FISHERIES SUBSIDIES AND THEIR IMPLICATIONS, CASE STUDIES OF FUEL SUBSIDY PROGRAMS IN TAIWAN AND VIETNAM

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ABSTRACT

In recent years, WTO constantly focuses on fishery subsidy negotiations, and since the Non-actionable subsidies have been cancelled, fishery subsidies norm is still hard to reach a consensus. Although the WTO president drafted a list of prohibitive subsidies in 2008, they have been implementing widely in most countries, especially the vessel fuel subsidy programs. While Taiwan has implemented for a long time the vessel fuel subsidy program made the fishermen depend on it as an annual aid, Vietnam has shown several disadvantages in fishery management after the first application of fuel price supporting for its fishing fleet. This research studied fuel subsidies programs in two countries Taiwan and Vietnam, examined its impacts on management policy and adjustments to fisheries in conformity with the countermeasure. Currently, most countries treated the fuel subsidy as a negative policy. The 7th Meeting of Ministers just finished in Geneva in December 2009, most delegates claimed that Doha round negotiation should be finished in the year 2010. With this, phasing out or reducing the fuel subsidy may be implemented in 2013. In order to release the pressure on fishermen's livelihood and apply adjustments earlier, the government can encourage the retirement on aged vessel, and reward suspension of fishing activities, energy-conservation, safe and small-scale fishery. In addition, government can also consider a more elastic category of fishing activities, or discourage the subsidy on production support or the structural safety net by supporting the fishermen income. Finally, in order to provide more rooms for negotiating in WTO, it is necessary to continue data collection on other countries fishery subsidies policy and adjust the timing and contents publicized.

Keywords: Fisheries sector, vessel fuel subsidies, Taiwan, Vietnam, WTO

INTRODUCTION

Fisheries resources have been gaining scientist as well as public attentions for a few decades. Fisheries activities led to the over-exploited, fully exploited and depleted status of fisheries resources [1] due to partially fisheries subsidies. Although the fisheries resources have been warned to reach the threatened level, fisheries subsidies still remains and continuously increases from year to year. They are recently considered to be big tools that accelerate the rate of depletion. WTO in recent years constantly focused on fisheries subsidies negotiations, and since the non-actionable subsidies have been cancelled, fisheries subsidies norm is still hard to reach a consensus. Although the WTO president drafted a list of prohibitive subsidies in 2008, subsidies have been implementing widely in most countries, especially the vessel fuel subsidy programs.

Not only do subsidies have a range of diverse impacts on environment, trade effect, but also on social in both levels: national and global. Economically, they can distort fisheries prices and production levels, and impede the structural adjustment while aggravating budget deficits. At the international level, fisheries subsidies distort trade and competitiveness. With regard to the environment, subsidies can encourage overuse of fossil fuels and other inputs to production or lead to the over-exploitation of resources while contributing to harmful emissions and waste. These ecological impacts easily spill over to the global sphere. Socially, these supports can redistribute income from consumers to producers and distort financial
and resource allocations across firms and sectors as well as countries, with adverse effects on overall living standards [2].

Despite the existence of different definitions, fisheries subsidies, obviously, are payments from the government to the fishing sector that make fishing sector more profitable than it would be without them due to the decreasing of the invested cost. Due to several ways to define fisheries subsidies, there are various ways to classify fisheries subsidies based on target group, method used, typical programs, and impact on resources. However, one of the most typically popular forms of fisheries subsidies which could not be confused were discussed in many literatures was fuel grant which seemed to be an unfair treatment from government to their own citizens at national level, and an unfair game to all the trade participants at international level. All the citizens when using gasoline and diesel fuel have to pay the tax; however, there exists the tax exemptions for fishermen in more than 80 countries [3]. Although the subsidy amounts and forms which vary from countries to countries, continents to continents, their potentially negative impacts on resource can not be disclaimed.

Sumaila et al. in 2008 [3] for the first time estimated the global fuel subsidies in the year 2000 approximately US$ 6.4 billion concluded that Taiwan government supplied US$ 120 million annually to its fishing fleet while Vietnam had no fuel subsidies. Up to date, that article did neither mention clearly about the policy in each country, nor predict the trend of fuel subsidies amount. It was seemed to be out-of-date, having a big gap in updating information especially after the global economic crisis since at the end of 2007 extending until 2010. Hence, this study would further detail the fuel fisheries subsidies programs in Taiwan and Vietnam as well as compare the differences in policy, implementation and result. Certainly, the figure found out in this study will differ far away from previous ones.

