# THE EFFECT OF CHARITY ATTITUDE AND ECONOMIC CONDITION ON THE FARMERS' HOUSEHOLD FOOD SECURITY

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## Abstract

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Charity attitude is one of the unique variables identified that owned by farmers in Bangkalan, Madura Island, Indonesia. This research will focus on examining the relationship of charity attitude variable as one of the unique characteristics possessed by farmers in Bangkalan and economic condition on household food security of farmers in Bangkalan. Charity attitude will be one of the novelties of this research in the realm of human resource of agribusiness. The purposes of this study are to analyze the influence of charity attitude on food security of farmer household and to analyze the effect of economic conditions on food security of farmer household. This study will use 337 samples which are processed descriptively. The social ecological model will be the conceptual basis of this research and for testing the three variables this research will be tested using one of structural equation modeling tools called Warp-PLS. The results of this study will provide a description of the effect of charity attitudes and economic conditions on household food security of farmers indicated needed for the formulation of farmer empowerment policy in the future.

*Key words:* food security; farmer household; charity attitude; economic condition

## Introduction

One of the elements that becomes a prosperity variable of a country is food security. Food security becomes a very crucial variable in almost all countries in many parts of the world including in Indonesia. In the 1970s food security began becoming an international issue (Maxwell and Frankenberger, 1992). In the early stages, the focus on the food security concept lies in the availability of food at the national and international levels. The concept was based on the world food crisis from 1972 to 1974. The concept of food security has been discussed in depth by Food and Agriculture Organization, food security as the starting point of world food situation evaluation based on the thoughts that emerged at the UN world food conference in 1974 (FAO, 1996).

Food security for a country is very crucial, especially for countries with very large population like Indonesia, where by 2020 the population of Indonesia is expected to reach 271 million people and an estimated 305 million people by 2035. Agriculture Ministry of Indonesia (2004) states that agricultural development is one of the national development backbones and its implementation should be synergistic with

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other sector developments. Food security according to the Agriculture Ministry of Indonesia (2004) requires simultaneous fulfillment of two sides: (a) the availability of adequate food for the entire population in the amount, quality, safety and affordability, of domestic products, and (b) the consumption side which is the ability of every household to access enough food for each member to grow healthy and productive from time to time.

## Theoretical Background and Literature Review

### Food Security

Food security is a situation where food for households or communities is sustainably sustained. It can be reflected from the availability of adequate food which is both quantity and quality, safe, equitable and accessible to the community. Food is an important thing in national resilience because it is one of the most substantial needs in the fulfillment of society needs. The problem of food consumption in the fulfillment of human needs will remain an important record in economic development in Indonesia (Karsin, 2004). The status of food consumption for the Indonesian population is often used as an indicator of the level of community welfare. The food crisis is very sensitive in the dynamics of socio-political life. Therefore, food security in the community becomes very important. Food is anything that comes from biological sources of agricultural products, plantations, forestry, fisheries, livestock, whether processed or unprocessed which is intended as a need or drink for human consumption, including food additives, raw materials of food, and other materials used in the process of preparation, processing and manufacture for the fulfillment of food or beverage needs (Karsin, 2004).

The concept of food sovereignty comes from the Vía Campesina farmer movement. The trigger is the frequent occurrence of conflicts in the use of plant genetic resources, causing tension between the approach of food security and food sovereignty. In 2002 a committee of the International Planning Committee (IPC) was established for food sovereignty. IPC formulates that food sovereignty has four priority areas, namely: the food right; access to productive resources; environmentally-friendly production (agroecological production); and also local trade and markets (IPC, 2006). The food right is concerned with the development of an approach to human rights in individuals, food and nutrition. Access to productive resources is related to access to land, water, and genetic resources. The concept of food sovereignty is sometimes equated with food security.

### Charity Attitude

Attitude identified firstly used by Spencer in 1862 which then developed rapidly until now. Initially this word used to indicate the mental state that a person possesses. Attitudes can be defined as readiness to respond consistently in a positive or negative form to an object or situation. From this understanding, it can be concluded that one of the elements possessed by attitudes is consistency. The response that an individual has will be consistent when receiving stimuli from the environment or other entities. Meanwhile, attitudes can be defined also as views or feelings, accompanied by a tendency to act in accordance with attitudes toward the object (Oppenheim, 1992).

