

# INCOME CONTRIBUTION OF WOMEN DUCK FARMERS TO FAMILY INCOME IN BATE PUTEH VILLAGE, LANGSA LAMA SUBDISTRICT, LANGSA CITY, ACEH

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## Abstract

*This study aims to analyze the income contribution and working time allocation of women duck farmers in Bate Puteh Village, Langsa Lama Subdistrict, Langsa City, Aceh, in supporting family income. The sampling technique used was a census or Saturated Sampling method, with a sample size of 12 women duck farmers. The data analysis methods employed are income analysis and the Harvard analysis method. The study results show that the average total working hours of women farmers across all activities is 11.66 hours per day, or 48.58%, with a rest time of 12.33 hours per day. The net income received by women meat duck farmers is IDR 6,003,908 per year, while women laying duck farmers earn IDR 1,972,013 per year. As a result, the average total net income received by women duck farmers is IDR 3,987,960 per month. Women duck farmers contribute 13.08% to the family income. Hypothesis testing was conducted to determine the income contribution of women duck farmers in enhancing family income. The income contribution of women duck farmers, at 17.48%, falls into the low category. Activities were divided into production, predominantly managed by women; reproductive tasks, also predominantly managed by women; and social and community activities, which were shared by both genders.*

**Keywords:** Contribution, Duck Farmers, Income, Women

## INTRODUCTION

The success of a family in building a prosperous household cannot be separated from the great role of women. Both in guiding and educating children, accompanying and helping husbands in working and being the breadwinners of the family. The role of women in the family is generally as wives, mothers, and taking care of the household. Meanwhile, the role of women in society is associated with social activities as part of community activities. Women also have an influence in increasing family income (Hafni, 2019).

Women will try to earn income for various reasons, including; the desire of women to be independent in the economic sector, namely trying to finance their living needs and the living needs of their dependents, the need to increase family income, and the increasing opportunities for women to work are some of the factors that encourage women to work (Sembiring, 2023). The involvement of women in social and economic activities in the public sphere can make a very large contribution to changes in their social status in the household. One of the contributions of women that is realized is by them working. By working, it automatically gives women a dual role, especially women who live in villages and have an important role in the family economy, these women are very persistent in working and the demand to be independent is the most important point because to appear good when working and when taking care of their household (Gozali et al., 2020).

One of the agricultural sectors that absorbs a lot of female labor is the livestock sub-sector. One of the important livestock sub-sectors in agricultural development is poultry and ruminants. Poultry that is starting to develop in society is duck farming. Although not as popular as chicken farming, ducks have quite large potential as producers of eggs and meat. When compared to other poultry, duck farming has advantages, including having resistance to disease (Gunawan, 2018).

Langsa City is one of the areas located in Aceh Province. There are several areas or sub-districts that are currently developing duck farming in East Langsa District, Baro Langsa District, Old Langsa, and West Langsa District (Basriwijaya et al., 2021). Old Langsa District is one of the second largest producers of duck livestock population after East Langsa (Food Service, 2020).

Based on the description above, the purpose of this study is to analyze the contribution of income of female duck farmers in Batee Puteh Village, Langsa Lama District, Langsa City, Aceh in helping family income and to analyze the household activities of female duck farmers towards family income in Batee Puteh Village, Langsa Lama District, Langsa City, Aceh.

## RESEARCH METHODS

### Research Location and Time

This research was conducted from May to June 2024 in Bate Puteh Village, Langsa Lama District, Langsa City. The research location was selected using purposive sampling, with the consideration that the area fits the research criteria, namely, women engaged in duck farming.

### Data Source Type

The research utilized a survey method combined with direct interviews with the duck farmers. The study population consisted of 12 women duck farmers in Bate Puteh Village, all of whom were used as the sample through the saturated sampling method (census method). The data collected included primary data obtained from field observations and interviews, as well as secondary data collected from relevant literature and documents supporting the research.

### Data Analysis

According to Basriwijaya in Gumilar (2021), the amount of work time spent by female duck farmers for earning a living is measured using the formula:

$$CWKwnf = \frac{CWKwnf}{WKwnf + WKwrt + Wksos} \times 100\%$$

CWKwnf = Curahan Waktu Kerja perempuan untuk mencari nafkah / Outpouring Time Work Woman For looking for living

WKwnf = Waktu Kerja untuk mencari nafkah / Working time to earn a living

WKwrt = Waktu Kerja perempuan untuk kegiatan rumah tangga / Time Work Woman For activity House ladder

Wksos = Waktu Kerja perempuan untuk kegiatan sosial / Women's working hours for social activities

### Revenue analysis

To find out the income obtained by subtracting total revenue from total costs, it can be calculated using the following formula:

$$I = TR - TC$$

I = Income (Income of Female Duck Farmers) (Rp/Year)

