



Jurnal Sosial Ekonomi Pertanian
(*J - S E P*)
(*Journal of Social and Agricultural Economics*)



***CIGARETTE CONSUMPTION, CREDIT ACCESS, AND DETERMINANTS
HOUSEHOLD FOOD SECURITY IN LAMPUNG PROVINCE***

Tetiyei Dwi Lestari^{1*}, Toto Gunarto¹, Dedy Yuliawan¹

¹Magister Ilmu Ekonomi FEB, Universitas Lampung

* Corresponding author's email: tetiyei.lestari@gmail.com

Submitted: 11/06/2023

Revised: 21/07/2023

Accepted: 31/07/2023

ABSTRACT

The SDGs emphasize the need to end hunger, improve nutrition and achieve food security. Meeting food needs occurs when everyone has physical and economic access to sufficient, safe and nutritious food. Lampung Province is a province that is a production center for rice, cassava, and corn. This shows that there is the ability of Lampung Province to provide food for its inhabitants. However, regional food availability at the macro level does not guarantee household food security at the micro level. This study uses Susenas raw data for Lampung Province in 2022. Food security status is measured based on a combination of the share of food expenditure and the level of energy consumption which adopts the Jonsson and Toole (1991) indicators to see the effect of several household variables. This study uses ordinal logit regression where the categorization of status is divided into four, namely food insecurity, food deprivation, food vulnerable, and food security. As much as 41,54 percent of households are food secure and 9,5 percent are food insecure. Based on ordinal logit regression analysis, the researchers concluded that the variables affecting household food security in Lampung Province were cigarette consumption, access to credit, social assistance, land assets, internet use, place of residence, income, number of household members, whether the household works on agriculture or not, and age head household.

Keywords: *food security, access to credit, cigarette consumption*

ABSTRAK

Tujuan Pembangunan berkelanjutan SDGs menekankan pada kebutuhan mengakhiri kelaparan, meningkatkan nutrisi, dan pencapaian ketahanan pangan. Pemenuhan kebutuhan pangan terjadi ketika setiap orang memiliki pangan yang cukup, aman, dan bergizi. Provinsi Lampung merupakan provinsi yang menjadi sentra produksi padi, ubi kayu, dan jagung. Hal ini menunjukkan bahwa adanya kemampuan Provinsi Lampung dalam menyediakan pangan bagi penduduknya. Namun, ketersediaan pangan wilayah di tingkat makro tidak menjamin adanya ketahanan pangan rumah tangga di tingkat mikro. Penelitian ini menggunakan raw data susenas Provinsi Lampung tahun 2022 dengan total responden sebanyak 10,418 rumah tangga yang tersebar di seluruh kabupaten/kota Status ketahanan pangan diukur berdasarkan kombinasi antara pangsa pengeluaran pangan dan tingkat konsumsi energi yang mengadopsi dari indikator Jonsson dan Toole untuk melihat pengaruh beberapa variabel rumah tangga. Penelitian ini menggunakan regresi logit ordinal dimana pengkategorian status dibagi menjadi empat yaitu rawan pangan, kurang pangan, rentan pangan, dan tahan pangan. Sebesar 41,54 persen rumah tangga sudah tahan pangan dan 9,5 persen rawan pangan. Berdasarkan analisis regresi logit ordinal peneliti menyimpulkan bahwa variabel yang mempengaruhi ketahanan pangan rumah tangga di Provinsi Lampung adalah konsumsi rokok, akses kredit, bantuan sosial, aset lahan, penggunaan internet, tempat tinggal, pendapatan, jumlah ART, ruta mengusahakan pertanian atau tidak, dan umur KRT.

Kata kunci : *ketahanan pangan, akses kredit, konsumsi rokok*



Copyright © 2023 by Author(s)

This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International

License. All writings published in this journal are personal views of the authors and do not represent the views of this journal and the author's affiliated institutions.

How to Cite: Lestari, Tetiyei Dwi; Gunarto, Toto; Yuliawan, Dedy. (2023). Cigarette Consumption, Credit Access, and Determinants Household Food Security in Lampung Province. *Jurnal Sosial Ekonomi Pertanian (J-SEP)*, 16(2): 139-148.