The view of attitude among psychologists is divided into two. The first view views attitude as a combination of affective, behavioral and cognitive reactions to an object (Katz and Stotland, 1959; Rajecki, 1982; Breckler, 1984) and this approach is called the "three component approaches". The second approach arises because of dissatisfaction over the explanation of inconsistencies that occur between the three components mentioned earlier. This second approach defines attitude as a positive-negative assessment of an object (Ajzen and Fishbein, 1980; Oskamp, 1977; Petty and Cacioppo, 1986; Brehm and Kassin, 1990) and this second approach is called the "single component approach".

Charity is one form of an attitude which in Arabic has the meaning of perfection or the best. The nature of charity is an attitude that feels itself always seen by God, the All-Knowing, All-seeing and All-Hearing the slightest deed done by a person, even if done in a hidden place. This attitude is identified to make an individual becomes full of responsibility in doing all his activities. In the world of work, this nature becomes one of the attitudes that are expected to be possessed by every human resource. This is because with an individual possessing this trait, they will carry out their duties and responsibilities responsibly so they can deliver the best performance they have. This attitude in Indonesia has received a fairly good response from some researchers and it is implemented in human resources in the banking and financial sector (Kholis, 2008; Kiswanto and Mukhibad, 2011).

## Economic Condition

The economic condition is one of the characteristics of the individual. Individual characteristics themselves represent different levels of aspects including gender, age, educational level, economic level or economic conditions and others. Individual characteristics possessed by individuals including identified economic conditions can influence some variables such as attitudes, needs, motivations and also the behavior of the individual (Thai et al., 2012).

Economic conditions in this research is defined as the economic condition of the family in terms of the status or

position of the family economy either in terms of income or a person's livelihood in fulfilling the family needs of the individual concerned. Conditions can be defined as a person's circumstances in a case. Conditions that will relate to this research are the economic condition of farmer's family. The economy literally comes from the Greek word that consists of two words, the word *oikos* and *nomos*. Understanding in Indonesian *oikos* means household, while *nomos* means rule, with the result that economy in Indonesian means to arrange household. Manage the household, is closely related to the finances. Economics is a way of managing the finances of each person to meet the needs of household life.

## Relationship among Variables

The basis of the formation of relationships among variables in the analysis of this study is the theory of social ecological model. This theory is one of parts of the behavioral theory that provides an understanding of the factors capable of influencing individual behavior and also provides guidance on the development of programs related to the social environment (Glaz and Rimer, 2005; Glanz et al., 2008; Glanz and Bishop, 2010). Through this theory, it can be identified that food security which is a condition where food conditions for households or communities are met on an ongoing basis is a social phenomenon that accumulates from the various activities of individuals that exist. This phenomenon builds on people's behavior in food security or in meeting food needs. The focus in this study is food security that occurs in farm households in Bangkalan, Madura island, Indonesia. Farmers' household food security is the accumulation of farmer society's behavior to meet their food needs.

From the figure above, it can be identified that in the social ecological model there is an interrelationship or stratified influence (such as individual, interpersonal, organization, community, and public policy). The behaviors possessed by these individuals will shape the social environment, besides those behaviors also formed from the social environment (Glanz and Bishop, 2010). From the above explanation it can be described that there is a reciprocal relationship between behavior and food security. This linkage is identified to proceed from upstream to downstream and vice versa from downstream to upstream. Behavior possessed by individuals can affect and be related to the behavior of the people around him, such as friends, family, and other small neighborhoods. Then the behavior of this set of people will be related and can affect the larger environment like an organization. From this organizational environment when the behavior they represent is well accumulated, it will be able to influence larger entities such as communities in the form of cultural values

and norms. From community behavior in the form of cultural values and this norm will be able to form a public policy.

From the previous explanation, it can be described that the behavior of individuals is a small part of shaped environment. Each entity is interlinked because of its reciprocal relationship form. Behavior of farmers in which the individual farmers themselves can accumulate to form a household food security of farmers. This is because the behavior of farmers in meeting food needs is a micro element that forms food security itself. Furthermore, food security of farm households is a manifestation of the behavior of farmers in meeting food needs, where the household food security is a phenomenon related to the behavior of farmers to meet food needs.

By identifying the relationship between phenomenon and behavior that make the food security, the researchers also explore the factors that cause the food security of the farmer's household to occur such as the attitude of the farmer and the farmer's economic condition. Farmers' household food security which is a representation of farmers' behavior in meeting farmers' household needs which are elements of food security of farm households identified can be influenced by the characteristics of farmers (Sirgy, 1982; Palan, 2001; Risman, 1998; Grier and Sonya, 2001).

