



Enhancing food security through halal system with a logistic regression analysis

Tribowo Rachmat Fauzan¹, Ajeung Syilva Syara²

¹Department of Logistic Business, Faculty of Social and Political Sciences, UNPAD, Sumedang, Indonesia

²Department of Islamic Economic Law, Sekolah Tinggi Agama Islam Al-Falah, Bandung, Indonesia

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ABSTRACT

This study aims to analyze the level of food security, factors which affect the level of food security and efforts to increase it level of food security with logistic regression analysis. Food security is clearly essential for the continued lifestyles of the human race. Food this is safe, secure, and sustainable to eat is a proper that belongs to each person on our planet and need to not be denied to absolutely everyone, anywhere in the globe, consisting of Indonesia. When it involves resolving troubles with the provision of food for its human beings, Indonesia, as the united states with largest Muslim population, need to additionally consider the halal detail. The usage of halal is fine no longer simplest for individual needs, but additionally for the purposes of society as a whole. The intention of this studies is to test the impact that halal concerns have on food safety in Indonesia. The Binary Logit Model became utilised if you want to do research oresearchn the halal meals security machine in Indonesia. We used food safety factors based on Jonsson and Toole which will determine the food protection level of Indonesia, which served as the structured variable. According to the findings of this reserach, the quantity of halal consciousness and halal certification in Indonesia has significant affects at the united states of america's standard level of food protection. The outcomes suggest that food protection might be completed now not just by using growing the satisfactory and quantity of intake, but additionally through incorporating Islamic viewpoints as an extra supply to save you food insecurity. This would be the first-class way to obtain food protection

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Corresponding Author:

Tribowo Rachmat Fauzan,
Department of Logistic Business, Faculty of Social and Political Sciences
Universitas Padjadjaran,
Jln. Ir. Soekarno KM. 21. Jatinangor, Kab. Sumedang 45363, Jawa Barat, Indonesia
Email: tribowo.fauzan@unpad.ac.id

INTRODUCTION

In severa international locations with massive Muslim populations, which includes Indonesia, Pakistan, and Sudan, the manufacturing of meals performs a full-size function within the development of each meals protection and process potentialities in those nations. It makes a vast contribution to the gross home product (GDP) of these countries (Shane, 2018) . In Indonesia, this enterprise debts for greater than 15 percent of the us of a's GDP, and it employs someplace inside

the neighbourhood of 40 percentage of the united states of america's personnel. The corresponding chances in Pakistan are 21 and forty five percent, respectively. It is expected that the arena contributes among 35 and 40 percentage to the GDP within the united states of Sudan. However, there was an increasing trend inside the farming network in these and other countries to search for new varieties of income, which has caused concerns about the provision of meals (Nusran et al., 2018)

The food itself is taken into consideration to be a thing of human rights and is ruled in accordance with the Indonesian Food Law, No. 18 of 2012. As a result of the policies, food has advanced into the primary fundamental requirement for the production of certified human assets. The intake of food is a great indicator of an person's dietary popularity, which in turn affects an individual's potential to generate revenue and contribute to their well-being (Semuel & Putra, 2018). Since the beginning of this decade, there was a growing difficulty all around the global over food protection. It is anticipated that a couple of billion humans do now not have get right of entry to to an adequate amount of electricity through their diet, and at least two times as many people be afflicted by shortages in micronutrients. The production of chicken, the production of livestock, and the manufacturing of rice are most of the primary participants to this phenomenon in Indonesia, amongst many others (Widada et al., 2017). The Halal machine, that is dominated via the Ministry of Religion and Ulama Council of Indonesia, have to be observed in order for food to be produced in Indonesia, which is a u . S . With the largest muslim population (Katuk et al., 2021)

One of the obligations that include being a Muslim is making sure that the meals they devour is halal in step with the Qur'an. As a result of obedience and dedication to the Qur'an, halal has end up an internationally recognised indicator of the nice warranty of merchandise and of residing standards. Muslims have a significant want for the supply of halal food and drinks. Because of this, it's far now important for governments to make halal food and other products available, in particular in nations where Muslims make up the bulk of the populace (Fadzlillah et al., 2011).The halal certification brand serves as a popular for customers of all faiths, including Muslims and others who do now not education Islam. It has to do with hygienic standards and safety guarantees for the products. Consumers had a nice impression of halal food due to the fact they had the impression that halal meals products have been healthful and sanitary. There is a sizable sense among non-Muslim clients that halal consciousness is establishing a norm for trust, safety, pleasant, and hygiene. This is why non-Muslims devour halal products because of their nice (also known as Halalan Thoyyiban)(Aziz & Chok, 2013)

