Household spending decisions analysis of coffee farmers in Aceh Tengah District

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Abstract. Farmer household income is certainly very closely related to expenditure. Coffee farmers in Aceh Tengah spend their income on consumptive and productive expenditures. This study aims to find out how the consumptive spending decisions and productive spending decisions of coffee farmers in Aceh Tengah District are described and to find out how the correlation between coffee farmers' income and consumptive and productive spending decisions. The data used in this study are primary and secondary data. The analytical method used is descriptive statistics and Chi-Square analysis. The results showed that the consumptive expenditures of coffee farmers in Aceh Tengah District had a high category with a percentage of 42.2% or 62 farmers, while for productive expenditures of coffee farmers in Aceh Tengah District had a low category with a percentage of 45.6% or 67 farmers. The results of the Chi-Square analysis, namely from the results of the two analyzes, can be seen that the significance value of the correlation between income and consumptive and productive spending decisions is 0.000, which means that there is a correlation because of the Asymp value. Sig < 0.05. Moreover, the contingency coefficient (r) has a high (0.61-0.80) and moderate (0.41-0.60) correlation.

1. Introduction
Coffee is a leading plantation commodity that has high economic value and plays an important role in foreign exchange. Coffee plants are also a source of income for coffee farmers to fulfill their family's economic life [1]. Aceh Tengah District is one of the best quality coffee-producing areas in Aceh. The area of coffee plantations in Central Aceh reaches 50,408.3 Ha [2]. Coffee plantations are not only managed by coffee farmers, but people who have permanent jobs also pursue the profession as coffee farmers.

One of the factors that affect the level of income is the price of coffee. The average income earned by coffee farmers in Central Aceh for two coffee harvests in a year reaches Rp. 120,822,580, and if calculated in months, farmers earn approximately Rp. 10,000,000 [3]. According to BPS, income of more than Rp. 6,000,000/month is classified as very high income [4]. Farmer household income is certainly very closely related to spending patterns [5]. Where the higher the household income, the smaller the pattern of household expenditure for food. It is clear that in a group of residents whose food...
consumption level is already at the saturation point, if there is an increase in income it will be used to fulfill desires or save [6]. The following is data on the average value of consumption expenditure (Rp/month) by group of goods in Aceh Tengah District in 2019-2020.

![Figure 1. Consumption expenditure (Rp/month) in Aceh Tengah District in 2019-2020.](image)

Public consumption expenditure in Aceh Tengah District has increased from year to year, which can be seen in the graph of community consumption expenditure in Aceh Tengah District which is higher for non-food consumption compared to food consumption, namely for non-food consumption expenditure reaching Rp 772,672/month, while for food expenditure of Rp.720,128/month. Dian [7] stated that most people in Central Aceh, especially coffee farmers, have consumptive spending habits. Where coffee farmers are accustomed to spending their income on things that are not really needed. However, according to Rustim, the people of Central Aceh tend to be productive, namely in terms of prioritizing education for their children. The habits of the children of coffee farmers there prefer to continue their education outside the region, causing farmers to spend more income for their children. Expenditure in the household is very dependent on how a person decides his expenses.

The decision of household expenditure is an option or policy in determining household expenditure. In this case a person can determine the option to spend income. Household spending decisions are divided into two parts, namely consumptive spending and productive spending. Consumptive expenditures are expenditures made to fulfill wants in addition to meeting needs. While productive expenditures are expenditures that can produce something in the future, such as investment and savings.

Understanding coffee farmers' household spending decisions will show the largest share of household spending. Thus, it will be known whether coffee farmers' household expenditures are more aimed at consumptive expenditures or productive expenditures. Based on the above background, this study was conducted to see how the income of coffee farmers is related to the consumptive and productive spending decisions of the farmers. In this study, the authors want to know whether the income received by farmers will be related to the consumptive and productive spending decisions of farmers.

