

# Economic and Social Determinants of Corn Farmers' Consumption Patterns: A Survey and Regression Analysis Approach

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## Abstract

This research discusses the consumption patterns of corn farming households in Indonesia which are influenced by economic and social factors. This study aims to examine consumption expenditure based on income, number of family members, education, age, and differences in place of residence. The research method used was quantitative with multiple linear regression statistical analysis, using primary data from 86 corn farming households. The research results show that income is the biggest factor influencing household consumption of corn farmers. Factors such as income, number of family members and education of the head of the family have a positive and significant effect on consumption patterns. Although age does not have a significant effect, this research provides important insights into the consumption behaviour of corn farmers in Indonesia, including the importance of wise consumption expenditure management to improve the welfare of farming households. These findings show that income, education, and family size play a key role in shaping consumption habits. This study also highlights how economic factors influence people's consumption patterns in various communities, both farmers and urban residents, and the importance of understanding these factors in planning policies that support the welfare of society as a whole. The contribution of this research is expected to bridge the results of previous studies with policy development, emphasizing the need for targeted programs considering income, family size, education, and residence location to improve the welfare of corn farming households in Indonesia.

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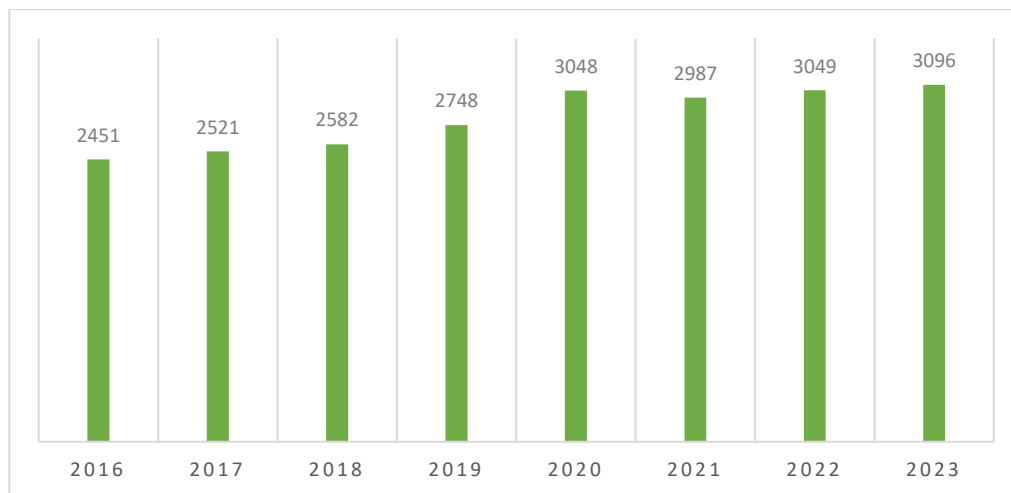
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## Introduction

Known as an agricultural country, Indonesia has abundant natural resources with strategic geographical conditions. The agricultural sector is one of the driving forces of the national economy. This is reflected in the availability of food and its role as a provider of employment. Despite being a food provider, the average income of farmers is still relatively low (Pangaribuan, Husaini, & Aziz, 2020). This condition requires farmers to be wise in managing their consumption expenditure, whether for food, education, housing, health, entertainment, or other social needs. Hanum (2018) People's consumption behavior shows long-term in their income allocation. Consumption is defined as a human or community movement in using or using goods and services to fulfill their needs. In allocating their income for consumption, consumers will certainly be faced with the process of making decisions on goods or services that will be consumed for their needs and to obtain satisfaction.



Source: Central Bureau of Statistics (2020)

Fig. 1. Maize Harvested Area (Hectares) in Paliyan, Gunungkidul

Figure 1 illustrates the annual maize harvested area in Paliyan sub-district from 2016 to 2023. The data shows a consistent increase in the harvested area over this period. Starting from 2,451 hectares in 2016, the area gradually rises to 3,096 hectares by 2023. This upward trend reflects the growing emphasis on maize cultivation in Paliyan, likely driven by the region's agricultural development efforts and the importance of maize as a key crop. The increase in harvested area suggests improvements in farming practices, investments in agricultural infrastructure, and possibly supportive local policies. This growth aligns with the overall trend in Gunungkidul Regency, where

maize production has significantly contributed to the local economy. The rising maize cultivation area in Paliyan highlights the region's potential to boost agricultural productivity and support the livelihoods of its farming communities.