The first variable indicated to affect the household food security of the farmers is the charity attitude. Some previous studies still focus on the general organizational context. By using the basis of the collaboration of theory of planned behavior, several previous studies have attempted to examine and describe the effect of attitudes on behavior possessed by individuals. Charity attitude begins with benevolent assumptions that are understood as a teaching or concept that supports a good work ethic. In this perspective, the charity attitude in its continuation is aimed to base the optimization of work and perform the tasks in accordance with the good and high quality performance (Nurhayati and Wasilah, 2007). In addition, human actions in carrying out all of their worship well and running it correctly are also identified as charity attitude manifested in the form of interaction with the creatures of Almighty. This attitude could make farmer as individual that able to run its job optimally with good quality also.

The charity attitude as a predictor in this research is proposed as a novelty in this research, where no research has been identified using this attitude as a variable in the context of agribusiness research using the basis of collaboration between social ecological model and also theory of planned behavior. One of the strong reasons why this charity attitude is used as a predictor variable in this study is because this attitude is identified inherent in the subject in this study. The relationship between the charity attitude and the behavior of farmers

to meet food needs is adapted from research (Aregay et al., 2017) which in the study examined the relationship between farmers' attitudes in China to their behavior on conservation farmland. The relationship between charity attitude and also the behavior of farmers to meet these food needs was also inspired from previous studies (Mahat et al., 2016; Ertz et al., 2016; Folmer, 2009; Kaiser et al., 1999; Ajzen, 1991).

The second predictor variable used in this study is the economic condition of farmers (Lynne et al., 2010). Economic conditions are one part of the characteristics possessed by a person (Sirgy, 1982; Palan, 2001; Risman, 1998; Grier and Sonya, 2001). Characteristics such as age, length of work, education level, gender and some others are identified as being able to influence individual behavior. In some previous studies, it was identified that farmers with higher income lacked a good attitude toward soil erosion, so that the behaviors or actions that emerged to overcome them were identified to be less than optimal. Unlike the case with lower income farmers, they are identified more concerned about the erosion and some bad things that are happening on their environment (Lynne et al., 2010). By looking at this, in this study, researchers will use this variable as a predictor of farmer household food security which is a manifestation of the behavior of farmers to meet food needs which later results of this study will be able to describe the situation that is happening on the subject of research, with the result that some appropriate policies and programs will be adopted.

Based on the above explanation, the researchers formulate the hypothesis as follows:

1. Charity attitude affects the food security of farm households.

2. Economic condition affects the food security of farm households.

## Methods

A quantitative approach will be used in this study where the researcher will involve the administration of a structured set of questions or statements with predefined response options aimed at a large number of respondents (Burns and Bush, 2014). The data and source format used is clearly identified and well defined. Compiling and formatting the data collected follow a neat procedure that is mostly numerical (Burns and Bush, 2014). This research is designed to explain the influence between variables or relationships affect (causality) between one variable to another variable through hypothesis testing or confirm the relationship influence between variables or constructs where the relationship between variables that are built or tested is a relationship that has been researched and tested before by researchers either conceptually or through a data analysis technique.

### *Analytical Tool*

WarpPLS is an analytical tool used in this study. The flow of use of this analytical tool will begin by designing a structural model (inner model) involving several variables involved in this study. Then the next step is to design the measurement model (outer model) followed by constructing the path diagram and convert the path diagram to the system of equations. Further measurements were made to determine the value of path coefficient, loading factor, and weight. This is continued by determining the value of goodness of fit and the last is hypothesis testing.

## Result and Discussion

### Model fit and quality indices

In the WarpPLS analysis, there is a fit model size and quality index to be met. Here are the results of the analysis presented in the following Table 1.

**Table 1**
**Model Fit and Quality Indices in Farmer Behavior Model to Meet Food Needs**

| MF &QI | Fit Criteria | Result | Note |
|---|---|---|---|
| APC | P < 0.05 | 0.411 P < 0.001 | good |
| ARS | P < 0.05 | 0.495 P < 0.001 | good |
| AARS | P < 0.05 | 0.492 P < 0.001 | good |
| AVIF | Acceptable if ≤ 5, ideally ≤ 3.3 | 1.001 | good |
| AFVIF | Acceptable if ≤ 5, ideally ≤ 3.3 | 1.496 | good |
| GoF | Small >= 0.1, medium ≥ 0.25, large ≥ 0.36 | 0.505 | good |
| SPR | Acceptable if ≥ 0.7, ideally = 1 | 1 | ideal |
| RSCR | Acceptable if ≥ 0.9, ideally = 1 | 1 | ideal |
| SSR | Acceptable if ≥ 0.7 | 1 | good |
| NLBCDR | Acceptable if ≥ 0.7 | 0.5 | enough |

