

## Short Interview with Local Fisherman in Bintulu, Sarawak on Monthly Income based on their Experience

Izzah Abd Hamid<sup>1</sup>, Wan Asrina Wan Yahaya<sup>2\*</sup>, Hairazi Rahim<sup>3</sup>

<sup>1</sup>Department of Crop Science, Faculty of Agricultural Science and Forestry, Universiti Putra Malaysia Bintulu Sarawak Campus, 97008, Bintulu, Sarawak, Malaysia.

Email: [izzahabdhamid@gmail.com](mailto:izzahabdhamid@gmail.com)

<sup>2</sup>Department of Crop Science, Faculty of Agricultural Science and Forestry, Universiti Putra Malaysia Bintulu Sarawak Campus, 97008, Bintulu, Sarawak, Malaysia.

Email: [asrina@upm.edu.my](mailto:asrina@upm.edu.my)

<sup>3</sup>Socio Economic, Market Intelligence & Agribusiness Research Centre, MARDI Headquarters, Persiaran MARDI-UPM, 43400, Serdang, Selangor, Malaysia.

Email: [hairazi@mardi.gov.my](mailto:hairazi@mardi.gov.my)

### ABSTRACT

Fishermen earn income from their fishing activities, but it depends on various factors such as the type of employment, either part-time or full-time. The aim of the study is to identify which criteria based on their experience affect the income of part-time and full-time fishermen in Bintulu, Sarawak, Malaysia. About 33 fishermen were interviewed in the Bintulu area using semi-structured interview questions. A qualitative method such as an in-depth interview was conducted and analysed, resulting in three criteria that affecting our participants' income. The first criterion was self-learning process which significantly hampered their ability to identify fish population areas, especially without the aid of technology. In contrast, the second criterion was equipment ownership. The ownership offers advantages to the full-time fisherman to facilitate their fishing activity by catching more fish in a short period of time. The final criteria were end products related to their sales activities, whether through intermediary (middleman) or directly to consumers. Regardless of their mode of operation or experience, direct-to-consumer sales is an alternative to earn a higher income, except that their yield varies significantly through the first and second criteria. Therefore, this finding indicated that the income of part-time or full-time fishermen in Bintulu, Sarawak could be influenced by three criteria.

### CORRESPONDING AUTHOR (\*):

Wan Asrina Wan Yahaya  
([asrina@upm.edu.my](mailto:asrina@upm.edu.my))

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**Contribution/Originality:** This study documents the criteria affecting the income of part-time and full-time fishermen in Bintulu, Sarawak, Malaysia. Classifying the fisherman community as poor due to their economic background was common in Malaysia. However, this study may give insight into the mode of fishing activity that differentiates their economic status.

## 1. Introduction

Engaging in fishing activities can generate sufficient income for the fisherman but depends on several factors. This has affected most fishing activities at sea or in rivers. It was common for the fishermen's background to be poor due to their economic constraints, which is typically reported in Malaysia (Mohammad Raduan & Amaluddin, 2002; Mohammad et al., 2007; Ramli & Mohd Som, 2019). However, these limitations can be alleviated by improving skills through active enrolment in reputable courses. Besides, the commitment given by fishers to improving their family's economic status could help them achieve the targeted income. In addition, fishermen's commitment to improving their family's economic status could help them achieve the income they seek. This is because they have implemented the use of Information and Communication Technology (ICT) as a tool to make their fishing operations smooth and profitable (Kiran & Shetti, 2021). Devices such as GPS, sonar, or sounder finder detection can identify the fish population based on wavelength. Once the fisherman gets the fish stock information, the catching procedure is much easier and could save his time. However, their income may also be affected by other factors. For example, in other studies, the older generation of fishermen have been manipulated by middlemen and left with low incomes (Muda et al., 2006; Hamdani & Wulandari, 2013). Meanwhile, fishermen who intended to sell it directly to consumers had a better income. After all, this is another key to improve fishermen's income in the long term. In addition, their employment as a part-time or full-time fisherman also contributed to their income. This is because most part-time fishermen engage in fishing as a recreational activity and may not be using the most important fishing skills compared to full-time fishermen. Their income comes solely from this activity, so it takes a full commitment to ensure they are able to support their families. Therefore, the objective of this paper was to identify which criteria based on their experience affect the income of part-time and full-time fishermen in Bintulu, Sarawak, Malaysia.