At the household scale, the consumption approach can be used to analysis the income of farming households. Households working in the agricultural sector have unique consumption behaviour and most of their consumption is limited to meeting food and non-food needs (Ghassani & Ernah, 2021). Most households in Gunungkidul Regency work as farmers for agricultural businesses such as rice, corn, beans, vegetables, and others.

These results certainly support the implementation of the program to improve the quality of food consumed by the community, the Government continues to encourage efforts to diversify food consumption through the use of local food diversity owned by each region (Kementrian Perekonomian, 2022). Special Region of Yogyakarta through the Department of Agriculture and Food Security implements the program by focusing on increasing the supply and consumption of maize, cassava, sago, potatoes, bananas and taro to meet the nutritional adequacy of the community so that they can live healthy, active and productive lives. Special Region of Yogyakarta is one of the regions with cultural wealth and biodiversity and diverse sourced local wisdom, focused on the supply and consumption of cassava, but it does not rule out the possibility of developing other commodities such as sweet potato, arrowroot, banana within the framework of local food diversification (DPKP, 2020).

Since 2012, the Yogyakarta Regional Government has issued Governor Regulation No. 88 on the Implementation Guidelines for the Movement to Accelerate Food Consumption Based on Local Resources. These efforts are expected to reduce dependence on one type of food, namely rice and wheat, so as to maintain the sustainability of food security, food independence and food sovereignty in the Special Region of Yogyakarta. In line with these regulations, policy implications are outlined in the management of village-owned enterprises (BUMDes) through food independent village activities. Food Independent Villages are carried out through a community empowerment approach so that they have sufficient ability to fulfill food needs in the village independently. It is hoped that through food independent villages, they will be able to provide productive land and supporting infrastructure to produce food crops, so that villages can meet the food needs of their people, villages that can market their agricultural food products well, villages whose farmers are prosperous, and villages that always innovate in developing agriculture.

Farmers who rely on agricultural products tend to have smaller incomes compared to farmers who have side jobs. The small income may affect the consumption made due to limited resources in

the form of money to make purchases. This tendency is confirmed by Agustin & Sasana (2012), that farmers' consumption patterns are dominated by food consumption and the ability to consume non-food items is still low. Thus, basic needs other than food such as education and clothing cannot be fulfilled optimally. Some factors that determine consumption patterns are income, number of family members, age of family members, previous income, and expectations of future income (Wahyuni, 2013).

Income is defined as the amount of real income that comes from all household members to fulfil the common and individual needs of the household. Income can be classified into three: personal income, disposable income, and national income. Referring to the concept of consumption, disposable income tends to be widely used because it describes personal income that has been reduced by income tax (Tamawiwi, Katiandagho, Rengkung, & Lolowang, 2015). Residents with higher incomes have a tendency to consume a lower average than those with lower incomes. This is because households with lower incomes spend more of their income on basic needs. This means that greater consumption is actually carried out by people with lower incomes, where most of their expenditure is used for the consumption of food, drinks and clothing. In contrast, people with higher incomes spend more of their income on long-term consumption such as education and investment.

Fadillah (2014) added that consumption is also influenced by human capital such as education. A higher level of education will have an impact on improving the quality of human resources. This can affect the level of wages which in turn affects the selection of goods and services consumed. The effect of formal education on income is that there is a positive correlation between a person's education and the income that will be obtained. This is true, if a person can complete secondary or tertiary education and compared to those who are only able to complete lower levels of schooling, then their income is different. Adiana & Karmini (2012) found that not only education and income affect consumption but also the number of family members. If the number of family members is relatively large, then the goods consumed are also more diverse and depend on the demand of each individual. This is of course there are differences in tastes between individuals with one and will ultimately affect the increase in consumption in a household (Yanti & Murtala, 2019).

