



2016

"Small and Medium-sized  
Enterprises Competitiveness"

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# PROCEEDING

## INTERNATIONAL CONFERENCE

Agribusiness Development for Human Welfare



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Muhammadiyah  
Yogyakarta

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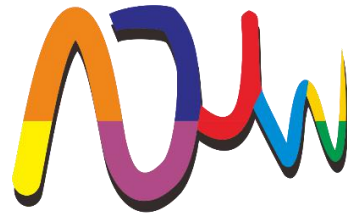
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# PROCEEDING INTERNATIONAL CONFERENCE

AGRIBUSINESS  
DEVELOPMENT FOR  
HUMAN WELFARE

*“Small and Medium-sized  
Enterprises Competitiveness”*



Agribusiness Development  
for Human Welfare

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## **EDITOR FOREWORD**

The economic integrations by ASEAN certainly have given a major influence on Small and Medium-sized Enterprises (SMEs). Beside economic integration in the form of free trade area (FTA) that has been going on since the early 2000s, economic integration in the form of ASEAN Economic Community (AEC) has been ongoing since the beginning of 2016. Through this integration, SMEs have opportunity to expand access to markets, technology, and capital. But at the same time SMEs are required to improve their competitiveness in order to survive in the market.

In order to explore ideas, concept, and innovations related to the competitiveness of SMEs, International Conference on Agribusiness Development for Human Welfare (ADHW 2016) was held in Yogyakarta on May 14, 2016. The conference organized by Department of Agribusiness Universitas Muhammadiyah Yogyakarta, in collaboration with Department of Agribusiness and Information System Universiti Putra Malaysia, Department of Agro-Industrial Technology Kasetsart University, Department of Agriculture Socio-Economics Universitas Gadjah Mada, Department of Agriculture Socio-Economics of Universitas Brawijaya, Indonesian Society of Agriculture Economics, Agribusiness Association of Indonesia. Hopefully proceedings of ADHW 2016 provide stimulus for increasing competitiveness of SMEs in ASEAN, especially in Indonesia.

Furthermore, we are grateful to Allah, the Sustainer of all word, who always makes it easy for our affairs. We would like to acknowledge with thanks to all the institution and individual who joined with resources and efforts in organizing the conference that resulted in the papers which are published in this proceeding. Special thanks to all authors and discussants who contributed with their intellectual capital and responded to our call papers. Thanks and acknowledgment are also due to all reviewers of the conference who helped in evaluating submitted papers; and to the members of the Organization Committee, who ensured smooth execution of the event.

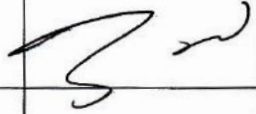
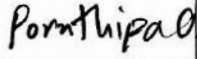


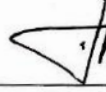

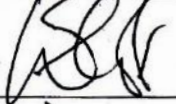
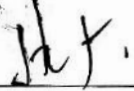
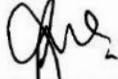


May 30, 2016

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## PREFACE

Assalaamualaikum, Warahmatullaahi., Wabarakaatuh.  
Dear Honorable Governor of Yogyakarta Special Province  
Dear respectable Prof. Dr. Zainal Abidin Mohamed  
Dear respectable Asist. Prof. Pornthipa Ongkunaruk  
Dear respectable Rector of UMY Prof. Dr. Bambang Cipto, MA.  
Dear all invited Guests, Speakers, and Participants of International seminar of ADHW 2016.

Alhamdulillah, all praise be to the Almighty God, so that we can be gathering here today at Muhammadiyah University of Yogyakarta in order to attend the Conference on Agribusiness Development for Human Welfare (ADHW) 2016.

Ladies and Gentlemen,

On behalf of the committee, I would like to say welcome to this International Conference on ADHW 2016 and thank you for attending our invitation.

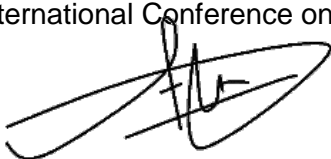
Especially, we are grateful to invited speakers, Prof. Zainal Abidin Mohamed and Asist. Prof. Pornthipa Ongkunaruk, for their willingness to share information and thoughts in this conference. As a bit report, that this conference has been attended by 85 speakers coming from five countries.