## 2. Methodology

This study was conducted from January to February 2022 using semi-structured interviews with the target participants in Bintulu, Sarawak, Malaysia. During this period, around 33 fishermen were interviewed about their active participation in sea or river fishing. The targeted participant was found near the coastal area because this division is located in a coastal town on the island of Borneo. The questions were developed to cover their personal background and factors affecting their monthly income and were later analysed and completed with three criteria, namely self-learning process, device ownership and end products. Their participation was announced a week in advance and the interview was voluntary. Participants' responses were multilingual which later carefully and accurately translated into English to ensure that the original responses retain their meaning and respondents' intent. This study used an in-depth interview with qualitative methods and the data was then analysed using content analysis.

## 3. Result and Discussion

### 3.1. Respondent Background

As can be seen in Table 1, about 96.97% of the participants are male and only 3.03% are female who voluntarily participated in this study. Most of the participants are between 41 and 60 years old (48.48%), while the rest are under 40 years old (27.27%) and over

60 years old (24.24%). Also, their experience of catching fish in the sea or river was divided into two categories. The first category were participants with less than 20 years of experience (48.48%) and another category was more than 20 years of experience (51.52%). Accordingly, their experience depended on their way of working as a part-time or full-time fisherman, which reflects their income. Most part-time participants were able to earn less than RM5,000/month (42.42%) as compared to full-time participants.

Table 1: Participant's demographic profiles

Demography (N=33)	Frequency	Percentile (%)
Gender		
Male	32	96.97
Female	1	3.03
Age (Years Old)		
21-40	9	27.27
41-60	16	48.48
61-80	8	24.24
21-40	9	27.27
Monthly income (RM)		
<5,000	14	42.42
5,001-1,0000	4	12.12
>10,000	2	6.06
Undisclosed	13	39.39
Years of experiences		
<20	16	48.48
>20	17	51.52

### 3.2. Self-Learning Process

Of all the criteria, skill development is the most important trait that impacts our participants' income. The learning process was based on their experience, has been shown in previous table. Participants with less than 20 years of experience had a minimum income of less than RM5,000/month. Most of them viewed these activities as a hobby and extra income (participant 6).

“...I go to the sea caused I'm bored at home after retiring from the engineering sector. I'm not a full-time fisherman. I do some fishing things to kill time and maybe buy cigarette...”

A similar finding was shared by participant 26, who had just finished his Sijil Pelajaran Malaysia (SPM) and went to the seaside for an extra income.

“...I'm waiting for a job offer after SPM and need to make pocket money, so I join my friends going to the sea. I don't get much, but it ok to survive for a while...”

However, participants with more than 20 years of experience had more stable income due to their involvement, and few relied solely on this activity. In addition, a wide range of experiences, including active participation in government short courses in aquaculture, had broadened their knowledge and slowly developed new skills. This was stated by participant 14.

“...I enrolled few short courses in UPMKB a long time ago on aquaculture and slowly learned from my friends. Now, fishing activity has become the primary income for my family. We’re making money even depending on the weather...”

It has been found that most of our participants derive income from their fishing activities but rely on experiences that develop from time to time. Therefore, years of commitment has a positive effect on their skills. The longer the experience, the more income they earn. Their purpose in doing this job also affects their learning and income, whether they do it as a part-time or full-time job with undeniable dedication. Additionally, improved skill learning can help identify selected areas with fish or seasons of selected species (Viswanathan et al., 2001; Fernö et al., 2007). Also, a study in Indonesia has reported similar results, with longer years of experience significantly impacting their earnings (Dahen, 2016; Ridha, 2017; Samuel et al., 2020).