In addition to halal certification, product attention is some other thing that impacts purchaser behaviour with regards to the choice of merchandise. Therefore, it's miles vital for Muslims to have the necessary expertise while it comes to purchasing and eating halal objects. It is crucial because of the fact that there are various non-Muslim sources similarly to Muslim businesses who create products which are certified as halal. As a effect of this, multiplied efforts to improve product knowledge via religion-centric-based advertising orientation, in addition to improved know-how of halal products thru powerful advertising communication sports, can raise customer cognizance and buy purpose for halal merchandise, which ultimately leads into meals safety (Ali et al., 2014)A written certificate that demonstrates a product's level of halal compliance is called halal certification. The Food, Drug and Cosmetics Evaluation Institute (LPPOM MUI) of the Indonesian Ulama Council is the corporation that confers the halal certification. Products that have been granted halal certification are denoted by means of the halal logo on the packaging of these merchandise. In latest times, the position of a halal mark at the packaging of a product has increased awareness amongst Muslim customers, prompting them to do greater look at in advance about the product as a way to be ingested (Lesmana, 2017).Food components are any ingredients which can be located in meals merchandise, and the position of information technology and expertise plays a key element for Muslims in identifying what to consume, determining whether or not it is secure, and whether or not or not it suits the standards for consumption through. Consuming a product that ends in

elevated meals security should therefore take into consideration the food elements that form the basis of the halal certification for that product (Nahriah Tejawulan, 2022). Bekasi and Bandung are the 2 cities in West Java with the highest populations. According to the figures supplied by using the BPS for the year 2020, the populations of Bekasi and Bandung are roughly 2.543.676 and 2.444.160 inhabitants, respectively, with a complete populace of three.873.043 Muslims living within the u . S (Maulana & Ichsan, 2022). In tandem with the boom of the Muslim populace and the expansion of the halal marketplace in lots of places throughout Indonesia, additional research on the factors that decide halal certification is needed. This is due to the fact halal certification has enormous implications for the food safety of foremost Muslim international locations. As a result, thinking of the information presented above, the researcher determined to present the examine the following subject matter: "The results of halal device on the meals security in Indonesia."

Based on Lalita's research (2018), monthly income from independent oil palm farming in Tulang Bawang Regency does not always meet food and non-food consumption needs, this is due to the cheap selling price of Fresh Fruit Bunches (FFB). These conditions greatly affect the amount and type of food that will be consumed by households and will indirectly affect the food security of independent oil palm smallholder households. Perception of change, vision for change, mutual respect and trust, change initiatives, management support, receipt and delivery of halal products also need to be included consideration (Susanto, 2008). Holt et al (2007) stated that readiness organization is influenced by employees who are able to implement changes, the proposed changes are appropriate for the organization, committed leaders to changes, management supports and proposes changes beneficial to the organization.

RESEARCH METHOD

The Binary Logit Model turned into the technique that changed into taken if you want to check the Indonesian's Food Security. In this Model, there had been two distinctive forms of variables used: the response variable, additionally called the structured variable (which turned into the meals endurance stage decided by means of Jonsson and Toole move class), and the independent explanatory factors, which were halal certification, halal cognizance, and halal food best. (Dista amalia arifah, 2012) divide the diploma of food security in a home into 4 stages: meals insecure, food prone, meals much less stable, and food secure (Maxwell et al., 2000). They arrive at these classifications thru integrating the proportion of meals expenditure with the extent of power adequacy inside the own family. The categorization changed into done by using deliberating economic and nutritional issues of individual households. From an financial perspective, it become calculated based totally on the percentage of family income that became spent on meals in comparison to the general expenditures of the households, and from a nutritional one, it become measured based on whether or not or not an good enough quantity of food changed into consumed relative to the power unit. The constraint that become utilised was a percent of meals expenditure that become about 80% of the power adequacy and about 60% of the whole family expenditure that turned into proven on Table 2.

Table 2. The Status of food security from jonsson and toole (Maxwell et al., 2000)

Consumption of Calories	Amount Spent on Food as a Portion of Total Expense	
	Low (<60% of total Expenditure)	High (≥60% of total Expenditure)
Sufficient (>80% from AKE*)	Food Secure (<i>food secure</i>)	Food Vulnerable (<i>food insecure</i>)
Not Sufficient (≤80% from AKE*)	Food Less Secure (<i>food insecure</i>)	Food Insecure (<i>food insecure</i>)

Source: Maxwell *et al.* (2000) with some modification.