2. Research methods

2.1 Place and time of research

This research was conducted in Pegasing District, Kebayakan District and Atu Lintang District, Aceh Tengah District in February 2021. The location determination of this research was carried out purposively with the consideration that Aceh Tengah District is one of the areas where the average community is farmers coffee.
2.2 Population and sample

The population in this study are coffee farmers in Pegasing District, Kebayakan District and Atu Lintang District, Aceh Tengah District which are under the auspices of the Baitul Qirad Cooperative (KBQ) Baburrayyan. The sampling technique in this study used simple random sampling, which is a sampling technique that provides equal opportunities for the population to be sampled. The reason for using the simple random sampling technique is because the population members are homogeneous in the sense of coffee farmers who are under the auspices of the Baburrayyan Baitul Qirad Cooperative (KBQ), which are certified and who sell coffee in the form of red logs. Furthermore, for the number of samples obtained were taken from 10% of the existing population, this is because the population is homogeneous. The total population and sample in each sub-District can be seen in the Table 1.

| No | Districts          | Population   | Sample    |
|----|--------------------|--------------|-----------|
| 1  | Kebayakan District | 191 Farmers  | 19 Farmers|
| 2  | Pegasing District  | 666 Farmers  | 66 Farmers|
| 3  | Atu Lintang District | 623 Farmers | 62 Farmers|
|    | Total              | 1,480 Farmers| 147 Farmers|

2.3 Types and methods of data collection

The types and sources of data used in this study include primary data and secondary data. The data collection method in this study used a questionnaire that was distributed directly to the population that became the sample of this study. This data collection technique is done by giving a set of questions or written statements to the respondents to answer them. The question must be filled by the respondent by choosing one of the available answers. The measurement scale used to measure questions or statements on the independent and dependent variables is by using a Likert scale. Sugiyono [8] said that the Likert scale is used to measure attitudes, opinions and perceptions of a person or group of people about social.

2.4 Data analysis method

1). Descriptive statistical analysis

Statistical descriptive analysis aims to describe or explain the picture under study based on data from the variables that have been collected. The data obtained can be seen from the average (mean), median, mode, standard deviation, and maximum and minimum values [9]. Descriptive analysis is used to find out how the description of consumer spending decisions and farmers' productive spending. In this study, the results of statistical descriptive analysis will be presented in tabular form. Rusydi and Fadhli [10] stated that in categorizing data, they were arranged based on the mean ideal (Mi) and standard deviation ideal (SDi), with the following calculation steps:

\[
a) \quad Mi = \frac{1}{2} (\text{the highest score} + \text{lowest value}) \\
b) \quad SDi = \frac{1}{6} (\text{the highest score} - \text{lowest value})
\]

Lia [11] classifies consumptive lifestyle variables into 4 categories, as follows:

\[
a) \quad \text{Very High Group} = X \geq (Mi + 1,5 SDi) \\
b) \quad \text{High Group} = Mi + 1,5 SDi > X \geq Mi \\
c) \quad \text{Low Group} = Mi > X \geq Mi - 1,5 SDi \\
d) \quad \text{Very Low Group} = X < Mi - 1,5 SDi
\]
2). Chi Square test analysis

The chi square test is a method used to determine the correlation and influence between two variables from the independent variable to the dependent variable [12]. In this study using the chi square test analysis because the dependent variable (Y) and the independent variable (X) are variables that use categorical (ordinal) data in the measurement scale. Variable X is the income of coffee farmers and variable Y is the expenditure decisions of farmers’ households. The chi square test is used to test the hypothesis of the correlation with the ordinal variable measurement scale. The chi square test is one of the non-parametric tests, so the data is not required to be normally distributed. According to Sudjana [13], mathematically the chi square test is formulated as follows:

\[ x^2 = \sum_{i=1}^{k} \frac{(O_{ij} - E_{ij})^2}{E_{ij}} \]  \hspace{1cm} (7)

Where:

\[ E_{ij} = \frac{n_{i0} \cdot n_{0j}}{n} \]  \hspace{1cm} (8)

Description:

\[ n_{i0} = \text{Number of rows-i} \]
\[ n_{0j} = \text{Number of rows-j} \]
\[ n = \text{Number of samples} \]
\[ O_{ij} = \text{Frequency of observations in row i and column j} \]
\[ E_{ij} = \text{Expected frequency in row i and column j} \]
\[ k = \text{Number of categories per cell 1, 2, \ldots k} \]

If the confidence coefficient (\( \alpha \)) is 95% and the level used is 0.05, then the criteria for drawing conclusions are as follows:
If value \( \text{Asymp.Sig} < 0.05 \) then reject \( H_0 \) accept \( H_1 \)
If value \( \text{Asymp.Sig} > 0.05 \) then accept \( H_0 \) reject \( H_1 \)
Or, if \( \text{Chi-Square count} < \text{Chi-Square table} \) then reject \( H_1 \), accept \( H_0 \)
\( \text{Chi-Square count} > \text{Chi-Square table} \) then accept \( H_1 \), reject \( H_0 \)