INTRODUCTION

The problem of food security at the household level is recognized as a global health problem, especially in developing countries (Drammeh et al., 2019). The SDGs Sustainable Development Goals emphasize the need to end hunger, improve nutrition, and achieve food security (Pérez-Escamilla, 2017). Meeting food needs occurs when everyone has economic and physical access to nutritious, sufficient, and safe food (Yovo & Théodore, 2023). Seeing how important it is to fulfill food, it is only natural that the government prioritizes the development of food security as the foundation for building other sectors (Badan Legislasi DPR RI, 2021).

Each region has potential in certain sectors (Qomariyah et al., 2018). Based on data from the Central Statistics Agency for 2022, it is noted that Lampung Province is the second-largest province by population on the island of Sumatra. When viewed from the sector the biggest contributor to the economy of Lampung Province is in the food crop agriculture sector with a percentage of 28,39 percent. With the Lampung Province's economy supported by the agricultural sector, Lampung Province ranks sixth in rice production in Indonesia (Kusnardi, 2022). The Central Bureau of Statistics (2022) records data on surplus rice production in the period 2020-2022. It is recorded that in 2021 the rice surplus in Lampung Province is 2,48 million tons and in 2022 it will reach 2,68 million tons (Oktavia, 2022). Besides being included in the top ten rice production at the national level, Lampung Province is also a center for cassava and corn production. This shows that there is the ability of Lampung Province to provide food for its inhabitants. However, regional food availability at the macro level does not guarantee household food security at the micro level (Food Security Service of Lampung Province, 2020). Food is also closely related to the nutritional intake consumed by the community.

Nutritional intake and household welfare can be measured through household consumption expenditure for food (Zainuddin et al., 2020). Data states that currently the second largest percentage of consumption after rice is cigarettes (Saksono, 2021). Research (Rachel et al., 2019) concluded that cigarette use is highly positively correlated with household food insecurity. A higher intake of cigarettes will affect nutritional status (Restutiwati et al., 2019). Apart from cigarettes, there are other factors studied that influence food quality, namely direct access, namely households that produce their land assets, and indirect access, such as credit and assistance (Sankar, 2022).

One of the main steps to increase household control over food is access to credit (Salima et al., 2023). Credit has the potential to improve household food status by enabling them to engage in activities that generate more productive income (Ragasa & Mazunda, 2018). In addition, the importance of extending credit to agriculture-based households is due to the fluctuating nature of agriculture in rural areas (Mukwedeya & Mudhara, 2023). Access to credit is divided into two main categories, namely formal and informal credit. Formal sources of credit are provided by banks or cooperatives supervised by the Central Bank. Meanwhile, informal sources of credit are provided by money lenders, friends, or relatives where there is no legal regulation which also affects household welfare (Manja & Badjie, 2022). In addition, ownership of assets such as land and savings determines household food security (Rono et al., 2023).

Another study from (Sabaora et al., 2021) states that there is an influence between assistance from the independent village program on the food status of Sumbanese citizens and research from (Amrullah et al., 2020) which concludes that BLT strengthens household food status. Other research states that barriers to accessing information can reduce the level of food security (Karnik & Peterson, 2023).

Furthermore (Kolog et al., 2023) concluded that household food security is also influenced by various factors from the family including the gender of the head of household, income, based on agriculture or not, and location of residence. The same thing was studied by (Yazew et al., 2023) who examined the effect of work on food insecurity status. Other studies state that there

are factors such as access to information, marital status, household head education, and household size as determinants of food security (Woleba et al., 2023). Research (Santos et al., 2022) also examined the age of head of household between men and women which greatly affected food conditions.

After reviewing various sources of literature, the latest thing from this research is that there are not many studies that directly link cigarette consumption and access credit to household food security. The author also adds several other variables in seeing how the food security situation is in Lampung Province and the influence of cigarette consumption factors, access to credit, savings, social assistance, and what social household demographic variables can affect household food security in Lampung Province.

