seeding	221	306	309.95
				Building ranching areas	50	89.7	90.05
Specialized Financing Programs				Vessel decommissioning, production restructuring, and fishermen retraining	29	4.3	0
				Support for the production of "food basket" items	100	200	200
Ministry of Agriculture				Disaster relief	410	0	0
Ecological protection (such as fishing reduction)	3	3	2.86	<i>Subtotal Central Government Budget Transfer</i>	810	600	600
Statistics	20	20	18.44	<i>Total Specialized Financing Programs</i>	1,087	925.4	980.31
International communication and cooperation	1.5	1.5	1.4	<i>Total Central Government Expenditures</i>	1,982	9,858.2	2,250.51
Wildlife species protection expenses	0.7	4	4	Fuel Subsidies	23,990	35,113	38,132.72
Disease monitoring and defense expenses	5	5	5	Grand Total Subsidies	25,972	44,971.2	40,383.23

Source: Mallory (2016)

Including Fuel Subsidies

Not Including Fuel Subsidies

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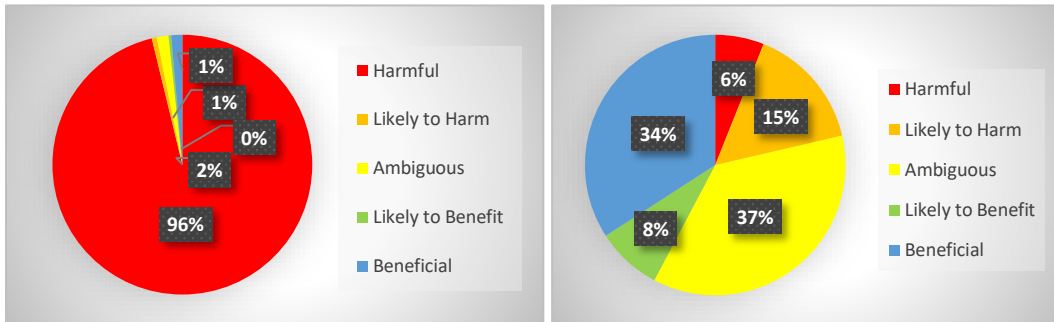


Figure 1 The Risk Profile of Central Government Expenditures Both Including and Not Including Fuel Subsidies, 2013
Source: Mallory (2016)

The productivity of the fisheries sector must be increased through efforts to manage and utilize the fisheries resources optimally and encourage the development of small and medium scale of fisheries processing industries (Tajerin, 2009). A change in capture fisheries management policy is needed in the context of recovering fisheries resource stocks and capture fisheries activities, such as sustainable fisheries management and management based on an ecosystem approach (Wiadnya, Djohani, Erdmann, Halim, Knight, Mous, Pet, Soede, 2005).

In Figure 2, the production of capture fisheries in 2015 and 2016 reached about 6.6 million tonnes. Its production increased by 6.9 million tonnes in 2017. The capture fisheries in Indonesia is both the marine fisheries and inland open water fisheries (Ministry of Marine Affairs and Fisheries, 2018). The aquaculture fisheries also have a prominent role in the fulfillment of fisheries production in Indonesia. The aquaculture fisheries production in 2015 reached 15.6 million tonnes. Then, its production rose 16.0 million tonnes in 2016 and 16.1 million tonnes in 2017 (Ministry of Marine Affairs and Fisheries, 2018a).