This conference entitled "Small and Medium-sized Enterprise Competitiveness". ASEAN Economic Community is the largest economic integration that is going to be implemented at the beginning of 2016 (December 31, 2015). Through this integration, SMEs will have opportunity to expand access to markets, technology, and capital. But at the same time SMEs are required to improve their competitiveness in order to survive in the market. We expect that this seminar is capable of producing thoughts building SMEs within ASEAN, especially Indonesia, to face the free trade.

This event can be done by support and efforts from all sides. Therefore, I would like to say thank you to all committee members having worked hard to conduct this event. We, as the organizer committee, do apologize when there is a shortage in conducting this event.

Wassalamualaikum, Warahmatullaahi., Wabarakaatuh.

Chairman  
International Conference on ADHW 2016



Dr. Aris Slamet Widodo, SP., MSc.



## **WORDS OF WELCOME**

Assalamu'alaikum warahmatullahi wabarakatuh

Alhamdulillah, all praise be to Allah SWT, who has given us His blessings so that this International Seminar of Agribusiness Development for Human Welfare (ADHW) 2016 entitled "Small and Medium-sized Enterprises Competitiveness" can be conducted. This International Conference is held in cooperation among Agribusiness Study Program of Muhammadiyah University of Yogyakarta with Putra University of Malaysia (UPM), Kasetsart University (KU), Association of Indonesian Agricultural Economy (PERHEPI), and Agribusiness Association of Indonesia (AAI), Universitas Gadjah Mada (UGM) and Universitas Brawijaya (UB).

Countries of ASEAN members like Indonesia, Malaysia, and Thailand have more than 90% Small and Medium-sized Enterprises (SMEs). In general, SMEs play important role in economic developments such as in terms of employment, added value, improve foreign exchange, and economic growth. For Indonesia, the role of SMEs is limited to employment and added value, while the foreign exchange from SMEs is still low. According to the General Director of SMEs of Industrial Ministry, in 2013 the total SMEs being able to pass through export market is just under 5 percent. For that required many breakthrough and innovation so that the role of SMEs becomes real economic development, especially in Indonesia, and generally in ASEAN countries.

On behalf of Agribusiness Department of Universitas Muhammadiyah Yogyakarta, we would like to express our gratitude Putra University of Malaysia (UPM), Kasetsart University (KU), Association of Indonesian Agricultural Economy (PERHEPI), Agribusiness Association of Indonesia (AAI), Universitas Gadjah Mada (UGM) and Universitas Brawijaya (UB) for all supports, sponsors, and all committee members having worked so hard that this International Conference can be conducted.

Hopefully, these synergies coming from various parties can provide contribution for developing SMEs in Indonesia and other ASEAN countries as well.

Wassalamu'alaikum warahmatullahi wabarakatuh

Head of Agribusiness Department  
Universitas Muhammadiyah Yogyakarta



Ir. Eni Istiyanti, MP.



**Gubernur**

**Daerah Istimewa Yogyakarta**

**Sambutan**

**KONFERENSI INTERNASIONAL**

**“*AGRIBUSINESS DEVELOPMENT FOR HUMAN WELFARE*”**

**Yogyakarta, 14 Mei 2016**

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Assalamu'alaikum Wr. Wb.

Salam sejahtera untuk kita semua.

Yang Saya hormati :

- Rektor Universitas Muhammadiyah Yogyakarta;
- Para Narasumber;
- Hadirin dan Para Peserta yang berbahagia,

Puji dan syukur marilah kita panjatkan kehadirat Allah SWT karena hanya atas limpahan rahmat serta karunia-Nya, kita dapat hadir pada kesempatan acara **Konferensi Internasional “*Agribusiness Development For Human Welfare*”** ini dalam keadaan sehat wal’afiat.

Pada kesempatan kali ini, secara ringkas Saya akan menyampaikan mengenai industri kecil menengah nasional yang menjadi tema pada pembukaan Seminar Internasional “*Agribusiness Development For Human Welfare*” ini.