METHODS

The data used comes from raw data 2022 National Socio-Economic Survey which comes from BPS Lampung Province as many as 10,418 household samples were taken using multistage stratified probability sampling. The method used is ordinal logistic regression which consists of four categories of variables, y namely food insecurity (1), food deprivation (2), food vulnerable (3), and food security (4). While x the variables are cigarette consumption, access to credit, cash social assistance (PKH, food assistance, groceries, and local government assistance), ownership of land assets, access to savings, access to information, place of residence, gender of head of household, income, size household, based on agriculture or not, education of head of household, age of head of head, and marital status.

To measure the level of household food security can be seen from the combination of the share of food expenditure and the level of adequacy of energy consumption (Maxwell et al., 2000) . This indicator adopts from Jonsson and Toole (1991). There are 4 types of levels, namely food insecurity, food deprivation, food vulnerable, and food security.

Table 1. Cross Classification of Household Food Security Levels

Energy Absorption Adults per capita (calories)	Percentage of Food Expenditure to Total Expenses	
	High ($\geq 60\%$ food expenditure to total	Low ($< 60\%$ food expenditure to total
Less ($\leq 80\%$ than 2100 kcal)	food insecure	food deprivation
Enough ($> 80\%$ from 2100 kcal)	food vulnerable	food security

The ordinal logit model is used to determine the factors that influence the condition of food security at the household level. In measuring household food security, there are four categories of levels of food security, namely food insecurity, food deprivation, food vulnerable, and food security. The ordinal logistics functions to be built are:

$$p_i = E(Y = 1|X_i) = \frac{1}{1 + e^{-(\beta_1 + \beta_2 X_i)}}$$

where the ordinal logistic model to be built in this study is:

$$TKP = \beta_0 + \beta_1 KR + \beta_2 AK + \beta_3 Bansos + \beta_4 AL + \beta_5 AT + \beta_6 Innternet + \beta_7 TT + \beta_8 JK + \beta_9 Pend + \beta_{10} JART + \beta_{11} RTani + \beta_{12} Umur + \beta_{13} SK_KRT$$

information:

TKP : Level of Household Food Security

KR : Number of cigarette consumption

AK : Credit access

Bansos : Social Assistance (PKH, food assistance, groceries, and local government

	assistance)
<i>AL</i>	: Land Assets
<i>AT</i>	: Savings Assets
<i>Internet</i>	: using the internet
<i>TT</i>	: Residence
<i>JK</i>	: Gender of Head of Household
<i>Pend</i>	: Household Income
<i>JArt</i>	: Number of Household Members
<i>RTani</i>	: Household Type
<i>Umur</i>	: Age of Head of Household
<i>SK_KRT</i>	: Marital Status of Head of Household