AKE is The Standard Indonesian Energy Sufficiency, that's equivalent to 2, a hundred and fifty kcal/capita/days, is derived from food consumption. In the context of the regression equation concerning a qualitative output variable, the Binary Logit Model was utilised as the suitable statistical tool. The degree of meals protection become the established variable utilised on this take a look at, and the qualitative data used changed into a degree of meals security, which became separated into wonderful groups: the ones that are meals insecure and food secure itself. Following the description supplied above, the formulation for regression that become implemented on this investigation turned into given inside the form of the this equation: ((Oluma & Abadiga, 2020)

$$\text{logit} = Li = B_0 + B_1X_1 + \dots + B_kX_k$$

Food Security:

logit = 0 means "Food Insecure" (food insecure, food vulnerable, food less secure, and food secure); 1 means "Food Secure".

The multiple logistic regression model was a form of logistic regression that took into account various variables of independent X and used Y as the dependent variable in accordance with dichotomy. The presence of a characteristic is denoted by the variable Y having the value 1, whereas the lack of a feature is denoted by Y having the value 0. According to Hosmer and Lemeshow (1989), the logistic regression model was affected by the variable known as the predictor.

With $0 \leq E(Y | x) \leq 1$ and Y had a number of 0 or 1. The number of E (Y | x) represented a likelihood of success, and since it was possible to describe it using p(x), the equation eventually became. The regression parameters were indicated by β_k , and the k-predictor variable of the predictor variable p was discovered to be x_k . The binary logistic regression model underwent logit modification before being used. In order to generate a function that is linear based on its parameters, logit transform was required. The range of the function g(x), which was either - or and was linear with respect to the parameter, was dependent on the range of the predictor variable X. The following is the equation of regression that was used to determine the halal factor of Indonesia's food security:

$$\text{Food security} = \beta_0 + \beta_1 \text{ halal certification} + \beta_2 \text{ halal awareness} + \varepsilon_{it}$$

with

Dependent variables: food security = food security level ("0" means food insecure and "1" means food secure);

β = coefficient of regression;

ε = error

Independent variables: data taken with questionnaire with 5-point likert scale.

The score of each answers; Strongly Disagree (STS) score 1, Disagree (TS) score 2, neutral/no opinion (N) score 3, agree (S) score 4, and Strongly Agree (SS) score 5.

'Halal certification' elements consists: 1. Having a halal logo is important, 2. Choosing halal products carefully, 3. Knowing an authentic halal logo (Harminingtyas & Noviana, 2021; Segati, 2018). 'Halal awareness' elements consists: 1. Understanding of halal rules, 2. Halal is not only the ingredients contained in it but the whole process from start to finish, and 3. Slaughtering procedures for meat consumption is important (Aziz & Chok, 2013; Nusran et al., 2018).

Testing of the model should be performed in order to assess the correctness of the framework that was used to determine the elements that affected food security in Indonesia. A reliable framework would generate an accurate estimation that could be utilised as an estimate for the purpose of enhancing the food security in Indonesia. Binary logistic regression did not presuppose a linear connection between dependent and independent variables. As a result, there was no presumption of normality was required on the distribution of the variables, nor was an assumption of homoscedasticity of variance necessary. There were a few key distinctions between OLS and BLM testing models from a statistical perspective (Badan Pusat Statistik, 2022)

Goodness of Fit Test

It is possible to say that the logistic model is accepted since it is according to the observation data written with the test, which is generated based on probability estimates (Hosmer and Lemeshow, 1989). If this test was considered good, then the binary logistic model was able to forecast the dependent variable. If the test was not successful, then the model was not able to forecast the dependent variable. Statistics for the Hosmer and Lemeshow test were computed based on the value $y = 1$

Coefficient of Determination

According to Bayaga (2010), the value of Nagelkerke's R Square and Cox and Snell's R Square demonstrated the extent to which the variability of dependent variables could be accounted for by independent factors. A version of Cox and Snell's R Square, the coefficient of determination, or R^2 , yielded values between 0 and 1, and it was derived from the R Square statistic. The view that R^2 belonged to Nagelkerke (1991) was the one that was utilised as a basis for the most research.