TR = Total Revenue ( Reception Total ) (Rp/Yr)

TC = Total Cost (Total Cost) (Rp/Yr)

### Analysis income family

Household income comes from three sources, namely from husband, wife and other sources. According to Basriwijaya in Mardiana (2021) household income can be calculated using the equation:

$$It = Im + If + Io$$

It = Income House ladder (Rp/Yr)

Im = Income husband (Rp/Year)

If = Wife's income (Rp/Year)

Io = Income from source other (Rp/Year)

### Contribution income woman duck farmer

According to Basriwijaya in Gumilar (2021), the contribution of income of female duck farmers is used to determine how much the contribution of female duck farmers' income is to family income. It can be calculated using the equation:

$$K = \frac{If}{If+Im+Io} \times 100\%$$

K = Contribution absolute income woman (%)

Im = Husband's income (Rp/Yr)

If = Wife's income (Rp/Year)

Io = Income from source other (Rp/Year)

### Hypothesis testing

To test the hypothesis stating how female duck farmers contribute to improving family welfare, according to Handayani in Gusmaniar (2013), the following formula is used:

$$P = \frac{I}{Pt} \times 100\%$$

P = The size Donation Income Woman Breeder Duck (%)

I = Income of Female Duck Farmers (Rp/Year)

Pt = Total Family Income Breeder Duck (Rp/Yr)

### Analysis Gender Model Harvard

The data was analyzed using the *Harvard gender analysis method* which consists of: three component which relate One with Which other. The three components include activity analysis, access and control analysis, and benefit analysis (Nasta & Indra, 2022).

**Table 1.** Framework *Harvard Model* Analysis

Variables Harvard	Unit Analysis	
	Woman	Man
Analysis Activity		
a. Activity Production		-
b. Activity Reproductive		-
c. Activity Social Community		

Source : Rahmadani *et al*, 2023

## RESULTS AND DISCUSSION

### Characteristics Respondents

The characteristics of respondents based on age, education, number of dependents and farming experience can be see in Table 2. The characteristics of respondents in this study are female duck farmers in Batee Puteh Village, Langsa Lama District, Langsa City, Aceh. And the respondents in this study were 12 female duck farmers, including 4 egg-laying duck farmers and 8 meat duck farmers.

**Table 2.** Characteristics Respondents

No.	Characteristics Respondents	Total	
		Person	Presentation
1.	Age		
	21-30 year	2	17
	31-40 year	3	25
	41-50 year	5	42
	51-60 year	1	8
	61> year	1	8
2.	Education		
	Elementary	5	42
	Junior High School	3	25
	Senior High School	3	25
	University	1	8
3.	Liability		
	<1 person	1	8
	1-3 people	8	67
	4-6 people	3	25
4.	Experience Breeding		
	1-5 years	7	59
	6-10 year	3	25
	11-15 year	1	8
	16> year	1	8

### Accumulation Outpouring Time Women's work

Accumulated Working Time is the total amount of working time of female duck farmers for domestic activities, earning a living, and social activities.

**Table 3.** Average Accumulated Working Time of Female Duck Farmers in Bate Puteh Village, Langsa Lama District, Langsa City, Aceh, 2024

Outpouring Time Work Woman (Hour/Day)			Amount	%(24 O'clock)
Domestic	Look for Living	Social		
3.91	4.75	3	11.66	48.58

Based on Table 3, the accumulation work time of female duck farmers on all activities is 11.66 hours per day or 48.58% of the total time per day (24 hours). The division of time includes domestic activities, livelihood activities, and social activities. **Accumulated work time (11.66 hours or 48.58%):** Female duck farmers spend almost half (48.58%) of their total daily time on various activities, including domestic work, livelihood activities, and involvement in social activities.

### Cost Production

Production costs are costs incurred by female duck farmers in carrying out duck farming activities (Table 3). It can be seen that the total cost of female duck farmers in Bate Puteh Village, Langsa Lama District, Langsa City, Aceh per year is Rp3,585,951. This cost consists of fixed costs and variable costs, the fixed cost components incurred by duck farmers include

depreciation costs cage of Rp 171,438 depreciation equipment of Rp 55,496, electricity and water costs of Rp 208,333. The equipment used by farmers in duck farming activities consists of a feeder, a drinker, a lamp, a bucket, a broom, a hoe, and a hose. The variable cost components incurred by duck farmers in the process of duck farming activities include the cost of purchasing seeds of Rp. 506,250, the cost of purchasing feed of Rp. 1,777,500, the cost of purchasing medicines of Rp. 64,333, the cost of transportation of Rp. 130,000, and labor costs for labor wages of Rp. 12,000 per hour, total working costs for 1 year amounted to Rp. 672,600.