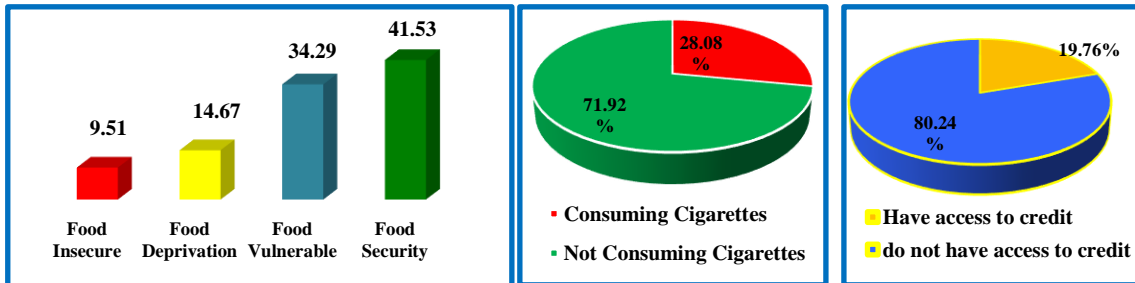
Table 2. Research Variables

Var	Variable Explanation	Measurement Scale	Expected sign
<i>TKP</i>	Level of Household Food Security 1 = Food Insecure 2 = Food deprivation 3 = Food vulnerable 4 = Food security	Ordinal	
<i>KR</i>	Number of cigarette consumption	ratio	negative
<i>AK</i>	Credit access 1 = have access to credit 2 = do not have access to credit	nominal	positive
<i>Bansos</i>	Social Assistance (PKH, food assistance, groceries, and local government assistance) 1 = getting help 2 = did not get help	nominal	positive
<i>AL</i>	Land Assets 1 = owns land assets 2 = do not have land assets	nominal	positive
<i>AT</i>	Savings Assets 1 = have savings assets 2 = do not have savings assets	nominal	positive
<i>Interne</i>	using internet 1 = using internet 2 = not using internet	nominal	positive
<i>TT</i>	Residence 1 = urban 2 = rural	nominal	positive
<i>JK</i>	Gender of Head of Household 1 = male 2 = female	nominal	negative
<i>Pend</i>	Household Income	ratio	positive
<i>JArt</i>	Number of Household Members	ratio	negative
<i>RTani</i>	Household Type 1 = Household Farmer 2 = Not Household Farmer	nominal	positive
<i>Umur</i>	Age of Head of Household	ratio	positive
<i>SK_KRT</i>	Marital Status of Head of Household 1 = Married 2 = Not Married	nominal	positive

THE RESULTS

Descriptive Analysis

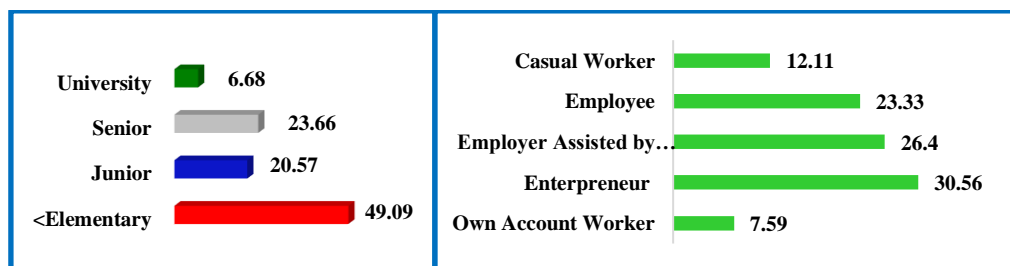
A total sample of 10,418 household samples in Lampung Province, it was found that as much as 41,54 percent were food resistant. Households that have a low share of food expenditure but have not met sufficient calories are 14,7 percent. In addition, households that have sufficient energy but a high share of food expenditure are 34,3 percent of the range of food. What needs to be emphasized is that there are still food insecure households at the lowest food level, namely 9,5 percent. This is what the government needs to pay attention to.



Source : Data Susenas March 2022

Figure 1. Percentage of Households Based on Status of Food Security, Consumption of Cigarettes, and Ownership of Access to Credit

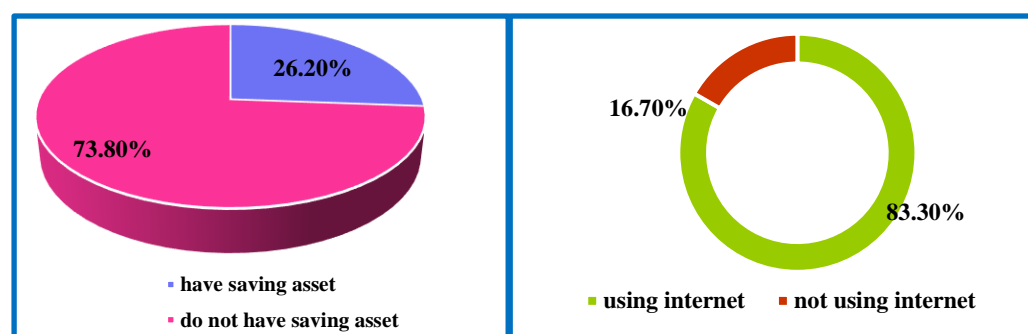
Cigarette consumption in Lampung Province households is quite high. Of the total household sample, 28,08 percent of households consumed cigarettes. When viewed from access to credit, only 19,8 percent have access to credit, while the remaining 80,2 percent do not have access to credit. Assistance from the government is one of the drivers for increasing household food security. 48,4 percent had received assistance from the government, be it PKH, food assistance, groceries, and other local government assistance. Another asset owned by many households in Lampung Province is land assets which are the driving force for the majority of people in Lampung Province to work as farmers, especially in rural areas. Land assets owned become one of the supporters of community activities in stabilizing food in their households. 86,2 percent of households own land assets. This is in line with the percentage of households living in rural areas of 74,5 percent and households working in the agricultural sector of 55,5 percent.



