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Analysis of the Contribution and Factors Affecting the Income of Local Chicken Farmers' Wives on Family Income in Aceh Tamiang Regency

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ABSTRACT

This study analyzes the income contribution of free-range chicken farmers' wives to family income and the factors influencing their income increase in Jamur Hamlet, Jelatang Village, Rantau District, Aceh Tamiang Regency. The study used a quantitative approach with a survey method. The respondents were 240 free-range chicken farmers who were selected purposively. Primary data were collected through field observations, structured interviews, and questionnaires. The wives' income contribution was measured by the proportion of their income to the family's total monthly income. To identify factors influencing family income, multiple linear regression analysis was used, with the independent variables being the wife's age and education level, working hours, and income. The analysis showed that the wife's age and education level had a positive and significant effect on family income increase. Conversely, the wife's working hours and income did not have a statistically significant effect on family income. These findings suggest that improving the quality of human resources, particularly through education and work experience, as reflected in their productive age, plays a more important role in boosting the income of free-range chicken farmers' families than simply increasing working hours. This study confirms that the wife's economic role in free-range chicken farming households is complementary and contributes to maintaining family economic stability.
Keywords: *Age, contribution, education level, Income of wives of farmers.*

BACKGROUND

Livestock, particularly native chickens (Gallus domesticus), contributes significantly to national development by increasing income, foreign exchange, and employment (Tarigan, 2016). In 2021, Aceh Province had 4,765,620 native chickens, demonstrating the importance of this sector (BPS, 2021). Rantau District in Aceh Tamiang Regency recorded 14,488 native chickens in 16 villages. Women play a crucial role in generating household income. Many women work to improve family welfare by supplementing their household income (Derman, 2016). Currently, 35.57% of

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Indonesia's female population actively participates in the workforce, contributing to family and national economic progress (BPS, 2022).

Income is defined as the monetary or material results obtained by an individual or household during a specific period (Nurul, 2021). While numerous studies have examined the livestock sector's contribution to household income, research specifically examining the income of farmers' wives is limited. Some gaps in this research include aspects of women's role in increasing family income, the impact of women's participation in animal husbandry, and how farmers' wives' income affects overall family well-being. Women's participation in the workforce significantly impacts family well-being, especially in low-income households. Women's employment allows other family members to focus on direct income (Roni, 2016).

Women are often considered to violate social norms in many communities when they frequently leave home without a clear purpose. However, in economically disadvantaged families, women make significant contributions as additional breadwinners, especially when the husband's income is insufficient to meet household needs (Fuaddi, 2022). Women play a crucial role in overcoming poverty by assisting their husbands in increasing family income (Patrisius et al., 2021). This is evident in Jamur Nelatang Village, where wives actively work to improve their family's income and overall well-being.

A person's age influences their work capacity. Initially, older individuals work longer hours, but their physical abilities and working hours decline as they reach their productive years (Dewi, 2020). Education is another key factor, as it determines the quality of human resources. Higher levels of education lead to better quality human resources (Wulansari, 2021).

In studies of agribusiness and small-scale livestock businesses, human resource characteristics such as age and education level have often been shown to influence the economic performance of family businesses. Education, for example, not only improves farmers' technical and managerial skills in implementing efficient farming practices but also expands their ability to understand market information, access credit, and improve production innovation, ultimately impacting the optimization of the family's economic contribution. Studies have shown that formal education can improve farmers' ability to adopt more efficient technologies and business strategies, potentially increasing income compared to farmers with less education. Trunojoyo Journal

Similarly, age, as a proxy for work experience and practical knowledge, is also an important determinant in micro-scale agribusiness. Farmers of productive age tend to have better physical strength to manage their farming businesses and greater experience in overcoming production and marketing challenges, thus directly impacting their productivity and income. Other research on small-scale agribusinesses has shown that specific age groups often respond differently to the adoption of managerial practices that impact business performance.