Mustakim, Efendi, & Sofiany (2021) and Rorintulus, Amisi, & Sanggelorang (2022), added that factors that influence consumption patterns are also influenced by age. Age is a positive influence on consumption expenditure. This means that the older the age, the more needs are needed in life. The age that is classified as productive ranges from 15-64 years. Then, Wijayanti & Priyanto (2022) mentioned that differences in residential location are also a factor that affects consumption in

households. Urbanization is part of the development of the urban population and the construction of economic structure (Sumaryanto, 2014). The impact of urbanization is a change in food consumption and non-food consumption. Usually, people who have lived in cities have increased consumption expenditure compared to people who live in villages.

Prasetyoningrum, Rahayu, & Marwanti (2016), conducted a similar study which proved that there is a positive influence on maize land area, education, and number of family members. Meanwhile, food expenditure has a negative and insignificant effect and non-food expenditure has a significant negative effect. Researched by Saragih & Damanik (2022); Hanum (2018); Fielnanda & Sahara (2018); Safia, Suyadi, & Ani (2018); Sultan (2019); Ismail (2019); Kurniasari (2016); Sanjaya & Dewi (2017); Vaulina, Elinur, & Anggraini (2019) and Supriyanto (2020), found that the income variable has a positive influence on consumption expenditure. This is certainly different with Harahap (2021) which found negative results in the relationship between income and consumption expenditure.

The education variable has a positive influence on consumption expenditure (Cheng, 2021; Islam & Sim, 2021; Wang & Sohail, 2022; Nisa, Hidayati, & Wahyudin, 2021; Marsela & Mulyani, 2024). This shows that it increases income, changes consumption patterns, and equips individuals with better financial management skills. Individuals with higher education tend to have an awareness of the importance of a good quality of life and understand the value of quality products and services. Education also supports social and economic mobility, opens access to wider opportunities, and improves living standards.

In contrast to previous studies Prasetyoningrum, Rahayu, & Marwanti (2016); Supriyanto (2020); dan Vahdanina V & Hesary (2020) found negative results on household consumption expenditure. These findings are due to the high cost of education, delayed income due to the study period, and financial priorities that are allocated more to education needs than daily consumption. In addition, parents often save for their children's education, reducing current consumption. Investment opportunities in education also divert funds from immediate consumption, and education loans that must be repaid after graduation can reduce income available for other consumption.

Furthermore, the variable number of family members from 20 studies has no difference in influence on household consumption patterns. Such as the findings made by Nisa, Hidayati, & Wahyudin (2021); Kusdianto & Samosir (2023); dan Madudova & Corejova (2024) which state that there is a positive relationship between the number of family members and consumption expenditure. An increase in the number of family members encourages greater consumption.

Moreover, there is a diversity of food ingredients that each family member can choose from. Meanwhile, Siman, Tawakal, Risamasu, & Kadir (2020) found that the number of family members hurts consumption expenditure due to income that must be shared among more members, spending priorities focused on basic needs, and household economies of scale that lead to lower average costs per member. In addition, large families may have lower incomes, which limits spending on individualized needs such as education and recreation. As a result, while total expenditure may be higher, expenditure on consumption in large families tends to be lower. As a result, although total expenditure may be higher, consumption expenditure in large families tends to be lower. On the other hand, these results show that meeting food needs tends not to vary. This means that the food consumed is not diverse and tends to use existing food ingredients.

Research Mubarokah & Pratiwi (2022); Kusdianto & Samosir (2023); Lee, Qian, Gustavsen, Nayga, & Rickertsen (2020) related to the age variable has a negative influence on household consumption patterns. The finding is based on consumption expenditure because as people age, income usually decreases due to retirement, while needs and lifestyles become simpler due to having settled major financial dependents such as mortgages or children's education. Health issues and increased mobility also limit the ability and desire to shop or travel. In addition, older people tend to be more cautious with their finances, prioritizing saving for medical needs or emergencies and prioritizing financial stability and security over the consumption of new goods or experiences.

In contrast to these results, Xue, Zhao, & Sun (2023); Chen (2022); dan Wang, Zhao, & Meng (2022) found that age has a positive influence on consumption expenditure. This suggests that income tends to increase with experience and career stability, as well as improved financial well-being through benefits such as pensions. In addition, the changes in life priorities that occur with age, together with experience and a more mature understanding of personal needs and wants, lead to a tendency to allocate more resources to non-essential consumption.