### 3.3. Equipment Ownership

The following criteria that impact our participants' income is their ability to purchase equipment to support their fishing activities. This equipment is important in guiding the participant to a location that may be populated with fish, such as using GPS, sonar, echo sounder, and others. However, we found that these criteria depended on their commitment to fishing activities, while part-time respondents found this equipment expensive and impractical. This was explained by participant 12.

“...GPS and sonar are expensive, and why should I spend for that thing if I can identify where the area populated with fish?...”

One participant with less than 20 years of experience also found it more convenient to judge by observation or to rely on objects or landmarks at sea. Rather than buying this gear, they prefer to use the money to upgrade their boat and fishing gear. Participant 3 agreed to this.

“...find fish without sonar? easy. Look for oil rigs, shipwrecks, coral, and reefs. Sometimes depend on the weather...”

However, the use of the devices to record the fish population requires more than 20 years of experience. This is because they need to ensure that enough fish are collected at the end of their journey to the sea. Three of the participants may sail for three days to fill their boat tank while the rest take less than 24 hours as some of them engage in trawling and participant 27 elaborates on this further.

“...first, I will detect the fish's location by sonar detection, and then my friends and I will use trawl fishing. We used two boats and got a lot of fish to sell once we arrived at the jetty...”

Rather than relying on learning experiences, owning the right gear can help participants catch fish in a short amount of time and maximize their income, although it depends on the right time of year or season (Lamia, 2013; Izza et al., 2018; Kiran & Shetti, 2021). Especially in Sarawak we had a season of *Udang Geragau/Bubuk* (*Acetes* spp. or small shrimp) which is unique for this state. During this season, all fishermen will catch these shrimps for making paste (an iconic product in Bintulu) and other products.

### 3.4. Final Products

The final criteria that can affect our participants' income is their end product from their fishing activity. Based on their experience, a similar trend was observed where full-time participants earned more income than part-time participants as they could catch fish up to 10,000 kg/trip (10 tons), even depending on various factors. Most prefer to sell the fish directly at the market or deliver it to the nearest restaurants and supermarkets. This was explained by participant 1.

“...I'm a supplier for Chinese restaurants and supermarkets here. As my fish is fresh, and according to their needs, I don't have any problem as they will pay the price...”

The part-time fisherman also sells directly to the market, but in smaller quantities and depending on the fish value, such as *Empurau* (*Tor* spp.), *Semah* (*Tor* spp.), and *Baung* (*Mystus* spp.), which are usually found in the river. Meanwhile, the main fisherman at sea depends on the size of *tenggiri* (*Scomberomorus* spp.), *senangin* (*Eleutheronema* spp.), and *jengahak* (*Lutjanidae* spp.). Participant 24 expressed agreement with this.

“...Big fish is expensive, and we can make money. We sit here (jetty area) and place the fish, easy to sell, customer-ready...”

Income depends on the fish collected, including species and potential buyer. Selling directly at the pier without intermediaries led to a significant increase in income, except part-time, as they often went to the sea for short periods (Shah & Selamat, 2015; Susilawati, 2019). However, a high fish value can increase their income.

### 4. Conclusion

The interviewed fisherman in Bintulu depends on three main criteria (self-learning process, ownership of the equipment and end products) that significantly affect his income. However, this criterion is characterized by years of experience, while the participant with short experience (< 20 years) may be earning a minimum income (< RM 5,000/month) compared to the participant with longer experience (> 20 years). This clearly demonstrated the dedication that gives the experienced fisherman advantages when investing in the right equipment while developing their skills from time to time. Also, their full-time mode makes participants serious about generating income to support their families.

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## Conflict of Interests

The authors declare no conflict of interest in this study.

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