Hypothesis Statement:
\( H_0 = \) There is no significant correlation between income and consumptive and productive spending decisions
\( H_1 = \) There is a significant correlation between income and consumptive and productive spending decisions

The criteria for the level of correlation (correlation coefficient) between variables ranged from \( \pm 0.00 \) to \( \pm 1.00 \), + is a positive sign and – is a negative sign. The interpretation criteria are as follows:
0.00 – 0.20 it means: Almost No Correlation
0.21 – 0.40 it means: Low Correlation
0.41 – 0.60 it means: Moderate Correlation
0.61 – 0.80 it means: High Correlation
0.81 – 1.00 it means: Perfect Correlation [14].

3. Results and discussion

3.1. Coffee farmer household expenditure decisions in Aceh Tengah District

3.1.1 Consumer expenditure decision. The consumptive expenditure variable was measured using 5 statements distributed to 147 respondents with a Likert Scale of 1-5. Based on the data that has been processed in SPSS version 16, the highest score (Max) is 25, the lowest score (Min) is 10, the average score (Mean) is 17.7, the median score is 18, the mode (Mode) is 19. and the standard deviation of 3.01.
Consumptive spending in this study is categorized into 4 categories, namely very high, high, low, very low based on the frequency trend. The next step is to determine the level of frequency tendency, then the value of is calculated mean ideal \((M_i)\) and standar deviasi ideal \((SD_i)\). Mean Ideal by using the formula \((M_i) = \frac{1}{2} (\text{the highest score} + \text{lowest value})\), then the standar deviasi ideal is calculated using the formula \((SD_i) = \frac{1}{6} (\text{the highest score} - \text{lowest value})\).

After getting the value Mean ideal \((M_i)\) by 17 and Standar deviasi ideal by 2, Then, the trend of very high, high, low, very low consumpton expenditure was identified using the \((M_i)\) and \((SD_i)\) values. To find the category is as follows:

- **Very High Group**
  \[ X \geq (M_i + 1.5 \, SD_i) \]
  \[ = X \geq (17 + 3) \]
  \[ = X \geq 20 \]

- **High Group**
  \[ M_i + 1.5 \, SD_i > X \geq M_i \]
  \[ = 17 + 3 > X \geq 17 \]
  \[ = 20 > X \geq 17 \]

- **Low Group**
  \[ M_i > X \geq M_i - 1.5 \, SD_i \]
  \[ = 17 > X \geq 17 - 3 \]
  \[ = 17 > X \geq 14 \]

- **Very Low Group**
  \[ X < M_i - 1.5 \, SD_i \]
  \[ = X < 17 - 3 \]
  \[ = X < 14 \]

Based on the results of the calculation of the trend of consumptive expenditure variables, the following results were obtained:

| No. | Score Interval | Total | Percentage | Category   |
|-----|----------------|-------|------------|------------|
| 1.  | \(X < 14\)    | 17    | 11.6%      | Very Low   |
| 2.  | \(17 > X \geq 14\) | 25    | 17%        | Low        |
| 3.  | \(20 > X \geq 17\) | 62    | 42.2%      | High       |
| 4.  | \(X \geq 20\)  | 43    | 29.3%      | Very High  |
|     | Total          | 147   | 100%       |            |

Based on Table 2, it can be seen that the consumptive expenditure of coffee farmers is in the very low category, with a percentage of only about 11.6% or 17 respondents, the consumptive expenditure in the low category is 17% or 25 respondents, and the consumptive expenditure in the high category is 42.2% or totaling 62 respondents and consumptive expenditure in the very high category, reaching 29.3% or totaling 43 respondents from 147 respondents. So, from the explanation above, it can be concluded that the trend of consumptive expenditure of coffee farmers in Aceh Tengah District is quite high. Consumptive spending in this study was measured by 5 statements. Consumptive spending is said to be very high if 4-5 statements are often and always done, then it is said to be high if 4-5 statements are sometimes and often done, said to be low if 4-5 statements are sometimes and rarely done and said to be very low if 4-5 statements rarely and never done. The following is the average score for each statement on consumer spending (see Table 3).
Table 3. Consumptive expenditure statement average score.