Residential differences have a positive influence on household consumption expenditure, as found by Liu & Chang (2021); Wu & Ma (2023); Zhang R. (2020); Zhang L. (2019); and Khorunzhina (2021). This is due to better accessibility, property values linked to social status, adequate facilities and infrastructure, and an active social and cultural environment. Residential safety and comfort also encourage spending on home improvements and participation in local activities. In addition, the availability of a wider range of services and products in urban or suburban areas makes it easier for residents to access and consume a variety of goods and services, increasing the frequency and amount of consumption expenditure.

Based on the results of the previous research gap, which certainly has a diversity of results from each variable that affects consumption expenditure. Therefore, the novelty of this study is that the consumption patterns of corn farming households in Giring Village have never been studied before. This study aims to determine the consumption expenditure of farmer households based on income, number of family members, education, age, and differences in residence of maize farmers in Giring Village. The contribution of this research is expected to bridge the results of previous studies with different locations.

### **Literature Review**

Consumption means the spending of goods and services by households. (Minkiw, 2018). The goods in question are durable goods and non-durable goods. Durable goods are household expenditures such as vehicles and household equipment. Meanwhile, non-durable goods include clothing and food. Furthermore, the services in question include abstract intangible goods such as haircuts, health care, education, and so on. Consumption or personal consumption expenditure is an expenditure that occurs in households on final goods and services (Rosyidi, 2011; Hone & Marisennayya, 2019).

The Keynesian concept of consumption can be based on hypothesis and there is a stable empirical relationship between consumption and income. If income increases, consumption will also increase but by a smaller proportion than the increase in income (Lanole-Calin & Druica, 2015). The reason is because of the desire for consumption, which is the tendency for marginal consumption or additional consumption to decrease when income increases. Keynes assumed that no one would consume the entire increase in income, but rather the richer a person is, the less he or she will consume (Drakopoulos, 2021).

If income increases, the household's consumption will increase. Conversely, if a household has a low income, it will tend to focus on buying basic needs until it runs out and this is explained in Engel's Law. However, households with high incomes spend a small portion of their expenditure on basic needs. According to Danil (2013), if income increases, a person can consume a lot of goods, but the income is not all used for consumption but the income will be saved when it has more consumption income. Income will certainly affect the amount of goods to be consumed, and vice versa. So, if a person's income increases, his consumption expenditure will increase. It is often seen that when

income increases, not only the goods consumed increase but also the quality of goods becomes a concern (Indriani, 2015).

Saragih & Damanik (2022) state that the income variable partially has a significant effect on the welfare of corn farming families in Mariah Bandar Village, Simangulun Regency. Hanum (2018) Used multiple linear regression methods on 97 fishing households in Seuneubok Rambong East Aceh with the results showing that income has a positive effect on household consumption. Fielnanda & Sahara (2018) state that income influences the consumption patterns of fishermen's households. The results of this research are also in line with the research results of Safia, Suyadi, & Ani (2018) which stated that the income variable had a positive and significant effect on the consumption patterns of rice farmers in the Ngudi Rejeki farmer group in Wonorejo Village, Kencong District. Sultan (2019); Ismail (2019); Kurniasari (2016); Sanjaya & Dewi (2017); Vaulina, Elinur, & Anggraini (2019) and Supriyanto (2020), found that the income variable has a positive influence on consumption expenditure. This is certainly different from the results of research Harahap (2021), which found negative results in the relationship between income and consumption expenditure. The hypothesis of income variable in this study has a positive effect on household consumption expenditure.

The number of family in a household life can affect the level of consumption that must be spent by the household concerned because it is related to its increasing needs (Lestari, 2016). The number of dependents of a household can affect the amount of consumption that must be spent by the household and this is certainly related to more or less needs. It can be concluded that the more family members in a household, the more household consumption expenditure will also increase. Such as the findings made by Nisa, Hidayati, & Wahyudin (2021); Kusdianto & Samosir (2023); dan Madudova & Corejova (2024) which state that there is a positive relationship between the number of family members and consumption expenditure. Meanwhile, Siman, Tawakal, Risamasu, & Kadir (2020) found that the number of family members hurts consumption expenditure due to income that must be shared among more members. Therefore, the hypothesis of number of family members has a positive effect on household consumption expenditure.