**Hadirin dan Saudara-saudara sekalian yang Saya hormati,**

Berdasarkan data BPS, pertumbuhan industri pengolahan nonmigas pada tahun 2015 secara kumulatif sebesar 5,04%; lebih tinggi dari pertumbuhan ekonomi (PDB) pada periode yang sama sebesar 4,79%. Pada periode Januari-Desember 2015, nilai ekspor produk industri pengolahan nonmigas mencapai USD 106,63 Milyar, dan nilai impor mencapai USD 108,95 milyar, sehingga neraca perdagangan industri pengolahan nonmigas pada periode yang sama sebesar USD 2,32 milyar (neraca defisit).

Usaha pemerintah untuk memperkecil defisit di atas, salah satunya dengan cara memberdayakan Industri Kecil dan Menengah (IKM) yang merupakan bagian penting dalam perkembangan industri nasional. Sampai saat ini, Industri Kecil dan Menengah



telah berkontribusi sebesar 34,82% terhadap pertumbuhan industri pengolahan nonmigas secara keseluruhan.

Angka ini dapat tercapai karena dukungan lebih kurang 3,6 juta unit usaha, yang merupakan 90 persen dari total unit usaha insutri nasional. Jumlah unit usaha tersebut telah mampu menyerap tenaga kerja sebesar 8,7 juta orang, yang tentunya berdampak pada meningkatnya ekonomi nasional serta mengurangi kemiskinan.

Industri Kecil dan Menengah (IKM) memiliki peran yang strategis dalam perekonomian nasional. Hal ini sejalan dengan Visi Pemerintah dalam Rencana Pembangunan Nasional Jangka Menengah (RPJMN) 2015-2019 yaitu *“Terwujudnya Indonesia yang berdaulat, mandiri, dan berkepribadian berlandaskan gotong royong”*.

Untuk lebih meningkatkan peran tersebut, Penumbuhan dan Pengembangan Industri Kecil dan Menengah diarahkan untuk memiliki tujuan jangka menengah guna mewujudkan industri kecil dan industri menengah yang berdaya saing, berperan signifikan dalam penguatan struktur industri nasional, pengentasan kemiskinan dan perluasan kesempatan kerja, serta menghasilkan barang dan/atau jasa Industri untuk keperluan ekspor.

#### **Hadirin dan Saudara-saudara sekalian,**

Awal tahun ini, kita telah memasuki era Masyarakat Ekonomi ASEAN (MEA). Dengan demikian, perekonomian nasional akan langsung bersaing dengan para pelaku pasar di kawasan ASEAN. Produk dan jasa termasuk investasi negara-negara anggota telas bebas memasuki pasar di kawasan ASEAN.

Dalam rangka menghadapi hal tersebut, Pemerintah mengambil langkah-langkah strategis berupa peningkatan daya saing industri dan mendorong investasi di sektor industri; di mana peningkatan daya saing industri itu sendiri dilakukan melalui penguatan struktur industri dengan melengkapi struktur industri yang masih kosong serta menyiapkan strategi ofensif dan defensif dalam akses pasar.

Pemerintah telah melakukan Penguatan Sektor IKM dengan strategi ofensif dan defensifnya melalui beberapa program pelaksanaan, diantaranya antara lain: Penumbuhan Wirausaha Baru; Pengembangan IKM melalui Pengembangan Produk IKM serta Peningkatan Kemampuan Sentra dan UPT; Pemberian Bantuan Mesin dan Peralatan Produksi; Perluasan Akses Pasar melalui Promosi dan Pameran; Fasilitasi Pendaftaran Hak Kekayaan Intelektual; Fasilitasi Sertifikasi Mutu Produk dan Kemasan; serta Fasilitasi Pembiayaan melalui Skema Kredit Usaha Rakyat (KUR).

Saya berharap agar berbagai program-program pemerintah tersebut dapat didukung secara sinergis oleh seluruh komponen masyarakat. Untuk itu, Saya berpesan kepada Saudara-saudara sekalian agar semua program pemerintah dalam bidang

Industri, khususnya dalam program pemberdayaan Industri Kecil dan Menengah, didukung dengan sepenuh hati, agar dapat lebih bermanfaat bagi masyarakat dalam rangka pengembangan industri kecil menengah.