| Consumptive | N  | R  | S  | O  | A  | Mean | Category |
|-------------|----|----|----|----|----|------|----------|
| Buying household consumption of staple foods (rice, fish, cooking oil, vegetables, fruit, etc.) and non-staple foods (meat, snacks, cigarettes, etc.) | 0%  | 0%  | 0%  | 31% | 69% | 4.68 | Very High |
| Bought several pairs of clothes in one month | 4%  | 11% | 27% | 57% | 1%  | 3.39 | High      |
| Buying more than one similar item with different brands at harvest time (motorcycles, cars, etc.) | 1%  | 15% | 40% | 39% | 5%  | 3.31 | High      |
| Replacing or upgrading mobile phones at harvest time | 9%  | 14% | 43% | 33% | 0%  | 3.01 | High      |
| Buying electronics and household furniture during the harvest season (tv, washing machine, refrigerator, etc.) | 0%  | 16% | 32% | 50% | 2%  | 3.37 | High      |

Description: *N: Never, R: Rarely, S: Sometimes, O: Often, A: Always.

Based on the data that has been collected from the questionnaire, it can be seen in table 3 shows that the statement of buying consumption of staple and non-staple foods is classified as very high, with an average value of 4.68, this means that coffee farmers in Aceh Tengah District are generally able to buy family consumption for staple and non-staple foods. Then for the statement that buying several pairs of clothes in one month is high with an average value of 3.39, it means that 57% of coffee farmers often buy several pairs of clothes in one month, they not only spend their income on food consumption but to buy everyday wear too. Furthermore, the statement of buying more than one similar item with a different brand at the time of the main harvest was relatively high with an average value of 3.31, meaning that around 39% of the coffee farmers there often spent their income at harvest time to buy similar goods but with the same brand, such as motorcycles, cars and others. For the statement of replacing or upgrading cellphones at the time of the main harvest, it was relatively high with an average value of 3.01, meaning that at the time of harvest, 43% of coffee farmers sometimes replaced their existing cellphones with new ones for personal use or for their children. The next statement is that buying electronic goods or household furniture at the time of the harvest is relatively high with an average value of 3.37, meaning that at the time of harvest, coffee farmers not only spend their income to meet food consumption but some of the income they generate is also used to buy goods. electronic goods and household furniture such as tv, washing machine, refrigerator and others.

From some of the statements above, it can be seen that coffee farmers in Aceh Tengah District on average have high consumptive expenditures. This is because in addition to the income they earn is used to buy basic and non-basic food, some of the farmers also spend their income on buying tertiary (luxury) things that are not in accordance with their needs. The income of these farmers is finally used up for things that are temporarily satisfying and not profitable in the future. Most farmers in Aceh Tengah District usually prefer to buy goods without comparing the prices of goods in stores because they spend a little more effort if they have to ask for the prices of goods in other stores. Then when buying goods, farmers are reluctant to bargain, this activity is rarely done by farmers because farmers are not used to negotiating.

3.1.2 Productive spending decision. The variable of productive expenditure was measured by 5 statements distributed to 147 respondents with a Likert Scale of 1-5. Based on the data that has been
processed in SPSS version 16, the highest score (Max) is 20, the lowest score (Min) is 7, the average score (Mean) is 13, the median score is 12, the mode (Mode) is 12 and the standard is 2.71.

Productive expenditure in this study is categorized into 4 categories, namely very high, high, low, very low based on the tendency of frequency. The next step is to determine the level of frequency tendency, then the value of is calculated mean ideal (Mi) and standar deviasi ideal (SDi). Mean Ideal by using the formula \( \text{Mi} = \frac{1}{2} (\text{Max} + \text{Min}) \) (the highest score + lowest value), then the standar deviasi ideal is calculated using the formula \( \text{SDi} = \frac{1}{6} (\text{Max} - \text{Min}) \) (the highest score - lowest value).