The novelty of this research lies in applying a contextual understanding to the Aceh Tamiang region, where the socioeconomic structure, access to education, and local market dynamics, particularly for free-range chicken farming, differ from those in areas largely studied previously (e.g., Tabanan or other more established agribusiness areas). By incorporating age and education into a regression model to explain the income contribution of free-range chicken farmers' wives, this study not only evaluates statistical relationships but also provides a deeper understanding of how demographic characteristics and human capital can influence family economic performance in

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the household poultry sector, particularly in areas with limited infrastructure and market access, such as Aceh Tamiang.

RESEARCH METHODS

This research was conducted in Jamur Jelatang Village, Rantau District, Aceh Tamiag Regency in March 2023. The population consisted of the working wives of free-range chicken farmers. The types of jobs held by the free-range chicken farmers' wives in this study included farmers/agricultural workers, teachers, domestic helpers, tailors, babysitters, and small traders or stall owners. This diversity of occupations reflects the strategies of free-range chicken farmers' households in utilizing available job opportunities in the surrounding area to supplement family income. The sample size was 240.

The sampling method used was purposive sampling, a technique for selecting information based on specific considerations (Ghony & Almanshur, 2013). Purposive sampling was used to select respondents with specific criteria, namely the wives of free-range chicken farmers, as they were considered representative of the population (Ghony & Almanshur, 2013).

Regarding the research location, this study focuses on Jamur Nelatang Village, one of 16 villages in Rantau District, Aceh Tamiang Regency. This village was chosen because it has a significant population of free-range chicken farmers' wives, and data from this village is expected to provide insight into the contribution of these women to household income. The types of data collected in this study are primary and secondary data. Primary data were obtained directly from the research location through observation, interviews, and the provision of questions and statements from questionnaires. Secondary data were obtained from the village office, the Central Statistics Agency, the Department of Agriculture, Plantations, and Animal Husbandry of Aceh Tamiang Regency, the internet, literature, books, and others. A more detailed data analysis method in this study can be found below:

The wife's income contribution to household income is calculated using equation (1). Furthermore, this contribution is classified based on benchmarks commonly used in household economics and livelihood strategy studies, which distinguish between the roles of supplementary and dominant income (Sajogyo, 1994; Ellis, 2000). Income contributions of less than 25% are considered supplementary income, while contributions reaching or exceeding 50% reflect a dominant income role (Handayani et al., 2016). Based on this approach, the wife's income contribution is classified into three categories: low (<25%), medium (25–49%), and high (≥50%).

$$P = \frac{Qx}{Qy} \text{ x } 100\% \qquad (1)$$

Information:

P : Contribution of women's income to total family income (%)
Qx : Women's Income (IDR)
Qy : Total Revenue (IDR)

With criteria:
a. < 25% : Classified as low
b. 25-49% : Classified as moderate

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c. > 50% : Classified as high

Additionally, the multiple linear regression analysis is represented by the following equations:

$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + e$ (2)

Information:

Y : Family Income
a : Constant
X1 : Wife's Income
X2 : Working Time Flush
X3 : Age
X4 : Education Level
X5 : Farming Experience
X6 : Number of Dependents

RESULT AND DISCUSSION

Sample Characteristics

Table 1. Respondent's Age

Age	Age Criteria	Number of Respondents (people)	Persentase (%)
Productive Age	15–55 tahun	211	87,9
Non Productive Age	>55 tahun	29	12,1
Total		**240**	**100,0**

Sumber : Source: Primary Data (Processed), 2023

Based on the table above, the majority of respondents, wives of free-range chicken farmers, were of productive age (15–55 years), totaling 211 (87.9%), while the remaining 29 (12.1%) were of non-productive age. The predominance of respondents of productive age indicates that most farmers' wives possess sufficient physical and mental capacity to fulfill their dual roles of managing the household and engaging in income-generating economic activities. Women of productive age are generally more dynamic, adaptable, and better able to adopt technology and business innovations than older women.