Next, education is an important factor in improving human resources. Education is not only to increase knowledge but can improve work skills and increase work productivity. A person's education can affect consumption expenditure. Thus, if a person's education level is high, the more his consumption expenditure will be. This is because a person who has a higher education needs to fulfill his needs not just eating and drinking, but there are other needs such as communication, socializing in the community, and other needs (Rahman, 2019). The education variable has a positive influence



on consumption expenditure as shown by the results of research (Cheng, 2021; Islam & Sim, 2021; Wang & Sohail, 2022; Marsela & Mulyani, 2024). This shows that it increases income, changes consumption patterns, and equips individuals with better financial management skills. Research conducted in the Sungailiat area with 100 family respondents showed that education has a positive effect on influencing consumption patterns (Nisa, Hidayati, & Wahyudin, 2021). Therefore, education has a positive effect on household consumption expenditure.

Age is the period since the existence of a person and can be measured using units of time viewed from the chronological side, normal individuals, and the degree of anatomical and physiological development (Sonang, Purba, & Pardede, 2019). Age is one of the factors that can affect income. Usually, the ideal productive age for workers is around 15-64 years. During this productive period, the increasing age of course the income will also increase and depends also on the work done. Furthermore, when a person's age has entered the elderly, his consumption expenditure will decrease again. This is because usually someone who is elderly only consumes as much as they can. Xue, Zhao, & Sun (2023) and Wang, Zhao, & Meng (2022) found that age has a positive influence on consumption expenditure. In addition, the changes in life priorities that occur with age, together with experience and a more mature understanding of personal needs and wants, lead to a tendency to allocate more resources to non-essential consumption. Research conducted by Chen (2022) using the panel data method in China, shows that age will hinder the consumption of the population. However, it will increase consumption in the non-food sector. So, in this study the hypothesis of age has a positive effect on household consumption expenditure.

The difference in residence is certainly related to someone who has urbanized. According to Selian & Jannah (2018), there is a relationship between humans and the environment that shows aspects of culture, behaviour, and human fate. A person who has urbanized will certainly have a different consumption expenditure than someone who continues to live in the city. This is because urbanization is part of the progress shown by the development of the urban population and the development of the economic structure (Sumaryanto, 2014). So, with urbanization, usually people who have lived in the city will spend more than people who live in the village. Therefore, the longer someone has lived in the city, the more their consumption expenditure will increase. Residential differences have a positive influence on household consumption expenditure, as found by Liu & Chang (2021); Wu & Ma (2023); Zhang R. (2020); Zhang L. (2019) and Khorunzhina (2021). In addition, the availability of a wider range of services and products in urban or suburban areas makes it easier for residents to access and consume a variety of goods and services, increasing the frequency and

amount of consumption expenditure. Based on 456-panel data from 32 provinces in China analyzed using the regression analysis method, shows that the location of residence affects people's consumption patterns. The closer to the city center, the greater the expenditure on both food and non-food consumption compared to people living in villages (Liu & Chang, 2021). Therefore, the hypothesis of differences residence has a positive effect on household consumption expenditure.

## Method

This research is included in the type of quantitative research because it is systematic, rational, measurable, objective, and concrete, and several scientific principles are realized empirically. Quantitative research is used because it has a numerical form and the data processing is done using statistical analysis. The method used in this research is a descriptive method to know the effect of the relationship between variables by obtaining information and entering numerical data to explain existing phenomena.

Then, Table 1 is the data description for each variables. Table 1 explains about the definition of the variable and the size for each variables in this research.

Table 1. Data Description

Variable	Variable Definition	Size
Household Consumption Patterns of Maize Farmers ( <i>Consume</i> )	Proportion of different expenditures made by maize farming households	Persen (%)
Income ( <i>Income</i> )	The amount of combined income from husband and wife per month comes from: - Results of main work - Results from corn farming - Family Reception - Government assistance - Other income	Rp. / Month
Number of Family Members ( <i>Fam</i> )	Many family members still live and eat under the same roof and still have to pay for it	Person
Education ( <i>Educ</i> )	Length of formal education completed by the head of the family	Year
Age ( <i>Age</i> )	The length of life of the head of the family is calculated from birth	Year
Differences in Residence ( <i>Region</i> )	Whether or not the head of the family has ever migrated outside the area.	Dummy

The type of data used in this study is an associative type of quantitative data to state the relationship between two or more variables (Sekaran & Bougie, 2017). According to Sugiyono (2019), associative research is a formulation of research problems that have a relationship between two or more variables. The associative research strategy in this study is used to identify the effect of independent variable consisting of income (*income*), number of family members (*fam*), education (*educ*), age (*age*), and difference in residence (*region*) on variable *consume* (dependent variable), namely consumption expenditure of corn farming households.