LR Value with Omnibus Test of Model Coefficient

In the ordinary least squares analysis, the LR test was exactly the same as the F test. The LR test was carried out in order to ascertain the impact that having multiple independent factors simultaneously had on the dependent variable. Mintercept was a type of regression model that just included the intercept and did not include any variables, whereas Mfull was a type of regression model that included all variables that were being evaluated for significance. The outcome of the computation using LR_{stat} adhered to the distribution of Chi Square (2) with degrees of free p or:

$$LR_{stat} \sim \chi^2(p).$$

Wald Test (Z)

The Wald test was developed with the purpose of determining the degree to which the independent variables influenced the dependent variable. The Wald test for the logistic model was quite comparable to the t test for the OLS. Nevertheless, the z-stat was utilised in the Wald test in order to arrive at a conclusion.

Parameters' Interpretation

The purpose of the interpretation of parameter in the logistic regression model was to determine the significance of the parameter estimation value contained in the predictor variable. There were two different kinds of predictor variables (Y), which were referred to as categorical variables and continuous ones respectively. According to (Ferdinand, 2014) the odds ratio was the method of choice for interpreting the results of logistic regression based on categorical variables.

A category's odds were calculated as the ratio of the probability of a successful event to the probability of a failed occurrence in that category. The odds ratio was calculated by dividing the odds value for the category with the predictor variable $x = 1$ by the odds value for the category with the predictor variable $x = 0$. This was done under the assumption that the other predictor variable remained the same.

The existence of the variable x with the value 1 would result in a value that is times greater than x with the value 0 in order to generate the successful event $Y = 1$. The assumption of a linear logit function against the predictor variable was the method that was utilised in the process of interpreting the logistic regression parameters of the continuous variable. For each value of x , it was possible to indicate that the value of $g(x)$ rose by 1 whenever there was a gain of one unit of x . The region of West Java, Indonesia, was chosen for the study because it is home to the region's largest Muslim population. According to the findings of the population census conducted in Indonesia in the year 2010, the province of West Java was home to 20.16 percent of the country's Muslim

population, making it the province in Indonesia with the greatest Muslim population. We concentrated our efforts on Bandung and Bekasi since, according to the Central (Mantiri et al., 2016), the majority of Muslims live in either of those two cities. 221 Muslim adults with an age minimum of 18 years old and a history of consistent use of halal foods were the study's participants. Table 3 presents the respondents' information in greater detail:

Table 3. Respondents' profile

Age	Bandung		Bekasi	
	Male	Female	Male	Female
18-25	35	22	32	27
26-45	25	20	27	24
Above 45	4	1	2	2

RESULTS AND DISCUSSIONS

As stated in the section on research methodology, the halal factors that affect food security in Indonesia will be examined via regression of binary logit with the score of food security variable acting as the dependent variable and halal elements that are believed to impact Indonesian food security acting as the independent variable. This analysis will be done with the dependent variable serving as the level of food security. The outcomes of a few tests carried out on this particular design will be presented further down on this page.

Table 4. Hosmer and lemeshow test

Step	Chi-square	df	Sig
1	6.228	5	0.285

Source: Author, 2023.

The significance level of the test result is presented in Table 4 and reads 0.285. When contrasted with the threshold value of 0.05 used for the agreed-upon, this value is shown to be higher. As a result, one might reach the conclusion that the model that was built was acceptable and that it can be utilised for further investigation.

Table 5. Determination's coefficient

-2 Log likelihood	Nagelkerke R Square	Cox & Snell R Square
85.202	0.505	0.246

Source: Author, 2023.

Table 5 demonstrates that the results of the determination have a value of 0.505 for the Nagelkerke R Square. This score indicates that the model that was created has an assortment of an independent variable that can explain at least 50.5% of the dependent variable and that other variables beyond the model can explain equal to 49.5% of the variance. The regression model that was utilised has a level of accuracy that is sufficient to explain why the halal system is such an important determinant of food security. (Liana, 2009)

Table 6. LR test with omnibus test of model coefficient

		Chi-square	df	Sig
Step 1	Step	62.399	2	<0.001
	Block	62.399	2	<0.001
	Model	62.399	2	<0.001

Source: Author, 2023.

The findings of the study are presented in Table 6, which demonstrates that the independent variables (halal awareness and halal certification) in the model have a substantial influence on the

degree of food security in Indonesia at the same time. A significance level of 0.000 (<0.05), which results in the rejection of the null hypothesis H0 and suggests that the inclusion of independent variables can have a discernible impact on the model; in other words, the model is considered to be a success.