After getting the value Mean ideal (Mi) by 13 and Standar deviasi ideal by 2, Then, the trend of very high, high, low, very low consumption expenditure was identified using the (Mi) and (SDi) values. To find the category is as follows:

**Very High Group**
\[ X \geq (\text{Mi} + 1.5 \text{SDi}) \]
\[ X \geq (13 + 3) \]
\[ X \geq 16 \]

**High Group**
\[ \text{Mi} + 1.5 \text{SDi} > X \geq \text{Mi} \]
\[ 13 + 3 > X \geq 13 \]
\[ 16 > X \geq 13 \]

**Low Group**
\[ \text{Mi} > X \geq \text{Mi} - 1.5 \text{SDi} \]
\[ 13 > X \geq 13 - 3 \]
\[ 13 > X \geq 10 \]

**Very Low Group**
\[ X < \text{Mi} - 1.5 \text{SDi} \]
\[ X < 13 - 3 \]
\[ X < 10 \]

Based on the results of the calculation of the trend of productive expenditure variables, the following results are obtained:

**Table 4. Category of coffee farmers household productive expenditures.**

| No. | Score Interval | Total | Percentage | Category |
|-----|----------------|-------|------------|----------|
| 1.  | \( X < 10 \)   | 15    | 10.2%      | Very Low |
| 2.  | \( 13 > X \geq 10 \) | 67    | 45.6%      | Low      |
| 3.  | \( 16 > X \geq 13 \) | 41    | 27.9%      | High     |
| 4.  | \( X \geq 16 \)   | 24    | 16.3%      | Very High|
|     | Total           | 147   | 100%       |          |

Based on table 4 above, it can be seen that the productive expenditure of coffee farmers in the very low category has a percentage of only about 10.2% or 15 respondents, productive expenditure in the low category is with a percentage of 45.6% or 67 respondents, productive expenditure with the high category, with a percentage reaching 27.9% or 41 respondents, and productive spending in a very high category, with a percentage reaching 16.3% or 24 respondents from the total respondents. So, from the explanation above, it can be concluded that the tendency of productive expenditure of coffee farmers in Aceh Tengah District is low. Productive expenditure in this study is measured by 5 statements. Productive spending is said to be very high if 4-5 statements are often and always done, then it is said to be high if 4-5 statements are sometimes and often done, said to be low if 4-5 statements are sometimes and rarely done and said to be very low if 4-5 statements rarely and never done. The following is the average score for each statement on productive spending:
Table 5. Productive expenditure statement average score.

| Productive expenditure | N   | R   | S   | O   | A   | Mean | Category |
|------------------------|-----|-----|-----|-----|-----|------|----------|
| Set aside some of the money earned to be invested (in the form of buying gold, houses, land, etc.) | 17% | 48% | 33% | 2%  | 0%  | 2.19  | Low      |
| Set aside some income for regular savings (every day, week or month) | 24% | 42% | 33% | 1%  | 0%  | 2.10  | Low      |
| Set aside some of the income earned for coffee farming needs (huller, sprayer, etc.) | 5%  | 33% | 50% | 12% | 0%  | 2.69  | Low      |
| Make payments for tuition fees (tuition fees and books) | 14% | 16% | 26% | 35% | 9%  | 3.07  | High     |
| Education Insurance for children in the future | 5%  | 31% | 38% | 13% | 13% | 2.97  | Low      |

Description: *N: Never, R: Rarely, S: Sometimes, O: Often, A: Always.

Based on data from interviews with farmers, it can be seen in table 5 which shows that the statement of setting aside income for investment is relatively low, with an average score of 2.19, meaning that it sets aside income earned by farmers for investment activities such as buying a house, gold and others are rarely applied by farmers with a percentage of 48%. Furthermore, the statement setting aside some income for savings is relatively low, with an average score of 2.10, meaning that as many as 42% of coffee farmers rarely save the income earned, coffee farmers are accustomed to spending all their income, this is because most of the farmers adhere to the principle that income received today must be spent or enjoyed today. The statement for setting aside income for farming activities is low with a score of 2.69, meaning that as many as 50% of the farmers there sometimes set aside their income for farming activities such as updating equipment that is no longer functioning and so on. The statement of making payments for education costs is high with an average score of 3.07, meaning that 35% of coffee farmers often make payments for education costs, be it tuition, pocket money, books and others. The education insurance statement is classified as low with a score of 2.97, meaning that 38% of farmers sometimes set aside their income for insurance for their children's education.

From the statements above, it can be seen that the level of productive expenditure of farmers in Aceh Tengah District is relatively low. This is due to the habit of the people of Aceh Tengah District spending all of their income on consumptive things. However, some of the farmers in Aceh Tengah District also choose to set aside their income for the purposes of the education costs of their children. In this study, after interviews with several farmers, most of the children of the farmers there prefer to continue their studies outside the region. This is due to the close support of parents who prioritize their children's education. Not only that, some of the coffee farmers in Aceh Tengah District also set aside their income to save and invest. Investment activities, whether in the form of land, house or gold investment. For those who do not invest, in the future it will be difficult to support children's education and the thing to be afraid of is borrowing money from moneylenders.