Source : Data Susenas March 2022

Figure 2. Percentage of Households Based on Education of Head Household, and Working Status of Head Household

Savings is one of the determinants of household food security, relatively many households have savings, namely 73,8 percent, while the rest do not have savings. In addition, judging from internet usage, 83,3 percent of households already use the internet as a medium of information.



Source : Data Susenas March 2022

Figure 3. Percentage of Households Based on Saving Assets and Using Internet

The majority of household heads in Lampung Province are male at 89,6 percent. When viewed from the education of the head of household, 30,4 percent have the education status of senior high school and above while 69,6 percent have junior high school education and below, meaning that the education of the head of the household is still relatively low in Lampung Province. However, even though education is relatively low, in fact, many households have their business activities as a working status. It was recorded that 52,62 percent had working status, both their businesses and businesses assisted by workers.

Table 3. Summary of Statistical Results

	<i>Variabel</i>	(%)	<i>Estimate</i>	<i>Sign</i>	<i>Odds Ratio</i>	<i>Results</i>
<i>KR</i>	cigarette consumption		-0,011	0,000*	1,011	<i>fit</i>
<i>AK</i>	have access to credit	19,8	0,052	0,000*	1,053	<i>fit</i>
	fo not have access to credit	80,2				
<i>Bansos</i>	Receive	48,4	0,109	0,006*	1,115	<i>fit</i>
	Not receive	51,6				
<i>AL</i>	owns land assets	86,2	0,191	0,001*	1,210	<i>fit</i>
	do not have land assets	13,8				
<i>AT</i>	have savings assets	73,8	-0,079	0,094	1,082	
	do not have savings assets	26,2				
<i>Internet</i>	using the internet	83,3	0,380	0,000*	1,463	<i>fit</i>
	not using the internet	16,7				
<i>TT</i>	urban	25,5	-0,252	0,000*	1,286	<i>fit</i>
	rural	74,5				
<i>JK</i>	male	89,6	0,042	0,675	1,042	
	female	10,4				
<i>Pend</i>	household income		0,052	0,000*	1,053	<i>fit</i>
<i>JArt</i>	number of household members		-0,751	0,000*	2,119	<i>fit</i>
<i>RTani</i>	household farmer	44,5	0,235	0,000*	1,265	<i>fit</i>
	not a household farmer	55,5				
<i>Umur</i>	age of head of household		0,006	0,000*	1,006	<i>fit</i>
<i>SK_KRT</i>	married	85,9	-0,020	0,818	1,020	
	not married	14,1				

*Significant *p*-value 0.05

Based on the results of the table above, it can be seen that the variables that significantly influence are cigarette consumption, access to credit, social assistance, land assets, internet use, location of residence, household income, households engaged in agricultural activities, and the age of the head of household. Meanwhile, the variables of saving assets, gender of head of household, and marital status are not significant in influencing household food security.

Analysis and Interpretation of the Model formed

To see if the model to be formed is appropriate:

Table 4. Summary of Model Test Statistical Results

<i>Test Statistics</i>		<i>Chi Square</i>	<i>sign</i>	<i>Test results</i>
Model Fitting Information				
<i>Goodnes of Fit</i>	<i>Pearsons</i>	75306,992	0,945	<i>fit</i>
	<i>Deviance</i>	22911,756	1,000	<i>fit</i>
<i>R²Nagelkerle</i>	0,577			

Based on the test statistics, the fitting information model $<0,05$ concluded that the logistic regression results were better than the non-logistic ones. Judging from the significance value of *Goodness of Fit* > 0.05 , it means that the ordinal logistic regression model fits the observation data. The output of Nagelkerle's pseudo R Square concluded that 57,7 percent of the independent variables were able to jointly influence the dependent variable.

