Analysis of the Role of Fish Basket Women towards Household Income in Eretan Wetan Village, Indramayu District, West Java

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Authors' contributions

This work was carried out in collaboration among all authors. Author AA designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors ZA and EA managed the analyses of the study. Author AN managed the literature searches. All authors read and approved the final manuscript.

Article Information

Original Research Article

ABSTRACT

The role of the fish basket woman is not only as a housewife but also as a breadwinner, thus the fish basket woman has a dual role in her family. Fish basket women help their husbands work to be able to meet family needs. This study aims to analyze household income as well know the motivation to work of women as fish baskets in increasing working household income and know the factors that affect the income of fish basket women in increasing household income in Eretan Wetan Village, Indramayu Regency, West Java. The research method used in this research is a case study and interviews using a questionnaire. The sampling technique used an accidental sampling method with a total of 50 respondents and collecting data using observation techniques, structured interviews, and documentation techniques. The results showed that the role of women with fish baskets on household income in Eretan Wetan Village, Indramayu Regency, West Java

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was quite significant by obtaining an average income of IDR 1,676,135 per month. Factors that affect the income of working basket women include helping their husbands, wages that are not appropriate, helping household income and the husband's income is uncertain. The coefficient of determination shown by Nagelkerke R-Square, age, education level, number of family members, husband's permission, and husband's income affect women's interest in working by 100.0%. Women's interest in working is not influenced by any other factors included in the research mode.

1. INTRODUCTION

Coastal communities can be defined as groups of people living in coastal areas. Operationally, coastal communities are only focused on groups of fishermen, traders, and fish processors [1]. In general, the fishing community is considered as one of the layers of society with a low level of welfare. Of course, not all fishermen can be said to be in the poverty line, many fishermen are classified as prosperous [2]. The constraints that cause the poverty of fishermen or coastal communities are maintained, including depending on the season conditions which greatly affect the level of fishermen's welfare, sometimes fishermen do not go to sea for several weeks due to uncertain seasons [3].

In conditions where the husband's income as a fisherman is relatively low and uncertain, the only person who can help maintain the family's livelihood is a fisherwoman (a fish basket woman). The role of fisherwomen can be seen from women fish traders or better known as fish baskets as part of the structure of coastal communities and also a part of the fisheries agribusiness system, especially in the marketing of fishery products. According to Sanatang [4], women are one of the most important components in coastal development because the role of women is very strategic in fisheries and marine-based activities. According to Kusnadi [5], the large role of fish basket women makes it important to map the position and role of fish basket women to support development efforts to optimize the role of fish basket women in improving the social welfare of communities in coastal areas, especially fishing communities.

This condition is also experienced by people who live in Eretan Village, Indramayu Regency, West Java. Eretan Village is one of the villages with the largest number of fishermen, fish processing business entrepreneurs, and women who sell fish/fish basket women in the subdistrict of Sometimeshaur, which is located on the north coast of West Java. Fishermen and fish basketry women are the professions most engaged in by residents of Eretan Wetan Village, women in Eretan Village also participate in earning income to help meet the household economy due to their husband's lack of income to meet their household needs. This research was conducted to see the role of fish basket women on household income in Eretan Wetan Village, Indramayu Regency, West Java.

2. MATERIALS AND METHODS

This research was conducted in Eretan Wetan Village, Indramayu Regency, Java West. and the method used in this research is a literature study and survey using a questionnaire. The types of data used are secondary data and primary data. Primary data were obtained from interviews with respondents, and secondary data were obtained from related institutions/agencies. The technique used in obtaining data from the data source (respondent) used in this study was the accidental sampling technique based on chance or incidental.

