

WELFARE ANALYSIS OF RICE FARMING BUSINESS AT KOTAR VILLAGE, HAMPARAN PERAK DISTRICT, DELI SERDANG REGENCY

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ABSTRACT

Welfare Analysis of Rice Farming in Kota Datar Village, Hamparan Perak District, Deli Serdang Regency. The problems in this research are broad land, production, price, education, power work, capital, policy government and technology are factors that affect the welfare of farmers. This study aims to analyze the factors that influence the welfare of farming in Kota Datar Village, Hamparan Perak District, Deli Serdang Regency. The data were processed using factor test analysis and then using multiple linear regression. The data obtained from distributing the questionnaires were processed using SPSS *software* Version 23.0 *For Windows*. The results showed that of the 8 variables analyzed with the analytical model factor consists from 3 factor that is factor price, factor production and factor land area. Based on multiple linear regression analysis, it shows that price, production and land area have a significant and significant effect on the welfare of farming in Kota Datar Village, Hamparan Perak District, Deli Regency Serdang.

Keywords: Price, Production, Land Area, Welfare

INTRODUCTION

Discussing progress, especially in agrarian countries, cannot be separated from the sector agriculture. Part big population in countries agrarian stay in rural area where part big for fulfil need daily from agricultural sector. Until now, Indonesia is still considered a strong country in the agricultural sector, it tends to be seen from the agricultural sector in terms of *Gross National Product* (GNP). The development of the agricultural sector itself has long been a stimulus for economic development that has the ability to overcome poverty, related to the cost of food prices, labor and the development of developed regions. Even so, one of the thorny problems in developing the agricultural sector is the capital limited.

Limited capital causes farmer activities not to run as expected, in fact without a rotation of economic policy, the process of collecting capital also cannot occur. Capital is very vital for farmers in increasing their agricultural yields, increasing production yields and meeting their daily needs. Capital is also expected to achieve normal results, with sufficient capital, the need for seeds, compost, and everything related to planting can be completed. Farmers also face a lot problem in produce ingredients food. Where moment this part Most of the farmers aged 60 or 70 years and those aged 30 and under have decreased due to their lack of desire to become farmer.

To see the welfare of farmers can be seen through indicators of income received by farmers. Income can be interpreted as income received which causes an increase in one's capacity, whether it is used for daily needs as well as regarding investment funds. There are many elements that influence well-being farmer paddy, including wide land. Breadth cultivated land greatly affects rice production, if production increases, life farmer also increase and well-being more equally (Trimukai, 2010). Rice production increases when the area owned by the farmer is wider and the income of the farmer is also increased increase.

Table 1. Rice harvested area by village in Hamparan Perak District (Ha)

Table 1. The harvested area by vinage in Framparati Frank Biother (Fra)					
Village/Kelurahan	Year				



	2016	2017	2018	2019	2020
Sign Upstream Two	293	100	326	326	326
Sign Upstream One	50	326	100	100	100
Paya Bakung	1306	1823	1823	1823	1823
Kelambir Five Villages	-	-	-	-	-
Kelambir Lima Gardens	8	125	4	4	4
Village Klumpang	-	50	-	-	-
Kebon Klumpang	-	-	-	-	-
Young Damn	-	-	-	-	-
Chinese Feather	1098	758	1495	1495	1495
Downstream Bundle One	162	1230	170	170	170
Bunch of Downstream Two	915	170	1230	1230	1230
Flat City	1233	1495	1333	1333	1333
Rantang City	603	1006	1006	1006	1006
Old Village	479	1333	758	758	758
Klambir	58	-	50	50	50
Selemak Village	-	4	-	-	-
Silver Expanse	115	-	125	125	125
Baru River	29	5	5	5	5
Paul Manan	698	898	898	898	898
Paluh Kurau	852	1682	1682	1682	1682

Source: BPS Subdistrict of Hamparan Perak in Figures, 2017-2021

In the table above, Paya Bakung Village has the largest rice harvest area, which is 1823 Ha in 2017-2020 when compared to other villages. Paluh Karau Village has the second largest area of 1682 Ha in 2017, while Kota Datar Village has the third largest harvest area that is wide 1495 Ha in year 2017. In year 2018 happening decline the harvested area of rice plants was 162 Ha or (10.83%) which was originally 1495 Ha to 1333 Ha in 2018.