Table 7. Partial test of halal factors of Indonesian food security

		B	S.E.	Wald	df	Sig.	Exp(B)
1	Step						
	Halal Certification	4.332	0.948	20.875	1	<0.001	76.061
	Halal Awareness	2.870	0.858	11.177	1	<0.001	17.630
	Constant	-30.101	5.952	25.577	1	<0.001	0.000

Source: Author (2023).

Because the P value for the Wald test (Sig) for each independent variable is less than 0.05, this indicates that each variable has a significant partial effect on food security inside the model. The Sig Wald value for Halal Certification is 0.000 0.05, which suggests that it rejects the null hypothesis (H0) and indicates that halal certification does, in fact, have a substantial partial effect on food security. The value of halal awareness is less than 0.05, which means that the null hypothesis cannot be true. This indicates that public awareness of halal products does, in fact, have a substantial partial effect on food security. According to the findings of this test, the model is capable of being utilised in a reasonable manner to count the halal variables which influence the status of food security in Indonesia.

Examining the value of exp(B) in Table 7, also known as the exponent value of the coefficient in the regression equation that was created, can help with interpretation. It is clear from looking at the results of the experiment Halal certification that the implementation of halal certification has the potential to boost food security 76,061 times more than the lack of halal certification does. The exp(B) value of halal awareness is 17,630, which indicates that there will be a shift of 17,630 times in boosting food security if there is an increase in awareness of halal items by just one. Therefore, if there is a rise in awareness of halal items, there is a 17,630-fold increased likelihood of a community becoming one that enjoys food security. Because every single value of exp(B) is positive, every single variable has a positive impact on food security, and as a result, every single hypothesis can be accepted. Following is an equation model that may be created based on the B values that were used in the computation up top:

$$\ln P/1-P = -30.101 + 4.332 \text{ Halal Certification} + 2.870 \text{ Halal Awareness}$$

With an estimated population of about 270 million people in the year 2020, Indonesia holds the fourth spot on the list of most populous countries in the world. Countries with large populations all struggle with the same problem when it comes to food security. The increase in population will put pressure on the availability of food if there is no extension of the land area. The question of halal, on the other hand, becomes more relevant when one considers Indonesia's status as the nation with the largest Muslim population on the earth.

The elimination of poverty and the guarantee that no one goes hungry are the endpoints of the quest for food security. Environmental variables (such as a changing climate or an inadequate water supply, for example) and agricultural development policies may have an effect on the ecosystem of the food supply chain, which in turn may have an effect on the availability and accessibility of goods that are of a high quality and are also safe (Ali et al., 2014; Ruzulan et al., 2021). The existing formulation of the term "food security" does not adequately address concerns pertaining to halal practises. The achievement of the goals for sustainable development is contingent upon the successful implementation of a food security system, which is primarily predicated on an unbroken food supply chain extending from the farm to the table. Although the status as halal of the raw

materials input and the methods are not clearly indicated, it is believed that they are safer for human consumption in terms of the nutritional content and the absence of potentially dangerous impurities (Ali et al., 2013). In addition to protecting future generations by preventing the overexploitation of natural resources, halal ecosystems make it possible to achieve sustainable halal food security. This is because halal certification serves as a standard for the quality and safety of products. The concept of social responsibility in the context of preserving natural environments as a means of ensuring the production of food that is both of high quality and of a safer variety is central to the halal value system (Darma, 2020; Katuk et al., 2021). The incorporation of halal and *thayyiban* norms and practises into the global food security agenda creates a development framework that is favourable to social entrepreneurship. This is accomplished through the numerous opportunities afforded by the halal food security system. There is a possibility that the ecosystem for halal food security will generate chances for various sizes of food-related economic initiatives, which will develop and flourish together with the system. There is a possibility that these openings will help in the fight against poverty. The prospects may result in the establishment of food-related businesses of varying sizes, all of which will expand along with the system (Duffy et al., 2021; Obaidullah, 2015).