**Hadirin dan Saudara-saudara sekalian yang Saya hormati,**

Demikian beberapa hal yang dapat Saya sampaikan. Akhirnya dengan memohon ridho Allah Subhanahu Wata'ala, seraya mengucap "*Bismilahirrahmanirrahim*", **Konferensi Internasional "Agribusiness Development For Human Welfare"** dengan ini secara resmi Saya nyatakan dibuka. Semoga Allah SWT memberikan petunjuk, bimbingan, perlindungan dan kemudahan dalam setiap langkah dan upaya kita. Amien.

Sekian dan terima kasih.

Wassalamu'alaikum Wr. Wb.

Yogyakarta, 14 Mei 2016  
GUBERNUR  
DAERAH ISTIMEWA YOGYAKARTA



**HAMENGKU BUWONO X**

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## ANALYSIS OF AGRIBUSINESS SYSTEM AND COMPETITIVENESS OF GROUPER FISH IN INDONESIA

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### ABSTRACT

Grouper fish (*Ephinephelus fuscoguttatus*) is one of the most potential fishery commodity product in Indonesia, It also has a high value and has been exported to many countries, such as Hong Kong, Taiwan, Singapore and Japan. Indonesia is the third largest grouper fish producer in the world after Hong Kong and Taiwan. Each year national grouper fish production demand experiences increases as much as 9, 61% since 2010-2014 (KKP, 2014). A study towards national grouper fish became crucial to be done knowing that Indonesia's position as one of the largest grouper fish producer and exporter in the world. The purpose of this study: 1) To analyze agribusiness system of grouper fish in Indonesia, 2) To analyze national grouper fish agribusiness competitiveness. The data used in this study is secondary data, analyze using descriptive qualitative method. Materials used in this study is system framework and Porter Diamond Theory. The Data analyze shows that grouper fish's agribusiness system is not integrated yet. Needs to be more observed including live grouper fish marketing governance that is not yet efficient. From the four main components in Porter's Theory, natural resources factor is the most competitive factor in Indonesia recently, furthermore to achieve excellent competitiveness require increasing on competitiveness in other main components. Indonesia's commodity grouper fish can reach its maximum potential by increasing competitiveness in all main agribusiness system.

**Keywords: Grouper fish, competitiveness, production, agribusiness system**

### INTRODUCTION

#### Background

Indonesia is a country with abundant natural resources. Given a 1.9 million km<sup>2</sup> total land area and 5.8 million km<sup>2</sup> total marine area, fisheries sector is one of a potential sector which has not been developed optimally in Indonesia. Having advantages as a maritime country, Indonesia shows significant increase in fisheries production. In 2014, the total fisheries production reached 20.82 million tons, which is increased for about 67 percent from the total production in 2005 (BPS, 2016). The aquaculture fisheries production contributes about 68 percent to the total National fisheries production, which the rest is performed by capture fisheries (BPS, 2016).

Grouper fish (*Ephinephelus fuscoguttatus*), is one of Indonesia's

potential fisheries products. This commodity, has high economic value and has been exported to various countries such as Hong Kong, Taiwan, Singapore, and Japan. Indonesia is the third largest Grouper fish's producer worldwide, right after Hongkong and Taiwan. The demand for Grouper fish increased by 9, 61% from 2011-2014 (CTF, 2014). Covering the increasing demand over the years, the local Grouper fish's farmers widen the fishing technique from only capture to aquaculture.

The aquaculture technique for Grouper fish has been developed in several central production in Indonesia. This development is expected to increase the farmer's welfare, decrease the environmental damage which caused by the irresponsible Grouper fish's capture technique, and to increase the National

income from fisheries sector (Chaidir, 2007).

Despite of the prospect and potency, Indonesia's agribusiness system of Grouper fish face several challenges in its subsystems. Chaidir (2007), mentioned that as a system, Grouper fish's business in Indonesia is facing risks and uncertainties in several subsystems. The input subsystem still could not support the farmers with a sustainable hatchery, which caused a risk production for farmers. Moreover, on the on-farm subsystem, capture technique still becomes the main technique to cultivate Grouper fish. As a result, many irresponsible capture fishing causes many environmental damages, while the aquaculture technique has not been widely applied as the capture technique does. On the processing subsystem, there are few stakeholders involved. As an exporter, Indonesia also faces price fluctuation as a result of fluctuation on demand by the international buyer (Chaidir, 2007).