DATA COLLECTION AND COMPUTING FUEL SUBSIDIES

Data were collected from printed and online resource such as internet, articles papers and theses. We created a database of fuel subsidies for two countries. Data about fuel subsidies of Taiwan was supplied from Taiwan Fisheries Agency, websites of Ministry of Finance. Data about fuel subsidies of Vietnam derived from the Department of Capture fisheries and Resource Protection. All the values of fuel subsidies in Taiwan would be changed into the year 2008 value by applying the consumer price index (CPI). CPI rate were extracted from the Directorate General of Budget, Accounting and Statistics, Executive Yuan, Republic of China, website http://www.dgbas.gov.tw/. The currencies of Taiwan and Vietnam will be converted to US dollar currency with the exchange rate on December 31, 2008 through the website http://uk.finance.yahoo.com/currencies/converter/.

RESULTS

Taiwan fisheries with fuel subsidies program

Like many other coastal countries, Taiwan started developing capture fisheries in the early due to the needs of protein and trade exchange. Taiwan fisheries can be classified into three kinds: coastal, offshore and far sea fisheries. Till the middle of 20th century the fisheries mainly focused in coastal fisheries with various kinds of gears, concentrated on small fishing vessels with more than 90% fishing vessels less than 100 GRT in 1970 [4]. Almost eight times-increasing in the total number in 20 years from 1950 – 1970, Taiwan fishing fleet continued increasing to the peak in 1989, then fluctuated till present, however, in general the number of vessels had a trend of decreasing (Fig. 1).

Due to the increasing of numbers in the middle of 20th century, Taiwan fishing fleet certainly required more and more fuel to operate, by the time, fuel subsidies program in Taiwan conceived in 1958, officially implemented since 1960 till present. This program can be separated into three stages.
Fuel subsidies program from 1958 to before 1993 with directly exempted fuel price

Chinese Petroleum Corporation (CPC), the only oil company in Taiwan until 1992, was in charged of importing and selling fuel in whole country. At the beginning, the Taiwan government had less experience in fuel subsidies policy but they was willing to give their fishermen fuel aid. Hence, the government cooperated with CPC to sell fuel to fishermen with directly exempted price which was often called CPC price. There were two types of supported fuel which could be classified as type A and type B that denoted for diesel and heavy oil, respectively. The exempted price for fishermen was 45% for type A and 37% for type B [5].

According to this policy, the fishermen got the most benefit even though the global fuel price increased. The more fuel price increased, the more subsidies Taiwanese fishermen got and it could be seen clearly in practice. In the early time of this stage, fuel subsidies lightly increased but fluctuated from 1960 to 1972 due to the variation of global fuel price but not due to fuel consumption. However, when the global oil crisis started in 1973, this grant increased strongly till 1976. In two years 1977 and 1978, the trend of fuel subsidies slightly decreased however it started increasing rapidly again due to the second global oil crisis in 1979 and extended in six successive years later. It reached the peak in 1985 by almost US$ 169 million. From 1985 to 1990, fuel subsidies stably remained around US$ 150 million.
During this period, the fuel subsidies policy of Taiwan was apparently not effective due to the strong dependence on the market price. At the end of this stage, realizing the impacts of global market oil price affected too much on the policy that were unseen before, the government tried to find another way to control that kind of grant. The amount of fuel subsidies declined in 1991 and 1992 partially because of the reduction in fishing vessels, however, the governmental act on squeezing subsidies also partially contributed. This could be seen a good mark in the policy of controlling subsidies of Taiwanese government.

**New policy in the stage from 1993 to before 2002**

In the Value-added and Non-value-added Business Tax Act of Taiwan [6], Chapter II: Scope of Reduction and Exemption article 8.28 mentioned:

“The following goods or services are exempted from the business tax:
... Fishing boats for coastal or offshore fishery and machinery, equipment, nets and fuel used by fishing boats.”