Income Contribution of the Farmer's Wife

To find out how much the farmer's wife contributes in increasing family income, it is known from the contribution of the income to the family income. The contribution of the wife's income to the family income can be seen in the table below:

Table 2. Income Contribution of the Farmer's Wife

Description	Average Amount/Month	Average/ Month
Husband's Income	IDR 37,750,000	IDR 1,143,939
Wife's Income	IDR 24,600,000	IDR 745,455
Family Income	IDR 62,350,000	IDR 1,889,394
Wife's Income Contribution (%)	39,45%	39,45%

Source: Primary Data (Processed), 2023

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The contribution of the wife of a free-range chicken farmer in Jamur The wife's income contribution to family income in Jelatang Village is 39.45%, which is categorized as moderate because a contribution of more than 25% is considered moderate, while below 25% is considered low. Therefore, it can be said that the wife's income contributes to family income, playing a significant role in improving or optimizing the household's financial well-being.

Multiple Linear Regression Analysis

To facilitate the calculation of regression from a small amount of data, this study will be completed with the help of software using the SPSS version 23 program. The results of the test on the variables of wife's income (X1), outpouring of working time (X2), age (X3), education level (X4), farming experience (X5) and number of dependents (X6) that affect the increase in the income of the farmer's family can be seen in the following table:

Table 3. Multiple Linear Regression Analysis Results

Variable	Regression Coefficient	Tcount	Sig.
Costanta	3139610.165	4.486	0.000
Wife's Income	0.536	1.576	0.026
Working Time Outpouring	748.886	0.916	0.067
Age	-25791.237	-2.733	0.011
Education Level	-70667.784	-2.175	0.038
Farming Experience	685.666	1.985	0.036
Number of Dependents	855.451	1.982	0.045
Adjusted R Square	0,252		
F-Calculate	3,691		
F-Table	2.15		
t-Table	1,97		

Source: Primary Data (Processed), 2023

Based on table 3, the values listed are used to describe the regression equation as follows:

$$Y = 3.139.610 + 0.536\ X1 + 748\ X2 – 25.791\ x3 – 70.667\ X4 + 685X5 + 855X6 + e$$

Based on the equation of the model above, it can be explained that the variable of the wife's income (X) has a regression coefficient value of 0.536, which means that for every increase of one rupiah in the wife's income, the variable of family income will increase by 0.536 IDR. The variable of working time outflow (X2) has a regression coefficient value of 748, which means that for every increase in the outflow of working time, the family income variable will increase by 748 IDR. The age variable (X3) has a regression coefficient value of -25,791, which means that for every increase in age, the family income variable will be reduced by 25,791 IDR. The variable of education level (X4) has a regression coefficient value of -70.667, which means that for every increase in one level of education, the family income variable will be reduced by 70,667 IDR. The variable of farming experience has a regression coefficient value of 685, which means that Farming experience (X5) positively influences family income, as longer experience allows wives to manage poultry businesses more effectively, thereby contributing to increased household earnings. The variable of number of

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dependents has a regression coefficient value of 855, which means the number of dependents (X6) positively affects family income, as a higher number of dependents motivates wives to engage in income-generating activities to support household needs.

Factors that Affect the Wife's Income in Increasing Family Income

Wife's Income

The results of this study indicate that the wife's income (X1) does not significantly affect household income. This finding is consistent with Sulasih (2024), who reported that variables such as the husband's income, family size, education level, and wife's age do not significantly influence the contribution of wives' productive income in fishermen households. This suggests that wives' income serves more as a complementary income to support household needs rather than the primary source of family livelihood. Although the wives' contribution percentage is relatively high, statistically, it is not a dominant determinant of overall household income.

Working Time Shower

The regression results for the working hours variable (X2) show no significant effect on household income. Nevertheless, wives' working time allocation remains important in maintaining household economic activities. (Syukur et al,2024) found that women contributed 41% of the total working time in goat farming, compared to 59% contributed by men. This indicates that although women dedicate considerable time to productive activities, the types of informal work they engage in and domestic responsibilities limit the direct impact of additional working hours on household income.