2.1 Analysis of the Motivation of Women to Work

To find out the motivation of women to work as baskets, logistic regression was used. The data processing method using the logit method aims to analyze how far the model used can correctly predict the categories (groups) of several individuals. This logit model is used for non-metric or categorical variables [6] as follows.

$$Y = Ln = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + u_i$$

Information
Y : Women's interest is working as fish baskets
Ln :
X_1 : Level of education
X_2 : Female age
X_3 : Number of family members
X_4 : Husband's permission
X_5 : Husband's income

β1, β2, β3, β4, β5 : Regression Coefficient
ui : Confounding Variable

2.2 Method Analysis of Fish Basket Women

The analysis of business income carried out by fishermen can be obtained from total revenue (TR) minus the total cost (TC). The formula used to calculate business income is:

Profit (π) = Total Revenue (TR) - Total Cost (TC)

Criteria:
TR> TC = Profit Effort
TR = TC = No Profit and No Loss Effort
TR <TC = Business Loss

2.3 Multiple Linear Regression Analysis

The data analysis used in this study refers to the analysis developed by Fitdiarini N. and Sugiharti [7], namely multiple linear regression analysis which is used to determine the magnitude of the effect of changes in other variables that have a relationship, which can be notated functionally as follows:

Y = β0 + β1 X1 + β2 X2 + β3 X3 + β4 X4 + β5 X5 + ei ....

Information :
Y = Income
X1 = Age of Coastal Women
X2 = Coastal Women's Education Level
X3 = Long selling
X4 = Working Time
X5 = Sales results
β0 = Constant
β1, β2, β3, β4, β5 = Regression Coefficient
ei = Confounding Variable

2.4 Classic Assumption Test

To find out whether the regression model really shows a significant and representative relationship, the model must meet the classic regression assumptions. The classical assumption tests carried out are normality, multicollinearity, and heteroscedasticity tests.

2.5 Statistical Testing (Goodness of Fit)

After the model is free from testing classical assumptions, it is followed by statistical justification. Statistical justification is a test of giving goodness of fit model that concerns the accuracy of the sample regression function in estimating the actual value by looking at the Goodness of Fit. Statistically, at least this can be measured from the coefficient of determination, the value of the F statistic, and the value of the t statistic.

3. RESULTS AND DISCUSSION

3.1 Characteristics of Fish Basket Women in Eretan Wetan Village, Indramayu Regency, West Java

Respondents in this study were women baskets of fish in Eretan Wetan Village, Indramayu Regency, West Java. Respondents taken were 50 people. Characteristics of respondents are used to determine the background of women in fish baskets in Eretan Wetan Village, Indramayu Regency, West Java, which includes age, education level, marital status, number of family members, and experience as fish traders. Descriptive analysis of respondent data consists of several tables.

Fig. 1 shows the number of respondents based on the age of the fish basket in Eretan Wetan Village, Indramayu Regency, West Java. It is known that the majority of respondents as many as 37 people or 74.0% were respondents aged 31-40 years and the least were respondents aged 20-30 years, namely 4 people or 8.0%. The average age of fish baskets in Eretan Wetan Village, Indramayu Regency is between 31-40 years. If the life of the fish basket is at a productive age, of course it will affect its sales activities and then continue on revenues the maximum as well as vice versa, if the life of the fish basket is already in the mature or old age, will certainly affect its sales activitiesand then continued on low incomes.This shows that in the research of fish baskets, most of the respondents were of productive age because the productive age would be able to increase sales results which led to high levels of productivity.

Fig. 2 shows the number of respondents based on education in Eretan Wetan Village, Indramayu Regency, West Java. It is known that the majority of respondents as many as 20 people or 40.0% were respondents who took the latest junior high school education/equivalent and the least was the respondents who took the last high school / equivalent education, namely as many as 13 people or 26.0%. This shows that the average education for fish baskets in Eretan Wetan

Village, Indramayu Regency is junior high school. The data show the low level of education of the respondents because education is not the main thing besides the large cost factor which makes them reluctant to continue with higher formal education. According to Hermanto [3], the higher the level of education, the decisions taken will be more rational and will lead to an increase in the economic welfare of the family.

3.2 Marital Status

Table Frequency distribution regarding Marital status and number of family members basket of fish in Eretan Wetan Village, Indramayu Regency, West Java shows the number of respondents regarding marital status and the number of members of the fish basket family in Eretan Wetan Village, Indramayu Regency, West Java. It is known that the majority of respondents

as many as 46 people or 92.0% were married fish baskets and the rest are unmarried fish baskets with as many as 4 people or 8.0%. This shows that most of the fish baskets in Eretan Wetan Village, Indramayu Regency are married and have families. Besides, Table 1, also shows the large number of family members owned by fish baskets Eretan Wetan Village, Indramayu Regency. From Table 1, it can be seen that the average fish basket has 5 family members.