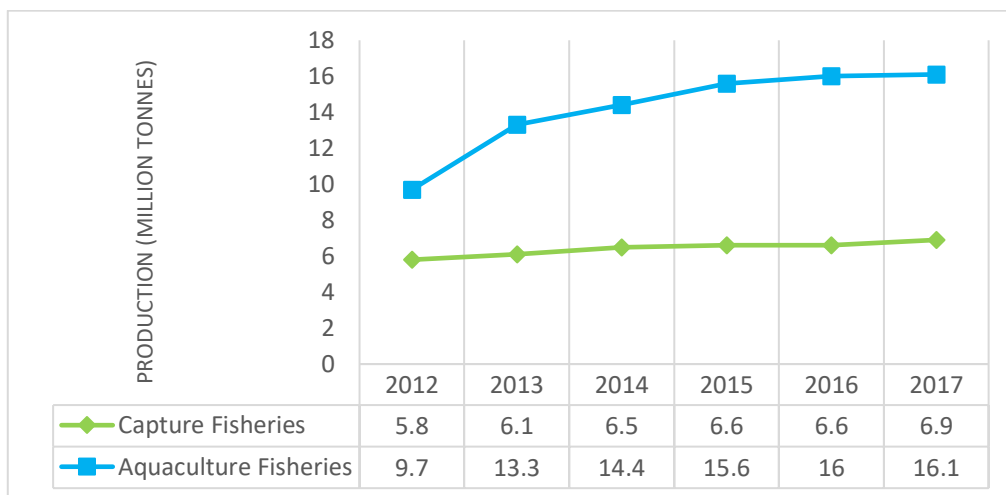


Figure 2 The Number of Capture and Aquaculture Fisheries Production in Indonesia, 2012-2017 (Million Tonnes)

Source: Ministry of Marine Affairs and Fisheries

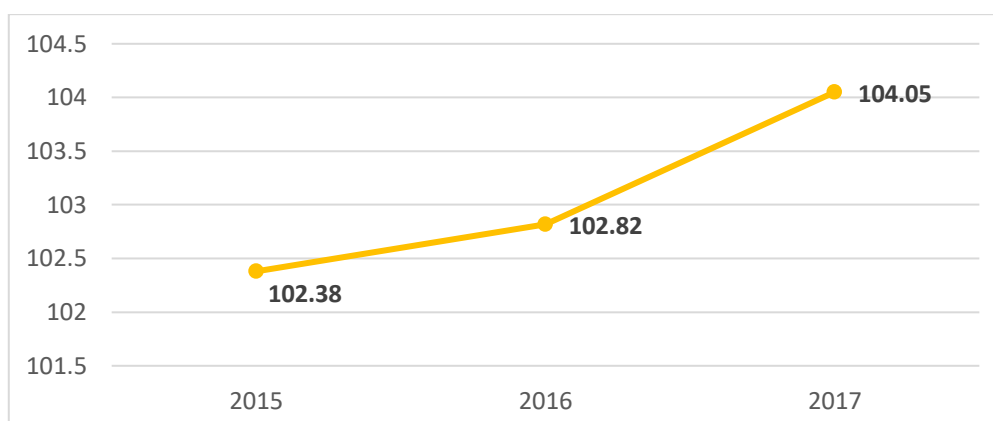


Figure 3 The Farmers' Terms of Trade of Fishery/Aquaculture Subsector in Indonesia, 2015-2017

Source: BPS-Statistics Indonesia

The fisheries production is one of the variables that effectuates the increase of GDP value of the fisheries sector. Based on the Gross Domestic Product (GDP) from BPS-Statistics Indonesia (2018a), fisheries sector had an increase. In 2016, the GDP of the fisheries sector reached 214.5 trillion Rupiahs with 5.15 percent growth and 2.56 percent contribution to the National GDP. In the following year, the GDP of the fisheries sector reached 227.3 trillion Rupiahs with 5.95 percent growth and 2.57 percent contribution to the National GDP.

The growth of fisheries export has become one of specific focus for the government, in this case the Ministry of Maritime Affairs and Fisheries. According to the Directorate General of Strengthening Competitiveness of Marine and Fishery Products processing BPS-Statistics Indonesia data, the value of fisheries export increased 8.12 percent from USD 3.78 billion (2016) to USD 4.09 billion (2017). In the same period, the fisheries export value to the major destination countries increased too. The fisheries export value to the United States grows 12.82 percent, Tiongkok grows 11.28 percent, the European Union grows 9.38 percent, Japan grows 8.31 percent, ASEAN grow 3.42 percent, and others fell 1.76 percent (Ministry of Marine Affairs and Fisheries, 2018c).

The Farmers' Terms of Trade of Fishery/Aquaculture Subsector/ *Nilai Tukar Petani Subsektor Perikanan/ Budidaya Ikan* (NTNP) describe the purchasing power of the fishermen and fish farmers in Indonesia. This indicator can also be used as the proxy for the fisheries household welfare in Indonesia. Based on BPS-Statistics Indonesia (2018b), the Farmers' Terms of Trade of Fishery/ Aquaculture Subsector increased to 1.67 points from 2015 to 2017; 102.38, 102.82, and 104.05 respectively (Figure 3). The Farmers' Terms of Trade of Fishery/Aquaculture Subsector has increased in recent years. This fact shows that the purchasing power of fishermen and fish farmers is better than before.