**Table 3.** Average Total Costs of Female Duck Farmers in Bate Puteh Village, Langsa Lama District, Langsa City, Aceh

No.	Description	Cost (Rp/Year)
	Fixed Costs	
1.	Depreciation Pen	171,438
2.	Depreciation Equipment	55,496
	<b>Variable Costs</b>	
1.	Seeds	506,250
2.	Feed	1,777,500
3.	Drugs	64,333
4.	Cost Transportation	130,000
5.	Cost Power Work	672,600
6.	Electricity And Water	208,333
	<b>Total Cost</b>	3,585,951

### Reception woman breeder duck

Reception woman duck farmer in Village Bates White Subdistrict Old Langsa City, Langsa Aceh is divided into two: for meat ducks obtained from the results multiplication between amount duck farming tail/year with selling price, Whereas for laying ducks it is obtained by multiplying the egg production by the selling price.

**Table 5.** Average Reception woman breeder duck in Village Bates Puteh District Langsa Long City Langsa Aceh

No.	Type Duck	Amount	Price (Rp)	Revenue (Rp/ Year)
1.	Duck Meat	301	46,250	13,607,500
2.	Duck Egg layer	2.025	2,000	4,050,000
3.	Duck Retired	10	25,000	250,000
<b>Total</b>				17,907,500
<b>Total Average</b>				8,953,750

Based on table 4 above, it can be seen that the total income of meat duck and egg-laying duck farmers per year is IDR 17,907,500 with an average total of IDR 8,953,750 per year. The total production generated in meat duck farming activities is 2,408 per year while the average meat duck is 301 then multiplied by the average price/head of IDR 46,050, then the income The average price of meat ducks is Rp 13,607,500. The total production generated from egg-laying duck farming activities is 8,100 eggs per year while the average duck eggs are 2,025 eggs then multiplied by the price of eggs at a price of Rp. 2,000/egg, then the income from

laying ducks per year is Rp. 4,050,000 and culled ducks are 40 per year with an average of 10 then multiplied by the price of Rp. 25,0000 with income from culled ducks per year of Rp. 250,000.

### Income woman duck farmer

Income obtained taking into account the difference between total revenue and total costs (Fixed Costs and Variable Costs) can be seen in Table 6. the average total income from meat duck farming activities per year is Rp 13,607,500 and the average total income from egg-laying duck farming activities per year is Rp 4,300,000. The average total cost incurred by meat duck farmers per year is Rp 4,086,682 And average Total the cost that issued by laying duck farmers per year is Rp 2,584,487. The average total income of meat ducks per year is Rp 9,520,818 and the average total income of meat ducks per month is Rp 793,401, while the average total income of laying ducks per year is Rp 1,715,513 and the average total income of laying ducks per month Rp 142,959. If averaged, the total income obtained from duck farming activities per year is Rp 5,618,165 and the average total duck income per month is Rp 468,180.

**Table 6.** Average Income of Female Duck Farmers in Bate Puteh Village, Langsa Lama District, Langsa City, Aceh

No.	Type Duck	Revenue (Rp/Year)	Total Cost (Rp/Year)	Total Income (Rp/Year)	Total Income (Rp/Month)
1.	Duck Meat	13,607,500	4,086,682	9,520,818	793,401
2.	Duck Egg layer	4,300,000	2,584,487	1,715,513	142,959
<b>Total</b>				11,236,331	936,360
<b>Total Average</b>				5,618,165	468,180

Household income of female duck farmers comes from three categories, namely on farm, off farm, and non farm . In addition to female duck farmers, sources of household income also come from husbands and other members including off farm activities as livestock laborers, and non farm activities as construction workers, vegetable traders, drivers, farmers, civil servants, and daily laborers. For more details on household income, see the following table.

**Table 7.** Average Household Income of Female Duck Farmers in Bate Puteh Village, Old Langsa District, Langsa City, Aceh

No.	Type Duck	Level Income Family (Rp/Year)			Total Revenue (Rp/Year)
		Husband	Wife	Source Other	
1.	Duck Meat	21,000,000	9,520,818	750,000	31,270,818
2.	Duck Egg layer	15,000,000	1,715,513	900,000	17,615,513
<b>Total</b>		36,000,000	11,236,331	1,650,000	48,886,331
<b>Total Average</b>		18,000,000	5,618,165	825,000	24,443,165

Based on Table 7, it can be seen that the highest income is the husband's income with a total husband's income of Rp 36,000,000 per year. The average total income of female duck farmers is Rp 5,618,165 per year, this value is not greater than the main income of Rp 18,000,000 per year. The average total income from other sources is Rp 825,000 per year. The average total income of female duck farmer families is Rp 24,443,165 per year.