Because food has become industrialised, and because it has a propensity to bring in revenue for the society, this has the potential to produce market demand within the society. As a result of this, the consumption of halal food has become an obligatory practise for Muslims. As a result, the halal food business has grown to become a specialised subset of the food industry. The individuals who participate in the halal food supply chain are responsible for ensuring that Muslims have access to halal food and are able to consume it. Nevertheless, the responsibility of the stakeholders includes not only guaranteeing the product's quality but also ensuring that it is devoid of any haram components. At this point in time, it is the responsibility of each individual who is involved in the supply chain for halal food to ensure that the food is guaranteed to be halal and acceptable for consumption. This is due to the fact that there is a higher risk of the integrity of the halal certification being compromised if the food chain is lengthy and intricate (Guber et al., 2020). To ensure that Muslims are able to exercise their right to acquire halal food, it is imperative that both the companies who produce food and those that provide it check to see that any halal food-related goods that are marketed towards Muslims are, in fact, compliant with the requirements of the *halalan tayyiban*. Also, Muslim researchers ought to have a strong desire to investigate the strategies of detecting food adulteration in order to safeguard Muslim consumers while they are selecting food goods for their own use (Fadzlillah et al., 2011). At this point, Islam provides complete guidance on the idea of the concept of food security, where it is not limited to simply making sure that Muslims have access to halal food, but rather, the way in which the food is circulated shall be Shariah compliant and equitably distributed. In other words, the concept of food security is an integral part of Islam.

Based on findings of the statistical study, halal certification and awareness have gradually become key factors in deciding whether or not a country has sufficient food supplies. It is connected to the fundamental premise of Islam that governs eating and drinking, which is known as *halalan thayyiban*. The idea of *halalan tayyiban* is not just concerned with tidiness and holiness; rather, it is also capable of satisfying quality requirements in terms of product quality, processing, and consumer delivery systems. Not only for one's own personal gain, but also for the greater good of the community as a whole. Brand branding, social media marketing, and playing the role of an affiliate or influencer are some of the ways in which the government and manufacturers can work together to raise awareness of halal practises. In order to improve Indonesia's overall food security, the government, specifically the Ministry of Religion, along with the backing of the Ulama Council of Indonesia, can serve as a regulator for halal certification. Their primary responsibility is to assist businesses, particularly those in the food industry, in obtaining certification for their products in accordance with Islamic law. Additionally, it was necessary for them to publicise the competitive advantages of having halal certification in countries with mostly Muslim populations like as Indonesia.

CONCLUSION

It is feasible to attract the following conclusion from the findings of this have a look at: the presence of a halal manufacturing system has a significant impact on the level of food safety in Muslim-majority international locations like Indonesia. Because Islam is a residing religion, its adherents have given enormous idea to the difficulty of making sure adequate food components. From an Islamic factor of view, it turned into clear that the idea of halala thayyiban was linked to the importance of meals safety in the Islamic religion. Rather than depending on safety alone to reduce hunger and poverty, it's miles most effective to meet the standards mentioned above as a way to acquire halal meals protection. Both the government and society as a whole want to be actively concerned inside the procedure of running to make sure that there will usually be sufficient meals for all people. The findings of this studies offer readers with a primary set of standards to don't forget even as attempting to gain an know-how of halal meals protection from an Islamic point of view. Increasing halal recognition and the quantity of merchandise which have been certified as halal can assist enhance the country's ordinary food protection. This may be achieved with the help of the authorities. There is a relationship between household food security where if a household is food-secure, the status will be even better. This shows that a village with a higher per capita availability potential does not guarantee that its population will have a better nutritional status compared to a village with a higher availability potential. It's just that it's only a matter of research Improving food security through the halal system by logistic regression analysis. Suggestions for further research are household food access which is highly dependent on the availability of food in the market and household purchasing power needs to be a priority in increasing household food security households, because regionally food ingredients, especially the staple food rice, still need it supplies from outside the region and household businesses to increase purchasing power in the sector agriculture still depends on natural resources and cannot fully depend on agriculture. It is necessary to diversify food sources of carbohydrates other than rice, such as corn, cassava, sago and others as alternative efforts to replace rice, so that people do not too dependent on the availability of rice where currently the potential for paddy fields is increasing narrowed due to the conversion of agricultural land which is mostly used as a place to live or other activities besides agriculture. It is necessary for a household to provide for itself their daily food availability by growing vegetables and raising small livestock besides being able to reduce food expenditure, it can also be directly utilized by households. Household size is one of the factors that affect the level of resilience household food that the household with the larger number of members has greater chance of becoming food insecure. To overcome this it is necessary the implementation of the birth control program should be encouraged if implemented well not only increase the chances of households to be food secure as well give more time to the mother and other family members to give time and attention for household members, especially for children who are still toddlers.

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