Summarizing the issues above, this study wants to capture the whole system of Grouper fish's agribusiness in Indonesia, and analyze the competitiveness. The analysis of Grouper fish's agribusiness system is important to be analyzed to identify the whole issues

occurred in Indonesia's Grouper fish Agribusiness. Moreover, the study also provide a competitiveness analysis of Grouper fish's Agribusiness to identify the National performance of Grouper fish's Agribusiness facing the international market. The analysis of Grouper fish's Agribusiness System will be performed by using the Agribusiness System Framework initiated by J. H. Davis & R. A. Goldberg in 1958. Meanwhile, the National competitiveness of Grouper fish will be analyzed by using the Porter's Diamond Framework by Michael E. Porter in 1990.

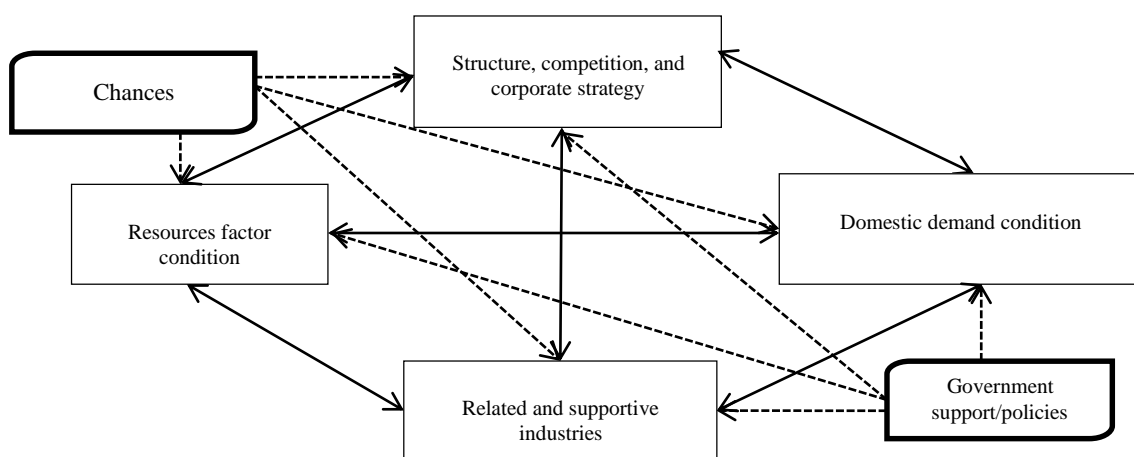
Thus, the research questions of this paper would be:

1. How is the condition of Grouper fish Agribusiness System in Indonesia?
2. How is the competitiveness of Grouper fish in Indonesia?

### Objective

Based on the research questions which are mentioned above, therefore this research divides the objectives into two, which are:

1. To analyze the Grouper fish's Agribusiness System in Indonesia, and
2. To analyze the National competitiveness of Grouper fish in Indonesia.



Notes:

- : indicates the relationship of the main components
- - - : indicates the relationship of the supportive components

Figure 1. The Complete System of Porter's Diamond  
Source: Porter (1990)

## RESEARCH METHOD

### Data and Instruments

The research was performed by using mainly secondary data. Primary data is also used as a complementary to the research analysis. Primary data was generated from observations and direct interview to several related experts. While the secondary data was generated from the documented data from Statistic Board Center (BPS), Ministry of Maritime and Fisheries Affairs (KKP), and any related reports, journals, statistics, and other documents. The instruments used are notebook, voice recorder and questions list. The research activity was performed from December 2015 until March 2016.

### Data Processing and Analysis

Data processing and analysis methods used in this research is descriptive qualitative method. The tools used in this research are Agribusiness System Framework initiated by J. H. Davis & R. A. Goldberg in 1958 and the Diamond Porter Framework by Michael E. Porter in 1990.