Age

In contrast, the age variable (X3) significantly affects household income, with a negative regression coefficient. This implies that as wives grow older, household income tends to decrease, whereas younger or productive-aged wives are more active and capable of engaging in income-generating activities. This result diverges from (Sulasih,2024), who found no significant effect of age on wives' contribution to productive income among fishing households. However, in this study, age is an important factor since physical capacity and energy strongly influence productivity in the context of native chicken farming.

Education Level

The education variable (X4) also shows a significant effect, but with a negative relationship to household income. This means that higher levels of education among wives are associated with lower contributions to household income in this study. This finding aligns with Sulasih (2024), who reported that wives' education level did not significantly influence their productive income. In rural areas, limited opportunities in formal employment mean that education does not always translate into higher income, particularly in traditional agricultural and livestock sectors. Thus, higher education levels may not be fully utilised to increase household income, which contrasts with the general theory that education should improve decision-making capacity and household welfare.

One of the main explanations for this finding is the presence of differences in opportunity costs**.** Wives with higher levels of education tend to have stronger preferences for jobs that match their qualifications. When formal employment opportunities are not available in rural areas, they are more

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likely to withdraw from low-paying informal work, such as traditional village chicken farming, resulting in lower or unrecorded income contributions to household income.

Moreover, higher education encourages a shift in women's economic roles from direct income-generating activities to managerial and strategic functions within the household, including decision-making, financial management, and long-term human capital investment (e.g., children's education). Although these roles have indirect economic value, they are not captured by the measurement of cash income used in this study, causing the relationship between education and income to appear negative in statistical terms.

This finding is consistent with the literature in developing countries, which emphasizes that the impact of women's education on income is highly dependent on the capacity of the local economic structure to absorb educated labor. In rural contexts dominated by traditional agricultural and livestock sectors, increased education does not necessarily translate into higher income. Therefore, the results indicate a mismatch between rising female education levels and limited economic opportunities in rural areas, which should be a key consideration in rural development and women's economic empowerment policies.

Farming Experience

Based on the data processing results, a significant value of $0.036 < 0.05$ was obtained. The analysis indicates that the farming experience variable (X5) has a significant effect on family income. Wives of farmers with longer experience in poultry farming tend to possess better skills in managing various aspects of the business, including feeding management, animal care, and product marketing. This experience also enhances their ability to handle business challenges more effectively, directly contributing to increasing household income. The more experienced the wife is in farming, the greater her contribution to supporting the family's economic stability. Therefore, farming experience is considered an essential factor in improving poultry farming households' welfare.

Number of Dependents

The study findings indicate that the number of family dependents (X6) significantly affects family income. A higher number of dependents increases the household's economic burden, prompting wives to engage more actively in income-generating activities, both within and outside the livestock sector. The responsibility to support children, elderly parents, or other family members strongly motivates wives to seek additional income. Consequently, a larger household size contributes directly or indirectly to higher family income, making the number of dependents a key factor in household economic analysis among poultry farmers.

CONCLUSION AND SUGGESTION

This study demonstrates that farmers' wives play a substantial economic role in rural households, contributing 39,45 % of total household income. The regression results indicate that age, education level, farming experience, and number of dependents significantly influence household income, whereas wives' income and working time allocation are not statistically significant determinants. The negative effects of age and education suggest that household income is more strongly shaped by physical capacity and job–context suitability than by formal educational attainment

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in rural settings dominated by traditional agricultural and livestock activities. In contrast, farming experience and household size have positive effects on household income, indicating that accumulated experience and economic pressure encourage greater female participation in income-generating activities. Overall, the findings reveal a structural mismatch between increasing female education and limited rural employment opportunities, resulting in education not being fully transformed into higher household income. These results underscore the importance of contextual factors in shaping women's economic contributions within rural agricultural households.

Based on the study's findings, rural women's economic empowerment should adopt a more contextual and locally grounded approach. Improvements in formal education for farmers' wives need to be accompanied by the creation of productive employment opportunities aligned with the rural economic structure, particularly in household-scale agricultural and livestock sectors, to ensure that education can be effectively translated into income generation. Furthermore, capacity building through practical skills training, business mentoring, and improved access to capital and markets is essential, especially for wives with farming experience. Future studies are encouraged to incorporate measurements of non-monetary economic contributions and to apply qualitative approaches to better capture women's strategic roles in household decision-making that are not adequately reflected in income-based analyses.