The period used in this study is using a cross-section approach. Cross-section data is data collected at a certain time and can reach many data objects and respondents. The data source used is primary data. Primary data is a data source that is direct in nature by providing data to data collectors (Sugiyono, 2019). The population was 625 farmer households so that in sampling a probability sampling technique was used with a simple random sampling method. In determining the number of samples from the population, the Slovin formula was used with a margin of error set at 10%. Thus, the number of samples taken in this study was rounded up to 86 farmer households.

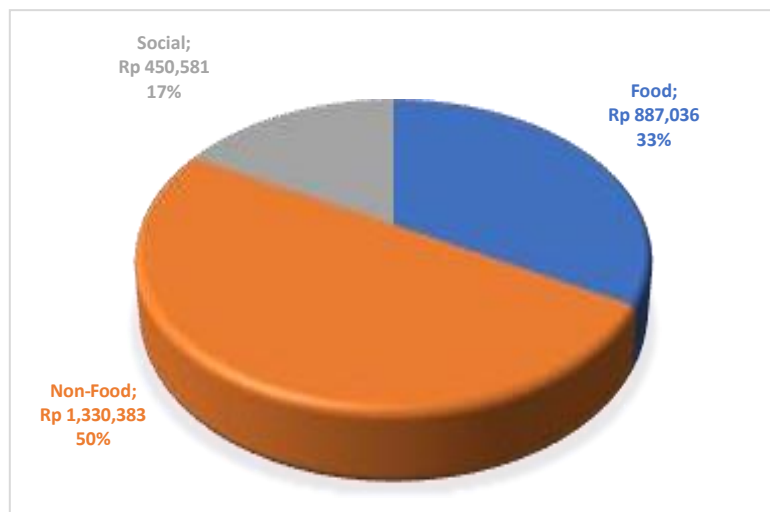
Data analysis used multiple linear regression models with the related variable being the consumption expenditure of maize farming households and the independent variables being income, number of family members, education, age, and difference in residence. The choice of method is based on the research objective, which is to estimate the effect of independent variables on the consumption expenditure of maize farming households. Thus, the correlation obtained can provide an overview of the influence of each variable used. The variables used are based on previous research gaps due to differences in estimation results.

Based on this, the best model selection is done by conducting the Chow Test and the Hausman Test. The Chow Test is used to compare the Common Effect Model (CEM) and the Fixed Effect Model (FEM). Meanwhile, the Hausman Test compares the Random Effect Model (REM) and the Fixed Effect Model (FEM). Furthermore, classical assumption tests such as multicollinearity and heteroscedasticity are carried out to fulfill the requirements of regression analysis in the form of the best linear unbiased estimator. The equation model used in this study is according to Widarjono (2017) (see equation 1).

$$Consum_{it} = \beta_0 + \beta_1 Income_{1it} + \beta_2 Fam_{2it} + \beta_3 Educ_{3it} + \beta_4 Age_{4it} + \beta_5 Region_{5it} + \varepsilon_{it} \quad (1)$$

## Result and Discussion

Figure 1 shows that the largest household consumption expenditure for corn farmers is non-food consumption expenditure, which is 50% with an average expenditure of Rp1,330,383. This is followed by food consumption expenditure, which is 33% with an average expenditure of Rp887,036. The final consumption expenditure, namely social, is only 17% with an average expenditure per month of Rp450,581. So, it can be seen that corn farming households in Giring Village spend more on non-food consumption compared to food and social spending.