Moreover, in Fisheries Act [7] article 59 which were added since February 1991 mentioned clearly about fuel tax exemption for fishers:

“Fuel for powered equipment used in fisheries shall be exempted for commodity tax”

Since 1991 there was a change in the policy when it clarified which type of tax exemption the fishermen could get. Though Value-added and Non-value-added Business Tax Act just mentioned about the coastal and offshore fisheries fishermen could get commodity tax. It seemed like the government just cared about these kinds of fisheries, however, it should be noticed that the far sea fishing fleet of Taiwan almost operated in EEZ of other countries and returned Taiwan in very short time after 3-4 years, thus, the fuel consumption of this kind of fisheries did not impact too much compare to the huge consumption of coastal and offshore fisheries. Therefore, in general the fishing fleet in Taiwan during this stage could get two types of tax exemption: (1) business tax which was remained 5% fuel price in the early stage till present and (2) commodity tax which changed by time.

Beside those two kinds of tax exemption above, fishermen also got fuel price subsidies from the government according to the “Oil Price Subsidies Standards in Fisheries Sector” on November 4th 1993. According to this policy, fishermen could get another fuel price support which consisted 28% and 32% per oil litter for type A and B, respectively.

Consequently, the types of tax exemption which fishermen could get were more clearly. Compare to the previous ratio, the new policy decreased the amount of subsidies per liter from 45% to over 33% for the type A and 37% for type B. The government started to control the fuel consumption as well as the subsidies themselves though it was not so effective when the support ratio was still high. In practice, after implementing the new policy, the total amount of fuel subsidies decreased significantly from US$ 73 million in 1993 to US$ 62 billion in 1999 before increasing dramatically again in 2000. However, the reason was not because of a new global oil crisis but due to the oil re-sale program of fishermen to other users such as trunk drivers.

It is noticed that in this stage, the government still used “hand-writing book” in order to record the fuel consumption by fishermen. Hence, the fishermen can fuel their fishing vessels anytime at any gas station which was managed by human resource from the Local Fishermen Associations who had power and willingness to sell as much as possible fuel for their fishermen. Though this oil re-sale program happened in long time, the government seemed like unseen until 2005. Consequently, the fuel consumption and the fuel subsidies in 2001 was higher 16% and 24%, respectively than in 2000. In the end of this stage, Taiwanese government faced with the negotiation in access to World Trade Organization (WTO), therefore, a new policy was created for the next stage.
The stage from 2002 to 2010

This was the stage Taiwan joined World Trade Organization (WTO), thus, subsidies were the big issue which should be considered thoroughly. On the one hand the government tried to cut fuel subsidies ratio to 5% in accordance with the requirement of WTO, but on the other hand the government tried to ease the anger of fishermen when cutting almost their benefit which used to be their annual aid. At the same time, the global fuel price increased and caused the fishermen so more and more difficult that their anger seemed to be double. In addition, when seeing other countries such as Japan, Korea, China or Europe Union still kept fuelling to their fishing fleet, the Taiwanese government finally in “Oil Price Subsidies Standards in Fisheries Sector” decided to decrease from 28% and 32% to 14% and 16% for type A and type B fuel, respectively. This figure did not include business or commodity tax which was always exempted for fishermen. This policy called “Price subsidies halves” due to its 50% reduction of subsidies for each type compare to the previous policy.

Figure 4 showed that after joining WTO, the Taiwanese government kept their promise when they decreased the ratio of price support for fishermen because amount of supported budget declined significantly though there were increases in 2004 and 2005 due to the rise of fuel consumption.

2005 was the year that the government solved fuel consumption problem when they implemented a new policy in which all the fishing vessels in order to get fuel subsidies they had to set up a machine called VDR which could record the information of the total route. Fishermen would only receive fuel subsidies
according to their fishing vessel route. This equipment is the best way until now to solve the fuel consumption issue in which fishermen re-sold their aid.

After 2005, the reduction of the total fuel consumption in Taiwan led to the decrease of fuel subsidies and it marked the lowest peak since 1993 approximately US$ 52.4 million. This indicated the efficiency of the policy as well as the effort of the government in controlling fuel consumption and fuel subsidies, though it increased again in 2008 due to the global economic crisis.

Generally, the Taiwanese government has implemented the fuel subsidies since the very early stage that made fishermen depend on fuel subsidies as an annual aid. However, the government by the time had more and more effective measure to control the fuel consumption and the fuel subsidies.