3.3 The experience of the Fish Basket Woman

The average respondent has experience of 16.79 or ± 17 years, with a maximum of 25 years of experience and a minimum of 10 years of experience. According to Damayanti [8], the length of time an entrepreneur conducts his/her business has an important influence on the
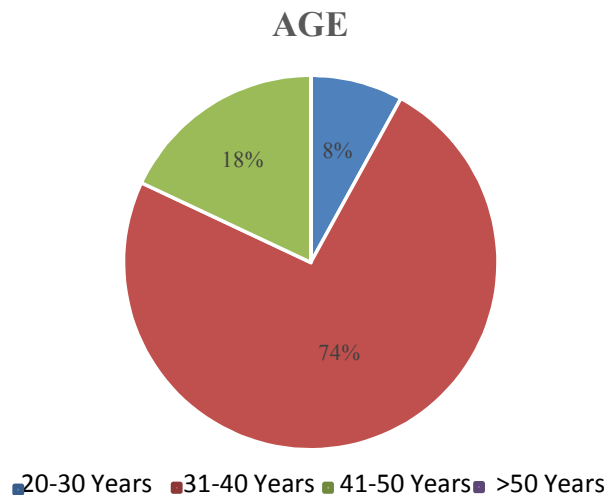

Fig. 1. Frequency distribution of respondents by age

Table 1. Frequency distribution regarding Marital status and number of family members basket of fish in Eretan Wetan Village, Indramayu Regency, West Java

	Frequency	Percentage
Marital status		
Single	4	8.0
Married	46	92.0
Total	50	100.0
Number of family members		
Minimum	0 people	
Maximum	8 people	
Mean ± Standart Deviasi	4.7 ≈ 5 people ± 1.75	
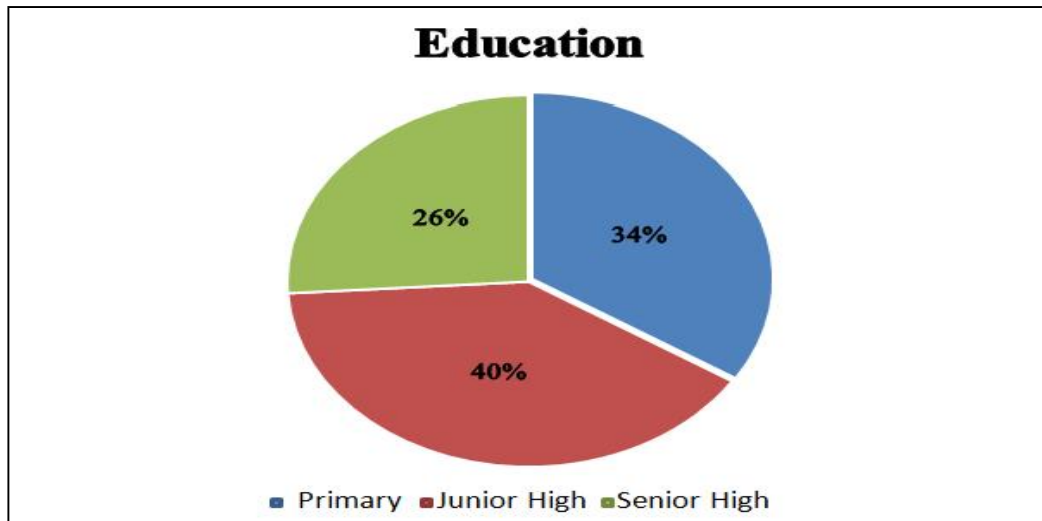
Fig. 2. Frequency distribution of respondents by education

choice of strategy and how to conduct his/her business and varies greatly from entrepreneur to entrepreneur. Entrepreneurs who take longer to do business will have a more mature and precise strategy in managing, producing, and marketing their products. This is because entrepreneurs who have higher flight hours in their business will have experience, knowledge, and be able to make decisions in every condition and situation.