Source: *Processed Data (2023)*

Fig. 2. Household Expenditures on Food and Non-Food

Food expenditure is divided into several types, including staple foods, side dishes, vegetables and fruit, supporting ingredients, and beverage ingredients. Consumption expenditure is calculated as an average per month. The largest non-food expenditure is expenditure on education amounting to Rp294,651 or around 22%. This is because corn farming households in Giring Village still have school-aged family members as dependents. Furthermore, expenditure on cigarettes is also relatively high, namely Rp244,127 or around 18%. This is because most farmers have a smoking habit and it is difficult to get rid of it, so farming households allocate part of their income to buying cigarettes.

Classical assumption testing is carried out to determine the accuracy of the model. The results of the normality test using the test method developed by Jarque-Bera (J-B), it is known that the significant value is the number 0.4612, which means the probability value is  $>0.05$ . So, it can be concluded that the data has a normal distribution. Then, the multicollinearity test aims to test whether a regression model correlates with independent variables or not. It is known that the five independent variables have a VIF value  $<10$ , so it can be concluded that there is no multicollinearity

problem. The heteroscedasticity test using the white test shows that the overall significance value of the variable is  $0.0873 > 0.05$  and it can be concluded that the variable value does not have symptoms of heteroscedasticity.

Table 2. Fixed Effect Model Result

Variables	Koefisien	Std.Error	t-statistic	Prob.	Results
<i>consume</i>	9.740431	1.215356	8.014465	0.0000	Significant
<i>log_income</i>	0.290651	0.086494	3.360357	0.0012	Significant
<i>fam</i>	0.107912	0.028929	3.730217	0.0004	Significant
<i>educ</i>	0.053449	0.015215	3.512590	0.0007	Significant
<i>age</i>	-0.001033	0.002814	-0.366997	0.7146	Not Significant
<i>region</i>	0.247482	0.089051	2.779114	0.0068	Significant
	f-statistic			0.0000	
	R-square			0.5484	

Based on Table 2, it can be partially seen that the income variable has a significant positive effect on the household consumption expenditure of corn farmers. This can be seen from the significant value of  $0.0012 < 0.05$ . These results indicate that the greater the income of corn farming households, the more consumption expenditure in corn farming households will increase. Therefore, the greater the corn farmer's income, the higher his consumption expenditure. Corn farmer households with high incomes will of course prioritize non-food consumption needs compared to food consumption, such as corn farmer households with low incomes. Therefore, consumption expenditure is largely determined by different incomes and results in consumption diversity in corn farming households.

The Keynesian concept of consumption can be based on hypothesis and there is a stable empirical relationship between consumption and income. If income increases, consumption will also increase but by a smaller proportion than the increase in income (Lanole-Calin & Druica, 2015). The reason is because of the desire for consumption, which is the tendency for marginal consumption or additional consumption to decrease when income increases. Keynes assumed that no one would consume the entire increase in income, but rather the richer a person is, the less he or she will consume (Drakopoulos, 2021).

The results of this research are in line with the results of research by Saragih & Damanik (2022) which states that the income variable partially has a significant effect on the welfare of corn farming families in Mariah Bandar Village, Simangulun Regency. Furthermore, the results of this research are also in line with the results of research by Fielnanda & Sahara (2018) which states that income influences the consumption patterns of fishermen's households. The results of this research are also

in line with the research results of Safia, Suyadi, & Ani (2018) which stated that the income variable had a positive and significant effect on the consumption patterns of rice farmers in the Ngudi Rejeki farmer group in Wonorejo Village, Kencong District.

Partially, the variable number of family members has a positive and significant effect on the household consumption expenditure of corn farmers. This can of course be seen from the significant value of  $0.0004 < 0.05$  (see Table 2). Results based on a survey on the number of household members of corn farmers can prove that the greater the number of family members who are still supported or financed, the greater the expenditure used for consumption. So, corn farmers in Giring Village who have many family responsibilities will certainly increase their consumption expenditure.

This was also explained by Lestari (2016), that the number of family dependents in the life of a household can influence the level of consumption that must be spent by the household concerned because it is related to increasing needs. Therefore, the number of dependents in a household can influence the amount of consumption expenditure depending on whether needs are increasing or decreasing. The results of this research are also in line with the results of research conducted by Hanun (2018) showing that the variable number of family dependents has a positive and significant effect on fishermen's household consumption. Apart from that, the results of this research are also in line with research conducted by Ismail (2019) which shows that the variable number of family members has a positive and significant influence on consumption patterns. The results of further research, namely research by Sanjaya & Dewi (2017), stated that the variable number of family members had a positive and significant effect on the consumption patterns of poor households in Banyakem Village.