Agricultural areas with the development of various food products to address public issues, have shown enormous commitment. Food needs will continue to increase in quantity, type and quality, in addition to population growth and quality of life in the local area. Very food production depends on wide area harvest. Commodity food paddy in Village City The data shows that the harvested area fluctuated during 2016-2020, but the fluctuations were small (not significant), so it can be stated that the figures are relatively permanent.

Staple food is food that is consumed in large portions, is a source of carbohydrates, has a neutral taste, is filling, and is obtained from local natural products. Apart from containing carbohydrates, staple foods are also foods that are commonly consumed and become a culture of eating in various ethnicities. The need for staple food in quantity and quality is very important as a reason for the progress of the Indonesian nation as a whole in the long term.

Rice is a food crop classified as annual crops or young plants, namely plants that are usually short-lived, less than one year and produce only one time, after one production they will die. grouped in two part that is: part vegetative and part generative.

Rice can grow well in hot climates and contains steam water. With say other paddy could grow in area climate hot which moist. The amount of rice production can affect the income factor. Land, capital, power work and management influence factor production. Land is the thing that Very urgent, could increase results production paddy compared with a factor



which other. Thing which need calculated in process production in sufficient quantities is the labor factor. The capital factor can shared into two, namely fixed capital and non-fixed capital. Fixed capital among them building land and machines. Whereas capital no permanent covers cost issued in the production process.

The fundamental problems faced by farmers are the lack of access to sources of capital, markets and technology, as well as weak farmer organizations. Participatory study of rural conditions is one of the stages in an effort to increase self-sufficiency, yields and people's welfare in their lives. A study of the rural situation is carried out to increase the ability and confidence of the community in identifying and analyzing their own situations, potentials and problems.

The reality on the ground is that there are still many poor farming communities. This is measured by the level of welfare which is still low. The inability of the farming community can also be seen from their income level, education level and health level, all of which have not reached the average, many of them are included in the poor category.

Results harvest farmer which no erratic will causing decline economic level. Most of the farmers who depend on the results of their lives harvest sometimes make income no stable. Results harvest which no good (harvest failure) often creates new problems that have a major impact on the survival of farmers. Therefore it is necessary to increase the welfare of farmers to deal with this problem the.

Table 2. Production of Paddy Plants by Village in Hamparan Perak District (Tons)

Village/Kelurahan	Year					
	2016	2017	2018	2019	2020	
Sign Upstream Two	1758	640	2086,4	2086,4	2086,4	
Sign Upstream One	310	2086	640	640	640	
Paya Bakung	9142	12241	12241,1	12241,1	12241,1	
Kelambir Five Villages	-	-	-	-	-	
Kelambir Lima Gardens	48	750	24	24	24	
Village Klumpang	-	300	-	-	-	
Kebon Klumpang	-	-	-	-	-	
Young Damn	-	-	-	-	-	
Chinese Feather	7027,20	4927	10016,5	10016,5	10016,5	
Downstream Bundle One	1036,80	8364	10880	10880	10880	
Bunch of Downstream Two	5673	10880	8364	8364	8364	
Flat City	7398	10016	8664.5	8664.5	8664.5	
Rantang City	4281.30	6481	6480.8	6480.8	6480.8	
Old Village	2969,80	8664	4927	4927	4927	
Klambir	359.60	-	300	300	300	
Selemak Village	-	24	-	-	-	
Silver Expanse	690	-	750	750	750	
Baru River	174	30	30	30	30	
Paul Manan	4467,20	5388	5388	5388	5388	
Paluh Kurau	5112	8410	8410	8410	8410	

Source: BPS Subdistrict of Hamparan Perak in Figures, 2017-2021

From the table above it can be seen that rice production in the Kota Datar Village, District Overlay Silver the movement relatively fluctuating. Amount production the highest paddy was in 2017 which was 10,016 tons while in 2018 is as big 8664.5 tons. From year 2017 to



2018 production paddy decreased by 1,351.5 tons. If seen from 2018 to 2019 rice production no experience increase nor decline that is a number 8664.5 tons.

Along with development economy agriculture this has experience period ups and down. Factors of production that are less than optimal raise farmers' income which in get no stable. If in see from year 2017-2018 wide land and rice production in Kota Datar Village is decreasing, this is caused by the large number of land conversions due to development housing area.