The objectives of this research are (1) understanding the general descriptions about fisheries subsidies in Indonesia and China; (2) how large the impacts of fisheries subsidies

linked with policies; and (3) the opinion whether the fisheries subsidies must be stopped or not.

For the first objective, according to Mallory (2016) and Putra and Aqimuddin (2014), subsidies in the fisheries sector are divided into four types, namely: (1) beneficial subsidies; (2) capacity-enhancing subsidies; (3) ambiguous subsidies; and (4) harmful subsidies. The beneficial subsidies are programs that are shown as investments in natural capital assets. For example, conservation and supervision of fish catches, fisheries management schemes, and fisheries research and development. Capacity enhancing subsidies provide disinvestment, likes increasing fisheries capacity causing overexploitation. Ambiguous subsidies are the aid programs that have no known (ambiguous) output, whether in the form of investment or disinvestment, such as fisheries counseling. Harmful subsidies reverse economic booster and reduce fishing profits including fuel subsidies and tax exemptions. The developed countries provide large subsidies in the field of fisheries management, while the developing countries give large subsidies regarding the support of making fuel and repairing ships.

Many global subsidies are dangerous and load the government budget, especially the fuel subsidies. Unfortunately, fuel subsidies are the greatest fisheries subsidies in both Indonesia and China. Although most global subsidies are harmful and overlay the state budget, the subsidies are still needed, especially in the developing Countries, including Indonesia.

For the second objective, the fisheries subsidies also contribute the positive effects to the fisheries sector performance indicators. Several indicators in the results chapter show the increase gradually, namely the fisheries production, fisheries export, and Farmers' Terms of Trade of Fishery/Aquaculture Subsector. The result of Muchlisin et al. (2013) research is the majority of fishermen have accepted subsidies from both government and non-government organizations. They declared that the types of aid proposed were appropriate with their needs and they are still hoped that the fisheries subsidies should be continued in the future. If the fisheries subsidies are eliminated, they can get negative impacts directly.

On the other hand, the fuel price increase, or fuel subsidies elimination, are expected to provide the negative impacts. The results show that the increase of fuel price immediately contribute to the negative effects on operational costs for not only the capture fisheries, but also the aquaculture fisheries and fish processing, such as production process, product distribution and consumption (Suryawati et al., 2013). The other studies also present the same condition if the elimination of fuel subsidies is applied. The reduction of fuel subsidies give negative impacts, such as diminishing fishermen welfare, increasing the fish price, and rising illegal fishing. The fuel is the most important requirement for fishermen to catch fish (Saptanto & Wijaya, 2014). It also will give the negative impacts on the fisheries market, fisheries resources and employment Putra and Aqimuddin (2014).

The focus of government programs in the fisheries sector achieves three main target indicators. First, pro-poor namely increasing the income of fishers, fish farmers and

coastal communities, and increasing the reach of community empowerment programs from poor coastal populations. Second, pro-job, namely increasing employment of fisheries labor. Third, pro-growth, namely increasing the contribution of fisheries GDP towards non-oil national GDP (excluding processing). To fulfill the three major focus in the fisheries sector, the government must carry out several subsidy actions (Putra & Aqimuddin, 2014).

According to Kumar, et. al (2019), the market entrance for fisheries sector has three main classifications of countries: “(i) the holders of fisheries resources; (ii) the holders of fish extraction capacity; and (iii) the current suppliers of marine capture in fisheries”. The matrix in Table 5 presents the outputs of two schemes: “(i) the example of retention and recognition of fisheries subsidies; and (ii) the elimination of fisheries subsidies”. Finally, there are two feasible schemes in the fisheries market in case talking about the fisheries subsidies with the aim of a trade policy tool and sustainability.