### The Porter's Diamond Theory

The Porter's Diamond Theory can be used to analyse the competitiveness of a commodity based on the condition of the main and supporting components in a country. There are four main components and two supporting components that make up the model like a diamond. The main components consist of: 1) resource factor conditions; 2) demand conditions; 3) related and supporting industries, and 4) structure, competition, and corporate strategies. The supporting components of the Porter's Diamond are: 1) government's policies/support and 2) the role of chances.

## RESULTS AND DISCUSSIONS

### Trade of Grouper Fish

Grouper fish is one of the most favored fisheries products, especially by the people in the Asian region. Countries like Hong Kong, Taiwan and Japan are some examples which consumption of Grouper fish is in high amount and often. Beside the taste, Grouper fish also

contains a high nutrition value. Further, it is known as a fish with a tender meat. In several countries like Taiwan, Hong Kong and Singapore, Grouper fish is identic with the food and cultural festival. Therefore, it becomes favorable to consume there.

### Production and Consumption of Grouper Fish in Indonesia

Out of all countries in the world, Indonesia is considered as one of the biggest Grouper fish producers, which rank is in the third position, after Taiwan and Hongkong. The national Grouper fish production in year 2011 until 2014 is proven to be excellent, which production is performed through capture fisheries and aquaculture. Aquaculture technique is now widely socialized, in order to minimize the negative impact from captured fisheries as environmental damages.

**Table 1.** Grouper Fish Production Volume Year 2010-2013 (Ton)

No	Year	Volume (Ton)
1	2010	10.398
2	2011	10.580
3	2012	11.950
4	2013	18.864

Source: KKP (2014)

In contrast, even though Indonesia is now becoming one of the largest marine country in the world, the consumption of fish including Grouper fish is still low, in compare to other countries. The National fish consumption level is relatively still low in compared to other Asian countries fish consumption such as Japan, Hong Kong and Singapore. The number of Indonesian consumption level in 2013 only reached 35 kg/capita/year, where the government targeted to increase into 38 kg/capita/year in 2014.

### Grouper Fish's Agribusiness System Input Subsystem

#### 1. Hatchery

Fingerlings and hatchery activity becomes one important thing to be prepared in Grouper fish aquaculture. The

hatchery focuses on marine hatchery operations, which performed by the full scale hatchery and the household scale hatchery. To support the operation of both hatchery mentioned, it is requiring several facilities such as: spawning basin, larva seed breeding, filter spawn. Moreover, there is also supporting medium is supporting media, which is used to back up the main medium such as streets, warehouse, cold storage.

## 2. Parent Fingerlings Availability

The breeding of Grouper fish by using hatchery needed the best quality of its parent fingerlings. The parent of Grouper fish fingerlings are generally caught from nature or hatchery breeding. Grouper fish's parents that was gained by captured straight from the open nature are usually bigger in size compared to the breeding result, this is caused because the parents from the breeding hatchery takes longer to grow. In the process off spawning, it requires regular feed to stabilize the fish growth condition.

## 3. Fingerlings Distribution

After fingerlings has grown become the exact size of the market demands, the next process is distributing the fingerlings to the central of aquaculture location in Indonesia. The distribution used two methods:

### a) Open System Transportation

The method is generally used for a short distance delivery with less than 5 hours travel to destination. The container used to transfer the fingerlings have to be able to keep the temperature, such as drum plastic that comes with an oxygen and compressor. Delivery using this system better done at night situation.

### b) Closed System Transportation

This delivery system method is used for long-distance transport, such overseas, by using transportations like airplane, ship and train. The media that used to transfer the fingerlings is wrapped by plastic/silicon teal with oxygen in it.

## On-farm Subsystem

In the on-farm subsystem, fingerlings of Grouper fish collected from the suppliers or research unit, which are first placed in the floating cages cultivations. The placements of fingerling of Grouper fish has to be adjusted with the net's size. Fingerlings growth in the net can grow up to 20 until 25 cm/ 100 grams. After the growth, the fingerlings transferred to another net to keep them grow until they reach the consumable size (500 gr - 1.200 gr). Feeding is the most important cycle on aquaculture, because it influence the growth of the fish.