### **Contribution income**

The income contribution contributed by female duck farmers in Bate Puteh Village, Langsa Lama District, Langsa City, Aceh is very helpful in the family economy. The percentage of income of female livestock farmers' families ducks are owned the highest by the husband's income which contributes 80.6%, this value is greater than the average contribution of female duck breeders' income, which is 15.4%. And the average contribution of family income from other sources is 3.91%. This comparison shows that the contribution of female duck breeders' income, which is 15.4%, can be said to be less based on the contribution interval scale (Gumilar, 2021) (Table 8).

**Table 8.** Average Income Contribution of Female Duck Farmers in Bate Puteh Village, Langsa Lama District, Langsa City, Aceh, 2024

Contribution Income Family (%/Year)		
Husband	Wife	Source Other
80.6	15.4	3.91

### **Hypothesis**

Hypothesis testing to state how revenue contributes female duck farmers in increasing family income. It can be calculated as follows:

$$P = \frac{11.236.331}{48.886.331} \times 100\% \\ = 22\%$$

That the amount of income contribution of female duck farmers is 22% is classified as low, based on the criteria of 0% - 25% = classified as low. This shows that the contribution of income of female duck farmers to total family income is not dominant and is still relatively small.

### **Harvard gender model analysis**

The Harvard analysis framework is an effective tool for collecting and analyzing data at the situation analysis stage, both general and detailed data as needed. Its advantage lies in its ability to adapt to various situations. This framework is also designed to increase gender awareness by identifying roles, responsibilities, and access to resources between men and women. In addition, this framework is an effective training tool for understanding the dynamics of gender relations in community communities or development organizations, helping to design more inclusive and gender-equitable policies and programs. The Harvard analysis framework consists of 3 main components, namely: 1) Activity Analysis; 2) Access and Control Analysis; 3) Benefit Analysis (Anggraini, 2011).

**Table 9.** Activity Analysis Framework

Variables <i>Harvard</i>	Unit Analysis	
	Woman	Man
Analysis Activity		
a. Activity Productive	✓	
b. Activity Reproductive	✓	
c. Activity Social Community		✓

Community activities are divided into 3 activities, namely productive activities, reproductive activities and social activities. Based on the results of interviews that have been conducted, productive activities in duck farming activities include cage sanitation, providing morning and evening feed and medicines, harvesting for meat ducks, and collecting eggs for laying ducks. In productive activities, women are the ones who carry out duck farming activities. Reproductive activities include cooking, cleaning the house, caring for children, preparing food and washing clothes. The involvement of men in reproductive activities, although sometimes limited, remains important to support the health and welfare of the family.

These community social activities include: various forms of interaction and participation aimed at improving welfare and solidarity in society. Based on the interview results, it was found that community social activities include religious studies, social gatherings, work devotion, and patrol. On activity social study And lottery club dominated by women, while on activities social community service and patrols are dominated by men. So it can be concluded that man and women both have important role in community activities according to the portion of each activity.

**Table 10.** Framework Analysis Access Profile And Control

Variables <i>Harvard</i>	Access		Control	
	Woman	Man	Woman	Man
Analysis Access And Control		✓	✓	

Access analysis is an analysis related to what can be obtained or enjoyed between women and men (Syahroni, 2020). Based on the results of the interviews conducted, the opportunities for access in the household between men and women have almost the same opportunities. For several access activities including household needs, household property, money, and family nutrition are dominated by women (wives). And in decision-making authority is dominated by women (wives), even though men are heads of families, the position of women (wives) in the household is very influential and important.

**Table 11.** Framework Benefit Analysis

Variables <i>Harvard</i>	Unit Analysis	
	Woman	Man
Analysis Benefit	✓	

Analyze these benefits used to answer who benefits more or results from activity in House stairs, and whether The benefits are more dominant for women, men or together. Based on the results of the interviews that have been conducted, it can be explained that women (wives) are more dominant in getting benefits from the results of activities in the household. In some activities carried out by women (wives), the more prominent benefits are in the use of kitchen equipment, clothing needs and family health. In this case, women play a more active role in all household activities.

## CONCLUSION AND SUGGESTION

The average total working hours of female duck farmers in all activities is 11.66 hours per day, or 48.58% with a break time of 12.33 hours per day. The average income received by female duck farmers is Rp 9,520,818 per year and the average income of female duck farmers is Rp 1,715,513 per year. So the average total income of female duck farmers is Rp 5,618,165 per year. Female duck farmers contribute 15.4% to family income. This percentage contribution is stated as low because it is based on the contribution interval scale. Hypothesis testing to state



how the contribution of female duck farmers' income is in increasing family income, the amount of income contribution of female duck farmers, namely 22%, is classified as low. The Harvard Analysis Framework consists of three components: Activity Analysis, Access and Control Analysis, and Utility Analysis.

The local government should pay attention to housewives who are duck farmers so that they can improve their skills in raising ducks to increase the income obtained by each female duck farmer so that it can be much better.

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