Interpretation of ordinal regression equations

Based on the statistical results of the t-test, households that consume cigarettes will significantly reduce their food security status by 1,011 compared to non-smokers. Having access to credit will increase household food security status by 1,053. For example, households that have access to credit, social assistance, and own land assets will tend to be more food insecure than those without access, namely 1,115 and 1,210. The greatest odds ratio value is in land asset ownership, which is 1,210, which means that land asset ownership has the greatest tendency to improve household food security status compared to access to credit and social assistance received by households.

Households that access the internet tend to be 1,4630 more food insecure than those who do not access the internet. When viewed from the location of residence, households living in urban areas tend to be more food insecure than those living in rural areas. Increases in household income and age also tend to increase the level of household food security.

A different thing happened to the variable number of household members and cigarette consumption. An increase in the number of household members and consumption of cigarettes will reduce the degree of food security in a household. Because the burden on members is increasing and there are adverse effects on nutritional status and food caused when the consumption of cigarettes increases. An increase in the number of household members decreased the status of household food security by 2,11 times when compared to cigarette consumption of 1,01. This means that the tendency of an increase in the number of household members has a more effect on reducing the status of household food security.

The results of several previous studies concluded the same thing from this study. Research (Akukwe, 2020) concluded that the age of the head of the household, household income, access to credit, marital status and land size affect the level of household food security. Different results were concluded by research (Broussard, 2019; Kassie et al., 2014) that the gender of the household head greatly determines the status of food insecurity where female household heads

tend to be food insecure compared to men. Another study (Mgomezulu et al., 2023) concluded differently that the gender of the head of the household and the number of household members did not significantly affect household food security.

CONCLUSION

Based on the ordinal logit analysis above, it can be concluded that the variables that affect household food security in Lampung Province are cigarette consumption, access to credit, social assistance, land assets, internet usage, location of residence, income, number of households members, households pursuing activities agriculture, and the age of the KRT. Several variables do not significantly affect household food security, one of which is savings assets, gender of the household head, and marital status. The households have been detained food and what needs to be the focus of the government is that there are still food insecure households at the lowest food level, namely 9.5 percent. The suggestion given by the researcher is that several other variables that have not been included by the researcher can be added such as the condition of the mother who prepares food for the family every day, which can be seen from the mother's education, age, and also the access that the mother has. Increasing food can be done by providing counseling and assistance, especially to households who have the lowest food level conditions, as well as counseling on farming productivity owned by households and assisting households who have the lowest food status.

DAFTAR PUSTAKA

- Akukwe, T. I. (2020). Household food security and its determinants in agrarian communities of southeastern Nigeria. *Agro-Science*, 19(1), 54. <https://doi.org/10.4314/as.v19i1.9>
- Amrullah, E. R., Pullaila, A., Hidayah, I., & Rusyiana, A. (2020). Dampak Bantuan Langsung Tunai Terhadap Ketahanan Pangan Rumah Tangga Di Indonesia (Impacts of Direct Cash Transfer on Household Food Security in Indonesia). *Jurnal Agro Ekonomi*, 38(2), 77–90. <https://doi.org/http://dx.doi.org/10.21082/jae.v38n1.2020.91-104>
- Badan Legislasi DPR RI. (2021). Laporan Pemantauan dan Peninjauan Undang-Undang Nomor 18 Tahun 2012 tentang Pangan. In *Badan Legislasi DPR*. <https://www.dpr.go.id/doksetjen/dokumen/persipar-Laporan-AKD-Buku-Laporan-Badan-Legislati-DPR-RI-thd-Pemantauan-dan-Peninjauan-Undang-Undang-Nomor.-18-Tahun-2012-tentang-Pangan-1631075526.pdf>
- Badan Pusat Statistik. (2022). *Luas Panen dan Produksi Padi di Indonesia 2022* (dan P. Pangan, Direktorat Statistik Tanaman Pangan, Hortikultura (ed.)). Badan Pusat Statistik.
- Bergmans, R. S., Coughlin, L., Wilson, T., & Malecki, K. (2019). Cross-sectional associations of food insecurity with smoking cigarettes and heavy alcohol use in a population-based sample of adults. *Drug and Alcohol Dependence*, 205, 107646. <https://doi.org/10.1016/j.drugalcdep.2019.107646>
- Broussard, N. H. (2019). What explains gender differences in food insecurity? *Food Policy*, 83, 180–194. <https://doi.org/10.1016/j.foodpol.2019.01.003>
- Dinas Ketahanan Pangan Provinsi NTB. (2020). *Laporan Tahunan Dana Dekonsentrasi Tahun 2020*. 3, 1–48.
- Drammeh, W., Hamid, N. A., & Rohana, A. J. (2019). Determinants of Household Food Insecurity and Its Association with Child Malnutrition in Sub-Saharan Africa: A Review of the Literature. *Current Research in Nutrition and Food Science Journal*, 7(3), 610–623.