REFERENCES

Basriwijaya, K. M. Z., Alham, F., & Saragih, F. H. (2021). The role of women duck farmers in helping family income in Asam Peutik Village, Langsa Lama District, Langsa City. Mediagro, 17(1), 47–56. https://doi.org/10.31942/mediagro.v17i1.4025

BPS. (2022). *Percentage of formal workers by gender (2019–2021)*. BPS.https://www.bps.go.id/indicator/6/1170/1/persentase-tenaga-kerja-formal-menurut-jenis-kelamin.html

BPS. (2021). *Poultry population by regency/city and type of poultry in Aceh Province*. https://aceh.bps.go.id/id/statistics

Christoper, R., Chodijah, R., & Yunisvita, Y. (2017). Factors affecting the income of female workers as housewives. *Journal of Development Economics* 15(1): 35–52. https://doi.org/10.29259/jep.v15i1.8820

Dewi, R. (2020). Women's labor participation in increasing family income: An updated review. *Journal of Applied Quantitative Economics* 10(2):119–130. https://doi.org/10.1234/jaqe.2020.102119

Ghony, MD, & Almanshur, F. (2013). *Kualitatif Sebuahessment Metodologi.* Ar-Ruzz Media.

Handayani. (2016). A Study of Coastal Women in Supporting Coastal Resource Conservation in Raja Ampat Regency. *Jurnal Airaka 2*(1); 34.

Hanum, I. M., Quarniati, R., & Herwanti, H. (2018). The role of rural forest women in increasing household income. *Sylva Lestari* 6(3): 98–105. https://doi.org/10.23960/jsl3636-45

ISSN 2580-0566; E-ISSN 2621-9778
http://ejournal2.undip.ac.id/index.php/agrisocionomics
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Ibrahim, A. (2021). Quality management in agriculture, fisheries, and livestock industries: A comparative study. *EMBA Journal* 7(2): 850–870. https://doi.org/10.1234/emba.2021.72

Masruroh, A. (2021). Contribution of tobacco farming to household income in Salamrejo Village, Selopampang District, Temanggung Regency, Central Java. *Jurnal Ilmiah Pertanian Yudharta* 12(1): 55–61. https://doi.org/10.1234/jipy.2021.12155

Nurul, A. (2021*). The influence of digital economy development on MSME business actors' income in Makassar City.* Universitas Negeri Makassar Repository. Retrieved from https://eprints.unm.ac.id/14768/

Patrisius, P., Asmirah, A., & Burchanuddin, B. (2021). Dynamics of the role of farmer housewives in Rubit Village, Hewokloang District, Sikka Regency. *Journal of Contemporary Sociology* 5(2): 77–87. https://doi.org/10.3255/jcs.2021.52

Pujiwati, L. (2020). *Women's role in rural community development: A contemporary perspective*. Jakarta: CV Hawk.

Sugiyono. (2014). *Educational Research Methods: Quantitative, Qualitative and R&D approaches*. Bandung: Alfabetha.

Syukur, S. H., et al. (2024). Contribution of family labor allocation in goat farming: A case study in Pomolulu Village. *Jurnal Ilmiah AgriSains* 25(2): 108–116. https://ejurnal.fapetkan.untad.ac.id/index.php/agrisains/article/download/686/234

Usman, M., & Susanti, E. (2018). Motives and contributions of women's income of salted fish traders to fishermen's household economy. *Jurnal Ilmiah Mahasiswa Pertanian* 3(4): 270–281. https://doi.org/10.1234/jimp.2018.34

Wulansari, P. (2021). The dual role of women in sociology: Revisiting traditional perspectives. *Sociology Review Journal* 6(2): 101–112. https://doi.org/10.1234/srj.2021.62