Based on the description of the two expenditures, namely consumptive expenditure and productive expenditure, it can be concluded that the description of household expenditure decisions of coffee farmers in Central Aceh Regency for consumptive expenditures is in the high category, with a percentage reaching 42.2% or 62 farmers, while for productive expenditures are classified in the low category with the percentage reaching 45.6% or totaling 67 farmers.
3.2. Coffee farmers' income in Aceh Tengah District

Income is something that a person produces in the form of money or not money received in a period of time either weekly, monthly or yearly. The main source of income for coffee farming households in Aceh Tengah District is income from their own coffee farming. Because coffee production is only produced in certain months with two peak harvest seasons each year, farmers need other sources of funds to meet the daily consumption needs of their family members. Farming other than coffee and non-agriculture is income outside of coffee farming, while farming income other than coffee mostly comes from other commodities such as avocados, oranges, then red chilies and fragrant lemongrass. While non-agricultural income is from the profession of farmers themselves such as traders, private employees, and civil servants. For farmers who have a profession, coffee plantations are only a side job for the people in Aceh Tengah District, considering that Aceh Tengah is one of the largest coffee production centers in Aceh, so it has become a culture for the people in Aceh Tengah District to have coffee plantations.

The following are the categories of the total income earned by coffee farmers from coffee farming, non-coffee farming and non-agriculture:

| No. | Income Group | Income (IDR/month) | Respondents Total FH | % |
|-----|--------------|---------------------|-----------------------|---|
| 1.  | Low          | < 2.000.000         | 20                    | 14|
| 2.  | Medium       | 2.000.000-4.000.000 | 28                    | 19|
| 3.  | High         | 4.000.000-6.000.000 | 48                    | 32|
| 4.  | Very High    | > 6.000.000         | 51                    | 35|
| Total|              |                     | 147                   | 100|

Description: *FH: Farmers Household

Based on table 6, it can be seen that income is grouped into 4 categories according to BPS (2016), namely low, medium, high and very high categories. As for income in the low category, which is less than Rp. 2.000.000, for income in the medium category it reaches Rp. 2.000.000-4.000.000, for the high category, which is between Rp. 4.000.000-6.000.000, then for the very high category, income received is greater than Rp. 6.000.000. In this study, the income of farmers in Aceh Tengah District is classified as very high, with an average income of IDR 8.000.000-9.000.000. This farmers income is not only received from coffee farming, but farmers also have other farms such as avocados, oranges, cayenne pepper and fragrant lemongrass. Even some of the farmers there also have permanent jobs such as civil servants, private employees and traders, with income that is certain to be received every month.

3.3 Income correlation with consumptive and productive household expenditure decisions

3.3.1 Results of the analysis of the correlation between income and consumptive expenditure. The results of the output analysis using crosstab can be seen in Table 7. Based on Table 7, it can be seen that from 147 coffee farmers, the percentage of income in the low category has low consumptive expenditure with a percentage of 8.2% (12 farmers) of the total percentage of 13.6% (20 farmers), this is because for farmers who have low incomes to meet their daily needs are sometimes not enough, how to fulfill desires such as buying luxury goods. Furthermore, income in the medium category has high consumptive expenditure with a percentage of 10.9% (16 farmers) of the total percentage of 13.6% (20 farmers), this is because for farmers who have low incomes to meet their daily needs are sometimes not enough, how to fulfill desires such as buying luxury goods. Furthermore, income in the medium category has high consumptive expenditure with a percentage of 10.9% (16 farmers) of the total percentage of 13.6% (20 farmers), this is because for farmers who have low incomes to meet their daily needs are sometimes not enough, how to fulfill desires such as buying luxury goods. Furthermore, income in the high category has high consumptive expenditure with a percentage of 19.0% (28 farmers) of the total percentage of 32.7% (48 farmers), and for the very high category of income has a very high consumptive expenditure with a percentage of 23.1% (34 farmers) of the total percentage of 34.7% (51 farmers). It can be said that the higher a person's income, the more likely a person is to make consumptive expenditures.
Table 7. Frequency of correlation between income category and consumptive expenditure.