<https://doi.org/10.12944/CRNFSJ.7.3.02>

- Karnik, H., & Peterson, H. H. (2023). Food security among low-income immigrant households and the role of social capital: A case study of Somali-American households in the Midwestern United States. *Food Policy*, 117(June 2022), 102456. <https://doi.org/10.1016/j.foodpol.2023.102456>
- Kassie, M., Ndiritu, S. W., & Stage, J. (2014). What Determines Gender Inequality in Household Food Security in Kenya? Application of Exogenous Switching Treatment Regression. *World Development*, 56, 153–171. <https://doi.org/10.1016/j.worlddev.2013.10.025>
- Kolog, J. D., Asem, F. E., & Mensah-Bonsu, A. (2023). The state of food security and its determinants in Ghana: an ordered probit analysis of the household hunger scale and household food insecurity access scale. *Scientific African*, 19. <https://doi.org/10.1016/j.sciaf.2023.e01579>
- Kusnardi. (2022). *Lampung Provinsi Produsen Beras ke 6 Nasional, Setahun Surplus 1,34 juta ton Siap Saat Nataru*. Ispeidata.Com. <https://ispeidata.com/lampung-provinsi-produsen-beras-ke-6-nasional-setahun-surplus-134-juta-ton-siap-saat-nataru/>
- Manja, L. P., & Badjie, I. A. (2022). The Welfare Effects of Formal and Informal Financial Access in the Gambia: A Comparative Assessment. *SAGE Open*, 12(1). <https://doi.org/10.1177/21582440221081111>
- Maxwel, A. (2000). Urban Livelihoods and Food Nutrition Security in Greater Accra, Ghana. *International Food Policy Research Institute*. <https://ebrary.ifpri.org/utils/getfile/collection/p15738coll2/id/48050/filename/43508.pdf>
- Mgomezulu, W. R., Edriss, A.-K., Machira, K., & Pangapanga-Phiri, I. (2023). Towards sustainability in the adoption of sustainable agricultural practices: Implications on household poverty, food and nutrition security. *Innovation and Green Development*, 2(3), 100054. <https://doi.org/10.1016/j.igd.2023.100054>
- Mukwedeya, B., & Mudhara, M. (2023). Factors influencing livelihood strategy choice and food security among youths in Mashonaland East Province, Zimbabwe. *Heliyon*, 9(4), e14735. <https://doi.org/10.1016/j.heliyon.2023.e14735>
- Oktavia, V. (2022). *Produksi Padi di Lampung Tahun 2022 Diprediksi 2,66 Juta Ton*. Kompas.Com. <https://www.kompas.id/baca/nusantara/2022/11/01/produksi-padi-di-lampung-diprediksi-mencapai-266-juta-ton-tahun-2022>
- Pérez-Escamilla, R. (2017). Food security and the 2015-2030 sustainable development goals: From human to planetary health. *Current Developments in Nutrition*, 1(7), 1–8. <https://doi.org/10.3945/cdn.117.000513>
- Qomariyah, S., Mustapit, M., & Supriono, A. (2018). ANALISIS POTENSI WILAYAH BERBASIS KOMODITAS PERTANIAN TANAMAN PANGAN SERTA KONTRIBUSINYA TERHADAP PEREKONOMIAN KABUPATEN BONDOWOSO. *JSEP (Journal of Social and Agricultural Economics)*, 11(1), 66. <https://doi.org/10.19184/jsep.v11i1.6883>
- Ragasa, C., & Mazunda, J. (2018). The impact of agricultural extension services in the context of a heavily subsidized input system: The case of Malawi. *World Development*, 105(January), 25–47. <https://doi.org/10.1016/j.worlddev.2017.12.004>