Next, the education variable has a positive and significant effect on the household consumption expenditure of corn farmers (see Table 2). This can of course be seen from the significant value of  $0.0007 < 0.05$ . According to Rahardja & Manurung (2008), someone who has a high level of education will also increase their consumption expenditure. Of course, this can influence consumption expenditure with a positive relationship. Apart from that, if someone has a highly educated family, their needs will certainly increase. Likewise, for corn farmer households whose families have a high level of education, the consumption expenditure of corn farmer households will increase.

The results of this research are in line with the research results of Fransiska, Sudiarti, & Nasution (2021) which stated that education has a significant effect on household consumption in the KB village community. The results of this research are also in line with the results of research by Harahap (2021) which states that education influences the consumption patterns of poor households in

Sungai Kanan. Furthermore, the results of this research are in line with research by Fransiska, Sudiarti, & Nasution (2021) which states that education has a positive and significant influence on the consumption patterns of fishermen's households. However, the results of this research are not in line with the results of research by Supriyanto (2020) which states that education does not affect the amount of household consumption. In this case, the researcher assumes that there are differences in the research results from the respondents.

Age variable does not have a significant effect on the household consumption expenditure of corn farmers because it can be seen that the significant value is  $0.7146 > 0.05$  (see Table 2). Age can have a positive or no effect on consumption expenditure. This is because, if a person enters a productive age, a person's consumption expenditure will increase so that it can have a positive effect. Meanwhile, if someone has reached old age, their consumption expenditure will decrease. Furthermore, in this study, age does not affect the consumption expenditure of corn farmers' households. This can happen because corn farming households that are still in their productive years will certainly increase their consumption expenditure. After all, the needs that must be met will increase. Meanwhile, for corn farming households that are no longer productive or elderly, their consumption expenditure will also decrease because fewer needs are met. The results of this research are in line with the results of research by Mubarokah & Pratiwi (2022) which states that the variables of education and age do not have a significant effect on household consumption of rice farmers in Air Satan Village

Apart from that, in rural areas, including in Giring Village, there are still many farmers who are old and are still working regardless of age so that their needs can be met and it becomes a habit to continue farming. Farmers in Gunungkidul, especially in Giring village, have traditional consumption patterns. This means that people tend to consume their own produce and rarely buy food such as meat and fish (Sproesser, et al., 2019). Thus, people who work as farmers with various age ranges feel sufficient with the fulfilment of food needs from garden products. The term that is often mentioned is "nrimo ing pandum", which leads to a feeling of gratitude for whatever God gives.

Variable of difference in residence has a positive and significant effect on household consumption expenditure of corn farmers because it can be seen that the significant value is  $0.0068 < 0.05$  (see Table 2). This is because someone who has lived in a city tends to have greater consumption expenditure compared to someone who has never migrated or lives in a village. In other words, the difference is because someone urbanizes and creates different consumption patterns.

Urbanization is part of progress which is shown by the development of the urban population and the development of the economic structure (Sumaryanto, 2014). So, the impact of urbanization is that

there is a change in food consumption expenditure to non-food consumption expenditure. Furthermore, city people consume more non-food than food consumption, which is different from village people who prioritize their food consumption. Therefore, corn farming households that have had experience migrating outside the region certainly have different consumption expenditures from corn farming households that have never migrated outside the region. Usually, corn farmers who have migrated outside their area will have higher consumption expenditure than corn farmers who only stay in the village.

### **Conclusion**

This research aimed to determine the consumption expenditure of farmer households in Giring Village based on income, family size, education, age, and differences in residence, using the Fixed Effect Model (FEM) for multiple linear regression analysis. The results show that income is the most significant factor influencing household consumption expenditure, followed by differences in residence. Higher income leads to increased household consumption, aligning with Keynes' theory, while farmers migrating outside the region have higher expenditures. The study suggests government interventions such as subsidies or direct cash assistance to enhance farmers' purchasing power and improve access to food through efficient supply chains. This research bridges findings from different locations and recommends future studies to explore additional variables affecting corn farmers' consumption patterns.

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