| Income  | Count | % of Total | Consumptive Expenditure | Total |
|---------|-------|------------|--------------------------|-------|
| Low     | 6     | 4.1%       | Very Low                | 20    |
| Medium  | 6     | 4.1%       | Low                      | 28    |
| High    | 5     | 3.4%       | High                     | 48    |
| Very    | 0     | 0%         | Very High                | 51    |
| Total   | 17    | 11.6%      |                          | 147   |

Table 8. Chi-Square test results, correlation of income category with consumptive expenditure.

| Value               | df | Asymp. Sig. (2-sided) |
|---------------------|----|-----------------------|
| Pearson Chi-Square  | 95.016 | .000               |
| Likelihood Ratio    | 102.057 | .000               |
| Linear-by-Linear    | 64.020 | .000               |
| Association         | 147 |                       |

4 cells (25.0%) have expected count less than 5. The minimum expected count is 2.31.

Table 8 shows that there are 4 cells that have an expected value less than 5 and the smallest expected value is 2.31. So if the frequency table (crosstab) is more than 2x2 and there is an expected value of less than 5 and more than 20%, then use the formula for "Likelihood Ratio". The results of the chi-square analysis using SPSS version 16 obtained a calculated chi-square value of 102.057 and a chi-square table value of 16.918 on df 9. Because chi-square count > chi-square table (102.057 > 16.918) then accept H1 and reject H0. The chi-square correlation can also be seen from the Asymp.Sig value with a value of 0.000 which is smaller than 0.05 which means it is significant. So it can be concluded that the income of coffee farmers is related to the consumptive expenditure of coffee farmers' households in Aceh Tengah District.

From the results of the study, it is known that income is related to consumptive expenditures of farmers' households, so it can be concluded that the higher the income obtained by farmers, the higher the consumptive expenditures issued by farmers. This can be proven based on the results of interviews from several research respondents. When the peak harvest season arrives, some of the farmers spend the income they receive by spending the goods they want to the exclusion of needs, buying goods without any consideration of price, even some farmers who spend the income they receive on vacations outside the city. Not only that, every peak harvest season some of the farmers also change cellphones for their children, replace existing vehicles with new ones, buy household furniture, and so on. This is in accordance with the theory that income is a determining factor for public consumption, the higher a consumer's income, the higher his purchasing power for the goods he wants, so the demand for these goods increases [15].
Table 9. Contingency coefficient value of income category correlation with consumptive expenditure.

| Contingency Coefficient | Value | Approx.Sig |
|-------------------------|-------|------------|
| N of Valid Cases        | 147   |            |

Based on Table 9, it can be seen that the contingency coefficient \((r)\) has a result of 0.627 which means that income has a high correlation or correlation with the consumptive expenditure of coffee farmer households in Aceh Tengah District.

3.3.2 Results of the analysis of the correlation between income and productive expenditures. The results of the output analysis using crosstab can be seen in Table 10. Based on table 10, it can be seen that the crosstab results from 147 farmers, namely the percentage of income in the low category of 10.2% (15 farmers) have productive expenditures in the low category of the total percentage of 13.6% (20 farmers), then for the percentage with the medium income category, namely 12.2% (18 farmers) having productive expenditures in the low category of the total percentage of 19.0% (28 farmers), for the high income category, namely 14.3% (21 farmers) having productive expenditures with the high category of the total percentage of 32.7% (48 farmers), while for the very high category of income 13.6% (20 farmers) had productive expenditures in the very high category of the total percentage of 34.7% (51 farmers). It can be concluded that the higher a person's income, the higher his productive expenditure.

Table 10. Frequency of correlation between income categories and productive expenditures.

| Income | Productive Expenditures | Total |
|--------|-------------------------|-------|
|        | Very Low | Low | High | Very High |       |
| Low    | Count    |     |      |           | 20    |
|        | 5        | 15  | 0    | 0         |       |
|        | % of Total | 3.4% | 10.2% | 0% | 0%       | 13.6% |
| Medium | Count    |     |      |           | 28    |
|        | 3        | 18  | 6    | 1         |       |
|        | % of Total | 2.0% | 12.2% | 4.1% | 0.7% | 19.0% |
| High   | Count    |     |      |           | 48    |
|        | 6        | 18  | 21   | 3         |       |
|        | % of Total | 4.1% | 12.2% | 14.3% | 2.0% | 32.7% |
| Very High | Count | 1    | 16   | 14        | 20    |
|        | % of Total | 0.7% | 10.9% | 9.5% | 13.6% | 34.7% |
| Total  | Count    | 15  | 67   | 41        | 24    |
|        | % of Total | 10.2% | 45.6% | 27.9% | 16.3% | 100% |