- Restutiwati, F., Murbawani, E. A., & Rahadiyanti, A. (2019). KUALITAS DIET, AKTIVITAS FISIK, DAN STATUS GIZI PADA PEROKOK DEWASA AWAL. *Journal of Nutrition College*, 8(3), 156–163. <https://doi.org/10.14710/jnc.v8i3.25805>
- Rono, P. K., Rahman, S. M., Amin, M. D., & Badruddoza, S. (2023). Unraveling the Channels of Food Security of the Households in Northern Kenya: Evidence from an Exclusive Dataset. *Current Developments in Nutrition*, 7(2), 100005. <https://doi.org/10.1016/j.cdnut.2022.100005>
- Sabaora, Y. U. O., Priyanto, S. H., & Prihtanti, T. M. M. (2021). Ketahanan Pangan Rumah Tangga Penerima Bantuan Program Desa Mandiri Pangan di Kabupaten Sumba Tengah. *Jurnal Agro Ekonomi*, 38(2), 105. <https://doi.org/10.21082/jae.v38n2.2020.105-125>
- Saksono, E. H. (2021). PENGARUH BANTUAN SOSIAL TUNAI TERHADAP KONSUMSI ROKOK RUMAH TANGGA MISKIN DI PROVINSI LAMPUNG. *E-Jurnal Ekonomi Dan Bisnis Universitas Udayana*, 10(5), 483. <https://doi.org/10.24843/EEB.2021.v10.i05.p05>
- Salima, W., Manja, L. P., Chiwaula, L. S., & Chirwa, G. C. (2023). The impact of credit access on household food security in Malawi. *Journal of Agriculture and Food Research*, 11(December 2022), 100490. <https://doi.org/10.1016/j.jafr.2022.100490>
- Sankar, S. (2022). *Food and Nutrition Security at Household Level*. <https://www.researchgate.net/publication/359207584>
- Santos, M. P., Brewer, J. D., Lopez, M. A., Soldan, V. A. P., & Chaparro, M. P. (2022). Determinants of food insecurity among households with children in Villa el Salvador , Lima , Peru : the role of gender and employment , a cross - sectional study. *BMC Public Health*, 1–8. <https://doi.org/10.1186/s12889-022-12889-4>
- Woleba, G., Tadiwos, T., Bojago, E., & Senapathy, M. (2023). Household food security, determinants and coping strategies among small-scale farmers in Kedida Gamela district, Southern Ethiopia. *Journal of Agriculture and Food Research*, 12(April), 100597. <https://doi.org/10.1016/j.jafr.2023.100597>
- Yazew, T., Daba, A., Hordofa, L., Garedew, G., Negash, A., Merga, G., & Bakala, T. (2023). Covid-19 related factors to food security and dietary diversity among urban households in western Oromia, Ethiopia. *Heliyon*, 9(3), 1–14. <https://doi.org/10.1016/j.heliyon.2023.e14476>
- Yovo, K., & Théodore, K. (2023). Assess the level and the determinants of household food security in Togo : The food expenditures approach. *Scientific African*, 20, e01685. <https://doi.org/10.1016/j.sciaf.2023.e01685>
- Zainuddin, A., Utami, R. A., & Novikarumsari, N. D. (2020). ANALISIS DETERMINAN TINGKAT PENGELUARAN KONSUMSI PANGAN DI JAWA TIMUR. *JSEP (Journal of Social and Agricultural Economics)*, 13(1), 92. <https://doi.org/10.19184/jsep.v13i1.17091>