*Note:* MF&QI is Model Fit and Quality Indices; APC is Average path coefficient; ARS is Average R-squared; AARS is Average adjusted R-squared; AVIF is Average block VIF; AFVIF is Average full collinearity VIF; GoF is Tenenhaus Goodness of Fit; SPR is Sympson's paradox ratio; RSCR is R-squared contribution ratio; SSR is Statistical suppression ratio; NLBCDR is Nonlinear bivariate causality direction ratio

From the table above, it shows that the overall model is fit. After the testing is done, it could be identified that all criteria in the fit and quality indices model are met. Thus the model is said to be good and can be used to explain the phenomenon (system) that is studied and can be used for hypothesis testing. From the Table 1 above, it could be described that the value of APC and ARS each has a number of 0.411 and 0.495. This shows that Average Path Coefficient (APC) and Average R-Squared (ARS) meet the fit and quality indices model. Then the AVIF (Averaged block VIF) value also shows a number smaller than 5 that is 1.001 where this shows that there is no multicollinearity in the model under study. For the value of other fit and quality indices model indicators such as AARS, AFVIF, GoF, SPR, RSCR, SSR, and NLBCDR generate numbers that match the predefined criteria to achieve the fit model.

## Goodness of Fit Outer Model

### Factor loading

The factor loading result of this study describes that the strongest indicator (dominant) as a measure of attitude charity (X1) is X1.6 with a factor load of 0.907 close to 100 percent. Then the identified indicators are able to perform the measurements properly are X1.4 and X1.5 with a factor loading of 0.886 and 0.878. While other variables are identified able to make measurements with the amount of load factor is X1.2 and X1.3 with the factor load of 0.536 and 0.550. Meanwhile, other indicators such as X1.1, X1.7, X1.8, and X1.9 were identified as the indicators are able to measure with the lowest ability like X1.1 with value 0.254 and also indicator X1.7, X1 .8, and X1.9, each of them which has negative values of -0.058, -0.375, and -0.040. Then the strongest indicator (dominant) as a measure (reflect) variable Farmer Economic Conditions (X2) is indicator X2.2 with a factor loading of 0.885, Then followed by indicators that also have strong enough ability to measure the variable that is X2.3 with a factor loading of 0.864. Then the identified indicator has the weakest ability to measure the variable is the indicator X2.1 with a factor loading of 0.392. The strongest indicator (dominant) as a measure (reflective) household food security of farmers (Y1) is Y1.8 with a factor load of 0.919, and also Y1.9 with a factor load of 0.917. Then followed

by other indicators such as Y1.1, Y1.2 and Y1.4 which also have a good factor load in measuring the variables which are respectively are 0.830, 0.859 and 0.869. The overall indicator used to measure the variable of Farmer's Household Food Security is identified as being overall positive. The last indicators to be gauges such as Y1.3, Y1.5, Y1.6 and Y1.7 are indicators that have a good enough value to reflect these variables with factor load values of 0.699, 0.778, 0.636 and 0.576, respectively.

### Validity Test

A model is said to be capable of having sufficient discriminant validity if the AVE root for each construct is greater than the correlation among constructs and at least AVE reaches 0.5 or higher (Hair et al., 2014). Here are the results of AVE tests performed. From Table 2, we can identify that the root value of the average variances extracted (AVE) reaches the required minimum value. The table above shows that the research instrument in the form of questionnaires for all variables is said to be valid.

### Reliability Test

The loading value required for a construct to be reliable and satisfy the composite reliability rule of thumb is a minimum of 0.6 or higher and ideally 0.7 (Fornell and Bookstein, 1982). Here are the results of analyses in identifying the reliability value of a construct. Based on the Table 2, it is identified that the whole variable indicates good reliability figures. The minimum although there is a variable that have values below 0.7 but the numbers are not too far from the specified limit. Thus it could be concluded that all indicators of each variable is valid and also reliable as a measure of research variables.

### Hypothesis testing

Hypothesis testing which is the representation of the relationship between the variables tested in this study can be seen in the following Table 3.