## Processing Subsystem

Generally, Grouper fish is exported as a fresh product. Farmers do not perform many processing activity to the Grouper fish. The processing activity is mainly consist of only fish collecting activity after being grew for several months, grading activity, and consumer selling. In this phase, when fishes are gathered in one floating cage waiting for the consumer, farmers should maintain the fish weight, therefore the feeding activity becomes important. The processing activity normally takes 1-2 months until the fishes reach the desirable consumption size.

## Supporting Subsystem

In aquaculture business, there are some supporting institutions which are play important roles to support the farmer's business, such as:

- a) **Cooperative:** has abilities to support financial and facility for aquaculture. It is beneficial for small farmer groups to be a part of cooperative. The benefits are money credits, and marketing institutions for their aquaculture products.
- b) **Bank:** gives capital investment and other payment stuff. Besides giving money, bank also evaluate the group's performance to make sure that credits are going well and other circumstances support this cooperation project.

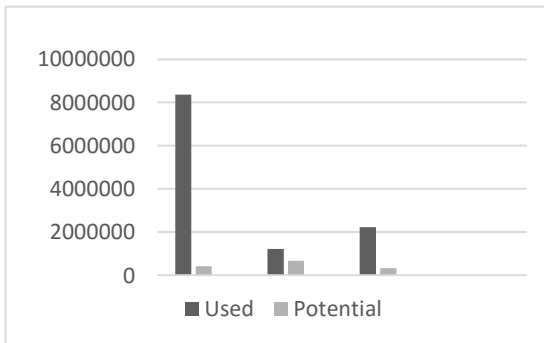
c) **Large Company/Exporter:** performs the processing, distribution and export activities. Companies also give excellent business techniques, and also provides production infrastructures for small business. This large company, often help small farmers to find new opportunity to reach and expand their market.

reaches only 3 kg/ capita/year. This amount is still relatively low when compared with the amount of fish consumption in the other countries on Asian region. Until now, the demand for Grouper fish is still dominated by foreign customers, such as Hong Kong. Hong Kong is one of the largest Grouper fish's consumer worldwide. One of the main suppliers for Grouper fish in Hong Kong is Indonesia.

## NATIONAL COMPETITIVENESS OF GROUPE FISH

### Condition Factor Resources

One important condition to start a Grouper fish's farming is the availability of potential land to build the floating cage area. As a marine country, Indonesia supports by the suitable natural condition to perform the Grouper fish aquaculture. Further, the usage of potential land still low. Figure 2 shows the gap between potential and actual land area which is used for aquaculture.



Source: (KKP,2014)

Figure 2. Gap between Potential and Used Area for Aquaculture

Figure 2 shows that from the total sea water area in Indonesia which reaches 8.363,501 km<sup>2</sup>, the cultivated marine area still only reach 413.862 km<sup>2</sup> (left bar), brackish water potential land from 1.224,076 km<sup>2</sup> is only used for 661.111 km<sup>2</sup>, and fresh water area which reaches 2.230,500 km<sup>2</sup> potentially, only cultivated for about 327,995 km<sup>2</sup> (KKP,2014).

### Domestic Demand Conditions

Indonesia's domestic demand is not as high as the demand from overseas markets. In general, fish consumption of Indonesian society is still very low,

### Structure, Competition, and Corporate Strategies

The market structure of the national Grouper fish aquaculture is oligopoly, since there are only few Grouper fish's producers which supply fish to the market. The traditional market targets are Chinese restaurants, hotel, and traditional fish markets. Strategy that commonly performed by the producers is to sell the fish to the large business export company, instead of to the local buyer. The main problem in supporting industry, which is grouper aquaculture industry are still lack connection of the stakeholder in supporting supply chains for aquaculture industry. This unconnected subsystem makes people in grouper fish aquaculture industry lack of information from beginning to downstream and information about the market demands. It makes them difficult to assume when to start producing grouper fish for the market, also happens to the fingerlings suppliers because they had to fulfill the fingerlings demand (Chaidir, 2007).