3.4 Other Business Ownership

Fig. 3 Other Business Ownership shows the number of respondents regarding other businesses owned by fish baskets in Eretan Wetan Village, Indramayu Regency, West Java. It is known that the majority of respondents as many as 40 people or 80.0% do not have a business other than trading fish and the fewest are respondents who have other businesses, namely rice stalls as many as 10 people or 20.0%. This shows that the average fish basket in Eretan Wetan Village, Indramayu Regency has no other business besides trading fish.

3.5 Motivation to Work for Fish Basket Women in Eretan Wetan Village, Indramayu Regency, Java

From the research results obtained by the majority of respondents as many as 46 people with a percentage of 92% stated that their reason for working or their motivation to work is a physiological drive to help their husbands earn a living because the income generated by their husbands cannot meet the necessities of life so that the wives are required to work earn a living so that they can help a little to meet their daily needs. Another reason that makes these fisherwomen work is that the income from their husbands as fishermen is very uncertain because the results obtained are by the number of catches they land, when the fishing season is good, their income will automatically be high. Besides, 46 people with a percentage of 92% felt that they were appropriate or sufficient for the results obtained. Working conditions and environmental conditions are also one of the motivations for being able to work comfortably in that environment. The majority of 41 people who want to be independent of fish basket women with a percentage of 82% are not the main choice because most of the respondents choose to work to help increase household income.

3.6 Income of Fish Basket Women

At the village, Indramayu Regency, West Java It is known that the majority of respondents on average had sales of Rp. 3,926,135 with an average total expenditure of Rp. 2,250,000, so it is known that the average income of fish basket women is Rp. 1,676,135. Based on the profit formula above, it can be seen that the average fish basket-owned business has a profit of Rp. 1,676,135 per month.
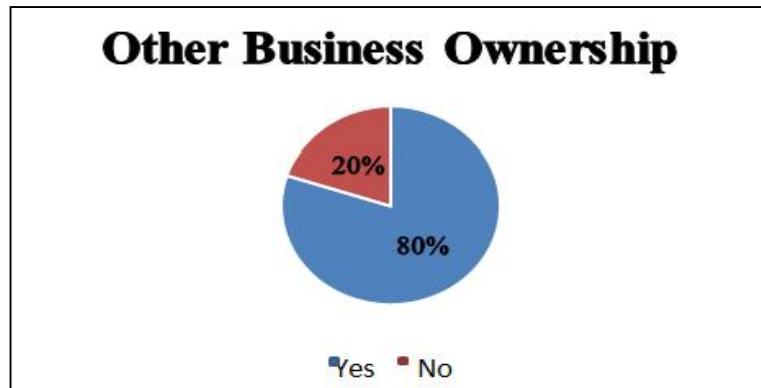
Fig. 3. Respondents frequency distribution based on other business ownership

Table 2. Motivation of fish basket women in Eretan Wetan Village, Indramayu Regency, West Java

No.	Motivation	Response	Frequency	Percentage
1	Helping Husband	Yes	46	92.00
		Not	4	8.00
2	Erratic Husband's Income	Yes	42	84.00
		Not	8	16.00
3	Wage Suitability	Corresponding	46	92.00
		It is not in accordance with	4	8.00
4	Safe and Comfortable Working Conditions	Yes	48	96.00
		Not	2	4.00
5	Want to be independent	Yes	9	18.00
		Not	41	82.00
6	Helping Household Income	Yes	48	96.00
		Not	2	4.00
Total			50	100

3.7 The Influence of Age, Education Level, Number of Family Members, Husband's Permission and Husband's Income on the Interest of Working Women

Then the logit model is:

Y = 960,004 + 111,318 X1 + (629,675) X2 + 170,719 X3 + 178,188 X4 + 49,912 X5

Logistic regression formed a probability logit model as follows:

$$\pi(x) = \frac{e^{Y = 960,004 + 111,318\,X1 + (629,675)\,X2 + 170,719\,X3 + 178,188\,X4 + 49,912\,X5}}{1 + e^{Y = 960,004 + 111,318\,X1 + (629,675)\,X2 + 170,719\,X3 + 178,188\,X4 + 49,912\,X5}}$$

3.8 Results of the Nagelkerke R Square Coefficient of Determination

The coefficient of determination shown by Nagelkerke R-Square for the model under study has a value of 1,000. This shows that age,

education level, number of family members, husband's permission and husband's income affect women's interest in working by 100%. Women's interest in working is not influenced by any other factors included in the research mode.