Table 5. The Possible Outcomes Based on the Fisheries Subsidies and Licenses

Scenarios	<i>Developed countries’ producers with vessel capacity and non-specific subsidy are issued license</i>	<i>Developed countries’ producers with vessel capacity and non-specific subsidy are <u>not</u> issued license</i>
<i>Developing countries’ current global marine catch producers retain existing and introduces new subsidies, and are issued fishing licences</i>	Competition	No market domination
<i>Developing countries’ current global marine catch producers eliminate specific fisheries subsidies, and are <u>not</u> issued fishing licences</i>	Exit fisheries market	Exit fisheries market

Source: Kumar, Kumar, Stauvermann, & Chakradhar (2019)

From the matrix, there is a difference in the implementation of fisheries subsidies, depending on whether the developed countries or the developing countries. The subsidies elimination will provide a positive welfare impact for the developed countries. On the other hand, the subsidies elimination will be give a negative welfare impact for the developing countries because most of them are the main producers of capture fisheries. Ultimately, the negative welfare impact can also effectuate the most small-scale fishermen with low-income that settle in the developing countries.

Merayo et al., (2019) review the subsidy reform and distributive justice in the fisheries sector. This study analyses and examines choices for resolving justice concerns in the reform of fisheries subsidies and calls for governments to think the impacts of subsidies

and subsidy reform on inflammable social communities. Several choices for reform can be selected by the policymakers. They would probably encounter solid opposition if they remove subsidies altogether because of high short-term disadvantages at the fisheries sector and society levels that outweigh any long-term benefits.

For the last objective, based on the result and discussion of this research, the author does not agree if the fisheries subsidies stopped. Although there are some negative impacts, the fisheries business actors, especially small-scale fisheries households (fishers), still need subsidies. The fisheries subsidies should be continued with applied terms and conditions, so the subsidies can be used wisely by the fisheries business actor and can be properly monitored by the government.

The author's opinion is in accordance with Putra and Aqimuddin (2014) research, the fisheries subsidies must continue to be implemented by the government, especially to protect fishers and small fisheries industries. Adam and Surya (2013) state that the fishers and fish farmers still need subsidies to sustain their fisheries activities. The government provides subsidies including fuel subsidies, input subsidies (seedlings, cold storage, and other supporting facilities), and output subsidies (maintaining price stability).

In the capture fisheries, the existence of fuel subsidies would reduce operational costs significantly. As a result, fishers can gain a more significant surplus to fulfill daily needs and upgrade household welfare (Suryawati et al., 2013). In the aquaculture fisheries, if there is an increase of fuel price or an elimination of fuel subsidies, it can contribute a huge effect both on intensive and semi-intensive scale, such as increasing production costs directly and decreasing the business profit (Ramadhan and Suryawati, 2016).

Conclusion

The fuel subsidies are the greatest fisheries subsidies in both Indonesia and China. Although most global subsidies, including the fuel subsidies, are harmful and burden the government budget, the subsidies policy are still needed, particularly in the developing countries, including Indonesia.

The fisheries subsidies also contribute the positive effects to the fisheries sector performance indicators. On the other hand, the removal of fisheries subsidies, particularly the fuel subsidies, is expected to make the negative impacts. For the policy, the government regulates the programs in the fisheries sector. There are two feasible schemes in the fisheries market in case talking about the fisheries subsidies with the aim of a trade policy tool and sustainability: (i) the retention and recognition of fisheries subsidies and (ii) the elimination of fisheries subsidies.

The author does not agree if the fisheries subsidies stopped. The fisheries subsidies should be continued with applied terms and conditions. Hopefully, the subsidies can be used wisely by the fisheries business actors and can be adequately monitored by the government.

Recommendation

There are two recommendations for the government. First, the government must evaluate the subsidy policies that have been implemented whether to successful or not. It can be connected with fisheries sector performance indicators. Second, the government must still prepare state budget for fisheries subsidies, especially subsidies for small-scale household, such as fishers. The transparency of fisheries subsidies is a must as stated in the WTO agreements contained in “The Ministerial Decision on Fisheries Subsidies”.

There are two recommendations for the next research. First, the next research can use the quantitative analysis, so we can get the direct variables that affect the fisheries subsidies partially and simultaneously. Second, the next research can add the time series data, so we can see the trend whether the fisheries subsidies have more positive impacts or not.

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