**Vietnam fisheries with one-year fuel subsidies program**

Vietnam has typical small-scale fisheries since the early stage until now, through many decades or centuries, that characteristic still remains as traditional fisheries. In the early years of the 21st century, Vietnam received support from NORAD, DANIDA, AusAID through ODA and multilateral assistance (EU, FAO, WB…) programs in fisheries sectors in order to establish MPAs, to develop fishing harbor infrastructure, to support fisheries management and conservation, etc.

The Vietnamese government, since the early stage, had never supported fuel aid to fishermen except in 2008 when the economic crisis occurred in USA and immediately extended and impacted from country to country and continent to continent. During the crisis, the oil price increased dramatically more than US$ 130 per barrel, this certainly had a significant impact on Vietnam economic and so did the fisheries sector. At that time, most of fishers in Vietnam were in trouble with fishing operation due to the high fuel price, fishing vessels were decommissioning in consecutive months. In that urgent case, the Vietnamese government financed the fishers through the Decision 289/2008/QD-TTg signed on March 18, 2008 [8] on aid to ethnic minority people, poor households and fishermen in the face of petroleum price hike. This Decision mainly focused on fuel price support to fishers through direct payments.

Unlike Taiwan or EU countries, the Vietnamese government supported fishermen by direct payments and based on the capacity of fishing vessel to determine the amount of support. The articles were as below:

**Article 1.7**
*Support fuel for fishermen who are the owners of capture fishing vessels or fisheries service vessels*

**Article 1.7 b)**
*Vessel with capacity equal or more than 90CV: support VND 8 million per time (≈ US$ 457.1429/time), 3 times per year.*

*Vessel with capacity under 90CV but equal or more than 40 CV: support VND 5 million per time (≈US$ 285.7143), 4 times per year.*

*Vessel with capacity under 40 CV: support VND 3 million per time (≈US$ 171.4286), 5 times per year*

**Article 1.7 c) of Decision No. 298/QD-TTg**
*Supporting time: in the year 2008*

Although the articles covered all fishing vessel, there was an unfair treatment between types of vessels. There was a big amount support gap between the owners of 90 CV vessels and owners of 89 CV vessels, or owners of 40 CV vessel and owners of 39 CV vessels. Total fuel aid of the 90-CV and 40-CV vessel were VND 24 million and VND 20 million, respectively while those of 89-CV and 39-CV vessel were only VND 20 million and VND 15 million, respectively. In July 2008, there was another Decision No. 965/QD-TTg [9] which changed, supplemented the previous Decision No. 289/QD-TTg
Article 1.2.b)

Vessel with capacity equal or more than 90CV: support VND 10 million per time (~ US$ 571.4286 per time), support 3 times per year.
Vessel with capacity under 90CV but equal or more than 40 CV: support VND 6.5 million per time (~US$ 371.4286 per time), support 4 times per year.
Vessel with capacity under 40 CV: support VND 4 million per time (~US$ 228.5714 per time), support 5 times per year.

Article 1.2 c)

Supporting time: in the year 2008

Compare to the previous decision, the amount of support increased, however, the problem which mentioned above still could not be solved in the new decision.

Another interesting issue was discovered through the implication of the fuel subsidies program in Vietnam was the number of fishing vessels. According to Article 1.7 of Decision No. 298/QD-TTg, fishermen need to fulfill some requirements such as fishing licenses, over 6 month operation after completing buying vessel insurance and crew insurance, and officially identified voyage to receive fuel support. These requirements were suitable for fishing vessel owners who wanted to receive the fuel subsidies. It should be noticed that the Decision was signed in March, 2008 while the time to implement the policy was just in the year 2008, this meant that the duration was only almost 9 months. However, the number of fishing vessels in a report of Department of Capture fisheries and Resource management (DECAFIREP) to the Ministry of Agriculture and Rural Developing (MARD) showed a significant increase in the number of fishing vessels (42%) while the total capacity just increased 8% compare to the previous year (Fig. 5). More details could be seen at the number of fishing vessels by month in 2008 (Table I). Number of fishing vessels increased more than 35% in December compare to May.

| Table I: Number of fishing vessels in 2008 after implementing Decision 289/QD-TTg |
|---------------------------------|------------|-------------|-------------|-------------|----------------|----------------|----------------|----------------|
| No. of vessels (Units)          | May        | June        | July        | August      | September   | October       | November      | December       |
|                                 | 93.405     | 93.405      | 96.323      | 99.784      | 103.38      | 117.778       | 123.609       | 126.388        |

This raised the question that whether the oil price support policy of the Vietnamese government was a tool to encourage the increase of fishing vessels or there already existed the failure in fishing vessel management when they could not control unregistered fishing vessels before that policy. The answer
should be the management failure because there was just a few of new fishing vessels built in the year 2008.