3.9 Factors Affecting the Income of Fish Basket Women in Eretan Wetan Village, Indramayu Regency, West Java

Y = 16,103 + (-4,236) X1 + (-0.347) X2 + 3026 X3 + 3.147 X4

Information :

Y	= Income
X1	= Age
X2	= Work Experience
X3	= Education level
X4	= Working Time
β0	= Constant
β1, β2, β3, β4	= Regression Coefficient
ei	= Confounding Variable

Table 3. Description of "The income of fish basket women per month in Eretan Wetan Village, Indramayu Regency, West Java"

	Sales Result (/ month)	Total expenditure (/ month)	Total income fish basket woman
N	50	50	50
Maximun	Rp. 5,423,000	Rp. 3,000,000	Rp. 2,423,000
Minimum	Rp. 2,160,000	Rp. 1,000,000	Rp. 1,160,000
Average	Rp. 3,926,135	Rp. 2,250,000	Rp. 1,676,135
Standart Deviasi	806517.24	535942.20	270,575

Table 4. Logit model estimation results variables in the equation

		B	SE	Wald	df	Significant
Step 1a	X1	111.318	58057.310	. 000	1	. 998
	X2	629.675	65632.552	. 000	1	. 992
	X3	170.719	18619.606	. 000	1	. 993
	X4	178.188	22278.325	. 000	1	. 994
	X5	49.912	11550.572	. 000	1	. 997
	Constant	960.004	311274.020	. 000	1	. 998

Table 5. Multiple linear regression coefficient results coefficients

Model		Unstandardized coefficients		Standardized coefficients	t	Significant
		B	Standart. error	Beta		
1	(Constant)	16,103	3,974		4,052	.000
	Age	-4,236	1,094	-.087	-3,871	.000
	Work experience	-347	.528	-.014	-657	.514
	level of education	3,026	.494	.566	6,126	.000
	working time	3,147	.658	.442	4,785	.000

Table 6. Determination analysis model summary b

Model	R	R square	Adjusted R square	Standart. error of the estimate
1	.989a	.979	.977	1.00124

a. Predictors: (Constant), sales results, age, level of education, time worked,
b. Dependent Variable: monthly income

This analysis is used to determine the percentage of influence between variable X (age (X1), education (X2), length of selling (X3), and working time (X4)) on variable Y (household income) simultaneously.

$$KD = R^2 \text{ X } 100\%$$
$$= (0,979)^2 \text{ X } 100\%$$
$$= 97.9\%$$

Thus, the KD value of 97.9% is obtained which indicates that the variable age (X1), education (X2), length of selling (X3), working time (X4), and sales results (X5) have a simultaneous effect of 97.9% dependent variable, namely household income (Y). The remaining 2.1% is influenced by other factors that the authors ignore.

4. CONCLUSION

Based on the research Analysis Of The Role Of Fish Basket Women Towards Household Income, it can be concluded that:

- From the research results obtained, several factors cause women baskets to work including helping their husbands, inappropriate wages, helping household income and the husband's income is uncertain;

- The average proceeds from the sale of fish basket women is Rp. 3,926,135 with an average total expenditure of Rp. 2,250,000, so it is known that the average income of fish basket women is IDR 1,676,135;
- The influence between variable X (age (X1), education (X2), length of selling (X3) and working time (X4)) on variable Y (household income) simultaneously obtained KD value of 97.9% which indicates that the variable age (X1), education (X2), length of selling (X3), working time (X4), sales results (X5), have a simultaneous effect (together) of 97.9%, the dependent variable is household income (Y). While the remaining 2.1% is influenced by other factors that are ignored by the author. Age, education level, and working time have a significant effect on household income variables while work experience has no significant effect on household income variables.
- From the test results, it can be concluded that together the independent variables/predictors of age, education level, number of family members, husband's permission, and husband's income have a significant (significant) effect on women's interest in working. The coefficient of determination shown by Nagelkerke R-square, age, education level, number of family members, husband's permission, and husband's income affect women's interest in working by 100.0%. While the remaining 0% is influenced by other factors not included in the research model.

CONSENT

As per international standard or university standard, participant's written consent has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
http://www.sdiarticle4.com/review-history/63921