Table 11. Chi-Square test results, correlation between income categories and productive expenditures.

| Value            | df | Asymp. Sig. (2-sided) |
|------------------|----|----------------------|
| Pearson Chi-Square | 52.572 | 9 | .000 |
| Likelihood Ratio  | 58.287 | 9 | .000 |
| Linear-by-Linear Association | 35.893 | 1 | .000 |

N of Valid Cases 147

5 cell (31.3%) have expected count less than 5. The minimum expected count is 2.04.

Table 11 shows that there are 5 cells that have an expected value of less than 5 with the smallest expected value of 2.04. So, if the frequency table (crosstab) is more than 2x2 and there is an expected value less than 5 and more than 20%, then use the formula for "Likelihood Ratio". For the results of the chi-square test analysis using SPSS, the calculated chi-square value is 58.287 and the chi-square table value is 16.918 at df 9. This shows that the calculated chi-square value is greater than the chi-square
table value, namely \((58.287 > 16,918)\) then accept H1 and reject H0. The chi-square correlation can also be seen from the Asymp.Sig value with a value of 0.000 which is smaller than 0.05 which means it is significant. So, it can be concluded that the income of coffee farmers is related to the productive expenditure of coffee farmers’ households in Aceh Tengah District.

From the results of the study, it is known that income is related to productive expenditures of farmer households, this is because the higher a person's income, the higher the level of a person in saving or investing. Farmers do not just spend income without any consideration. Some of the farmers in Aceh Tengah District also set aside the income they receive for investment. There are several investments made by farmers, such as when receiving farmers’ income, buying gold so that it can be invested because gold can be sold at any time even in times of urgency. Investment in the form of land, where farmers buy land in order to cultivate coffee so that coffee production from the garden increases. Investment in housing is that farmers buy houses outside the area for the purposes of their children’s studies. Farmers in Aceh Tengah District prioritize education for their children, many of the farmers there choose to study outside the area for their children. Not only that, some of the farmers also set aside their income for savings. This is in accordance with the theory that the higher a person's income, the higher the level of savings that will be saved. Vice versa, the lower a person's income, the lower the level of savings [16].

Table 12. Contingency coefficient value of income category correlation with productive expenditure.

| Contingency Coefficient | Value | Approx.Sig |
|-------------------------|-------|------------|
| N of Valid Cases        | 147   |            |
| Contingency Coefficient | .513  | .000       |

Based on Table 12, it can be seen that the contingency coefficient \((r)\) has a result of 0.513 which means that income has a moderate correlation or correlation with the productive expenditure of coffee farmer households in Aceh Tengah District.

Based on the results of the two analyzes above, it can be seen that the significance value of the correlation between income and consumptive and productive spending decisions is 0.000, which means that there is a correlation because of the Asymp value. Sig is less than 0.05, then the decision taken is to accept H1 and reject H0. And the contingency coefficient \((r)\) value of the correlation between income and consumptive expenditure ranges from 0.61-0.80 which means a high correlation, while the correlation between income and productive expenditure ranges from 0.41-0.60 which means a moderate correlation.

4. Conclusions

Household spending decisions are divided into two, namely consumptive spending and productive spending. Based on the results of the study, it was found that the consumptive expenditure of coffee farmers in Aceh Tengah District has a high category, while consumptive expenditure is to buy basic and non-basic consumption, clothing, buying or replacing motorcycles and cars, cellphones, electronic goods such as fans, tv and etc. Meanwhile, for the productive expenditure of coffee farmers in Aceh Tengah District, the category is low, while productive expenditure is setting aside some money to be invested in the form of buying; gold, houses, land, to be saved regularly; every day, week, month, for coffee farming needs, education costs and education insurance. Based on the results of the analysis, it can be seen that there is a correlation between income and consumptive and productive spending decisions. And the contingency coefficient \((r)\) value of the correlation between income and consumptive expenditure ranges from 0.61-0.80 which means a high correlation, while the correlation between income and productive expenditure ranges from 0.41-0.60 which means a moderate correlation.

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