The amount of fuel subsidies in Vietnam (US$ 129 million) was much higher than in Taiwan (US$ 80 million) in 2008, however, number of fishing vessels in Vietnam (126 thousand units) was much more incredible enormous than in Taiwan (13 thousand units) (Table II). This indicated that each fisherman in Vietnam did not receive the enough big money to enhance his fishing effort. Fuel aid for one CV of vessel could be estimated about US$ 23. This amount could only aid fishermen during economic crisis, but failed to encourage the fishing effort. The capture production in 2008-2009 which did not increase compare to previous years could also reflect the stable fishing effort (data unpublished).

<table>
<thead>
<tr>
<th>Region</th>
<th>Fuel subsidies (US$)</th>
<th>No. of fishing vessels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern</td>
<td>35,957.486</td>
<td>37,988</td>
</tr>
<tr>
<td>Middle</td>
<td>59,276.401</td>
<td>56,892</td>
</tr>
<tr>
<td>Southern</td>
<td>34,278.742</td>
<td>31,508</td>
</tr>
<tr>
<td>Total</td>
<td>129,512.629</td>
<td>126,388</td>
</tr>
</tbody>
</table>

Due to large number of fishing vessels, the policy was not effective in economic term when the catch per unit effort (CPUE) was lower than the previous year (Fig. 6). However, according to social and environmental terms, the fuel subsidies in Vietnam were considered as a good one which could help fishermen overcome through the crisis period without enhancing the fishing effort.

![Fig. 6. Total engine capacity and catch per unit engine (CPUE) in Vietnam, 1998-2008](image)

CONCLUSION

This study found out that the Taiwanese government has implemented their fuel subsidies program for over 50 years since 1960 with the total amount more than US$ 3.7 billion. The amount of each year ranked from US$ 16.1 million to US$ 168.9 million. This program made fishermen depend on fuel subsidies as an annual aid and the fisheries will be sure in many troubles without them. In contrast, 2008 is the first time the Vietnamese government has implemented the fuel subsidies program with a huge amount of money (US$ 129 million). However, this program was certainly a tool for the government to re-control their fishing fleet rather than to enhance fishing effort or to distort price market price in the international market.
According to the Article 3 of the SCM Agreement of the WTO’s fisheries related subsidies inventory report we recommend the adjustments to be made for future fisheries supports as follows: (1) replacing regular subsidies with irregular subsidies: current fuel subsidies in Taiwan are mostly regular subsidies, i.e., these subsidies are available yearly long, regardless whether it is during peak fishing season or off-peak fishing season, or the geographical area where the fishing operations are located. In the future, these subsidies should be provided only during specific season or occasion, such as during the idle season, off-peak fishing season, or when fishing grounds are closed for resource recovery; (2) replacing “compensatory” subsidies by “functional” subsidies: fuel subsidies provide financial support to decrease fishing costs and to increase competitiveness will result in trade distortion and cause disagreements between countries of the validity of these subsidies. We can replace these compensatory subsidies with functional subsidies, such as subsidies for resource protection and development, research and development, quality control, making production technologies more environment friendly, continue education for fishermen, improving the administrative efficiency of fishermen’s organizations, and providing market information.

Generally, we can do the following: (a) to increase the non-specific subsidies for education, or investment in human capital, these subsidies include personnel training, building and improving fishing ports, auction markets, storage and warehousing, and marketing facilities; (b) to increase subsidies for research and development, low-income fishing regions, and environmental protection facilities. These measures include accurate and timely information for fishing ground and ocean environments, improving living standards and assisting fishermen in remote and/or impoverished regions, improving the efficiency of engines of old or obsolete fishing vessels, i.e., increasing fuel efficiency and reducing engine exhaust pollution.

REFERENCES