Based on Table 3, the results of hypothesis testing are as follows:

➢ The first hypothesis tested in this research is charity attitude affect the Household Food Security of Farmers. The result of analysis uses WarpPLS (Figure 1) obtained coef-

**Table 2**
**Reliability and Validity Test**

| Variable | AVE | Composite Reliability | Cronbach Alpha |
|---|---|---|---|
| Charity Attitude (X1) | 0.594 | 0.683 | 0.640 |
| Farmer Economic Condition (X2) | 0.749 | 0.777 | 0.570 |
| Household Food Security of Farmers (Y1) | 0.796 | 0.938 | 0.924 |

**Table 3**
**Hypothesis Testing Results**

| Relationships among Variables | | Path Coefficient | *P-value* |
|---|---|---|---|
| Charity Attitude (X1) | Household Food Security of Farmers (Y1) | 0.687 *** | < 0.001 |
| Farmer Economic Condition (X2) | Household Food Security of Farmers (Y1) | 0.135 ** | 0.006 |

*Note:* α level has been set = 0.05; *** = strong significance with α = 0.001; ** = moderate significance with α = 0.006; * = low significance with α = 0.05

ficient value of path = 0.687 and p-value < 0.001 identified as significant at α = 0.001 with a very small error level that is only 0.1% with the result that the hypothesis is accepted. Path coefficient is marked positive, it shows that the relationship between two variables is positive so that the better charity Attitude owned by farmers, the stronger Household Food Security of Farmers.
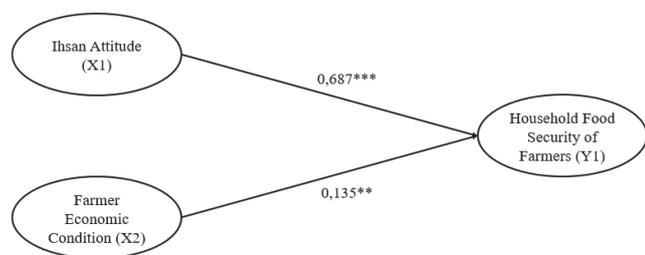


**Fig. 1. Model Test Result Using WarpPLS**

➢ The second hypothesis tested in this study is the Farmers Economic Condition affects the Household Food Security of Farmers. The result of analysis uses WarpPLS obtained coefficient value of path = 0.135 and p-value = 0.006 identified with significant at α = 0.006 and error rate only 0.6% only so that hypothesis also accepted. Path coefficient marked positive, this indicates that there the better the economic condition of farmers, the better Household Food Security of farmers will be perceived.

## Conclusion

Household food security of farmers is identified as an important variable in the welfare of the people in a country in which this research is tested together with some influencing variables such as charity attitude (X1) and also farmer economic condition (X2). In this study it was identified that the attitude of charity (X1) and also the farmers economic condition (X2) had an effect with a high enough significance value, especially for the charity attitude which each of is 0.687 and 0.135. This result indicates that the attitude of charity owned by farmers in Bangkalan, Madura Island gives a strong influence on food security of farm

households. The better or increased attitude charity owned by farmers, it will also increase the food security of farm households. By knowing this, of course the related parties such as the government can strive and empower the charity attitude owned by the farmers so that the food security of farm households which become one of the indicators of the welfare of a country can be realized. Through this research, it is identified that the farmers in the Bangkalan, Madura Island area have a good charity attitude, where the charity attitude is the attitude that is able to provide food security owned by the farmers.

One of the characteristics possessed by farmers is the economic condition owned by farmers. In this study, it is identified that the farmer economic condition has positive relationship to household food security of farmers. The economic condition in this study is the economic condition of the family in terms of the status or position of the family economy either in terms of income or livelihood of farmers in Bangkalan, Madura Island in meeting their family needs. It also identified that the better the economic condition owned by the farmers, the better the food security in the farmer's household.

Based on the results above, the researchers expect the parties which have responsibility on the preservation of household food security of farmers such as the government is expected to contribute through the implementation of policies or programs that can be implemented related to household food security of farmers. In addition, the government is also expected to formulate further policies on improving economic conditions owned by farmers. Through the implementation of these policies, it is expected to realize food security owned by farmers' households.

Reviewing the results of this study, it is hoped that further research can identify deeper about the classification of economic conditions that are divided into several levels of economic conditions, so that it can be known exactly at a level where economic conditions will actually be able to affect the food security of farm households. In addition, in-depth research on the charity attitude variable also needs to be done back in the realm of agribusiness because of this attitude that has its own value for the realm of human development.

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