### Related and Supporting Industry

A related industry is an industry that functions in an upstream sector, which is being the first supplier for the whole production sea farming process, such as Grouper Fish Larvae from hatchery, natural feeds for which is rucah fish, vitamin and medications, KJA tools, infrastructures and transportation. Meanwhile, supporting industry is an access post Grouper fish harvest season. Inside the supporting industry lies a company that provides starter for grouper fish aquaculture such as fingerlings supplier, nutrition and medications for

fishes and tools to build floating cages. Some hatcheries in few places still provide low quality of grouper fish fingerlings, as a result many larvae are dead and happens to be loss for the supplier. Agroindustry as a supporting industry take control to manage post-harvest including grading, sorting grouper fish types, packaging, and fisheries product logistic.

### **Government Policy**

The Indonesian government intervene the Grouper fish business through several policies, such as:

1. Policy No.2 Kep 02/MEN/2004: about aquaculture from Ministry of Fisheries and Marines.
2. Policy about limited quota on exporting fingerlings from Ministry of Fisheries and Marines.
3. Policy about export trading of Grouper fish from Ministry of Fisheries and Marines.

### **Chances**

Chances are some random situations which influence good luck either disaster. Benefiting from the high international demand of Grouper fish, Indonesia could gains more value from the implementation of ASEAN Economic Community (AEC) which automatically expand opportunities to meet the market in ASEAN region. AEC allows the ASEAN countries including Indonesia to perform free trade in ASEAN area without any significant barriers. The opportunity to export Grouper fish to several new potential countries like Laos, Cambodia, and Myanmar is one of the benefits targeted by Indonesia's producers. Further, to compete in the international market, domestic fisheries product must ensure excellent quality and quantity of the products.

## **CONCLUSIONS**

### **Conclusions**

Grouper fish is one of the most potential fishery commodity in Indonesia. Contain high value and strategic market demand on Asian Region, aquaculture is needed as the demand of grouper fish

keep raising each year, by using hatchery system. Each Agribusiness subsystem were not integrated yet, from the hatchery locations into the on farm still lack and trade between product is also not yet well controlled, beside that the grouper fish agroindustry also needs to be more attached from subsystem to another. From the four main component's diamond porter's theory natural resources is the most competitive in Indonesia, but it also needs development on technology and system to maintain the resources.

The other component of diamond porter's theory are also needs to be more effectively support, as well as the government policy. To increase domestic grouper fish competitiveness, each grouper fish agribusiness system has to be integrated firm, as a result domestic grouper fish product can competitive well in domestic nor international markets.

### **Recommendations**

According to the study above, to increase domestic grouper fish competitiveness, the agribusiness system has to be integrated from input subsystem until supporting subsystem. Increase the competitiveness of each stakeholder, especially in the industrial sector. Government also has to takes in charge of creating fair policy for stakeholders to support the grouper fish aquaculture, by giving a fair policy it helps to provide better agribusiness system from beginning until downstream. Increasing the hatchery locations would help the on-farm system and also providing professional expert to train them of having a better quality of fingerlings. Improving the research and development in technology through the education institution or technical school would help to provide better technology.



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**DISCUSSION FROM PARALLEL SESSION**

<b>PAPER TITLE</b>	ANALYSIS OF AGRIBUSINESS SYSTEM AND COMPETITIVENESS OF GROUPER FISH IN INDONESIA
<b>AUTHOR</b>	Grace Maharani Putri, Venty F. Nurunisa
<b>DISCUSSION</b>	
<b>QUESTION</b>	<ol style="list-style-type: none"> <li>1. In condition factor sea water has high potential but used poorly, why this happen? Infrastructure?</li> <li>2. What is the main reason why the grouper fish producer still limited?</li> <li>3. Integrated system is riley on ABGG</li> </ol>
<b>ANSWER</b>	<ol style="list-style-type: none"> <li>1. The government not support the location from hatchery to on farm</li> <li>2. Because in Indonesia the supply of grouper fish is still limited</li> </ol>
<b>SUGGESTION</b>	<ol style="list-style-type: none"> <li>1. Define the Porter's Demand theory</li> <li>2. For government policy need short description</li> <li>3. Government policy need explanation has been done in the presentation</li> </ol>



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