The price of rice continues to increase from year to year. The high price of rice was caused by the implementation of rice import policies. The concern is the low domestic rice, so the price of local rice will increase. The retail price of rice at the sub-district level, which was previously Rp 10,000 per kg, has increased to Rp 10,500 per kg which caused no exists harvest paddy, increasing price This rice is due to the high market demand because the stock in the market is empty. This is due to concerns among the authorities and importers to market rice import.

Rice import policies can result in a decrease in the selling price of rice. If the government does not import rice, it is likely that many people will find it difficult to buy rice with the high price of rice. The people want affordable (cheap) rice prices, but this is not in line with what is desired by rice farmers whose fate is always down. Farmers want optimal rice prices. The rice economy is likened to a saying that says it is like a simalakama fruit. The price of rice has gone up, the farmers are happy, but the people are suffering. The price of rice has fallen, the people are happy but the farmers are miserable. So with this, the government must be wiser in determining rice policies.

There are several factors that can affect the level of welfare of farmers, including land area, production, price, education, labor, capital, food security and technology. Usually, the budget for daily rice production costs incurred by farmers is related to the costs of buying seeds, fertilizer, plowing, planting fees, cleaning grass fees, and harvesting fees. Most farmers want profits from every process of the rice plant, to help the family economy. Sometimes they don't eat the rice they grow and prefer to buy raskin rice provided by the local government at very affordable prices.

In addition to the factors above, technology is also part of the factor that can save time and costs incurred by farmers in cultivating agricultural land. Buffaloes used as plowing technology require time and a lot of energy when compared to modern technologies such as tractors which are more effective and efficient. Threshing rice by slashing paddy need time which long if compared with the use of technology such as fast loss machines and does not use a lot of labor and costs a lot. Efforts to increase farmers' income through production factors do not only require technology but also must be accompanied by the development of a farmer's mindset, every human being has the skills, knowledge, *mindset* and creativity different.

LITERATURE E REVIEW

Well-being is defined as a condition in which a person is able to meet all needs and is able to have good relations with the surrounding environment. Welfare can be seen from several aspects, namely sufficient income, education and health that are fulfilled (Fahrudin, 2014). Welfare is a condition in which a person is safe, prosperous, safe from all kinds of problems or difficulties and so on (Adi, 2015). Disorders of this problem cover various aspects, namely health problems, educational disorders, work disorders and so on.



Land is part of an important production factor for farmers, in addition to capital and labor production factors, especially for farmers who only have one source of income, land is one of the factors of production that has an important role in the agricultural sector because land is where farmers produce products. According to Moehar in (Zulfitriani, 2016) land is land which used as effort agriculture, no all land is agricultural land but otherwise all agricultural land is land. Land and land Becomes element main in field agriculture this is because not all types of land can be used as a business agriculture.

In general, production is the process of producing goods or converting goods into goods that have use value by using production factors. Farmers are the driving force in the agricultural production process, in this case land, seeds and fertilizers are included in the inputs that are needed to produce output. Farmers here play a very important role in managing and carrying out efficient production at low costs and with the hope that the resulting production will get high profits. One of the production efforts is the decision of a producer to maximize production in order to get higher profits. In this case farmers usually face all kinds of obstacles or obstacles and difficulties in determining the amount of input to be produced (Onibala, Sondakh, Kaunang, & Mandei, 2017).

Price is one of the most important marketing mix variables in marketing management. Price is also one of the most flexible marketing mix variables. According to (Assauri, 2014) price is the only element of the *marketing mix* that generates sales revenue, while the other elements are only cost elements. Price according to Kotler and Armstrong is the amount of money billed for a product or service. Price is one of the elements of the marketing mix that generates revenue, while the other elements represent costs. Prices are flexible, meaning they can change quickly (Tumoka, 2013).

Education is all efforts that are deliberately planned to influence an individual, group or community so that they can follow what has been planned in accordance with the expectations of educators. Education is one of the phases of learning which means education is a process of growth and development of change towards a more mature, more mature mind in individuals, groups or society. According to (Marufah, 2020) education is one of the efforts to grow and increase potential both physically and spiritually according to the values that exist in society. The term education contains broad functions of maintaining and improving the life of a society, so education is a learning process which more wide from on process which only going on in In schools, education also means social activities that enable people to develop in a different environment complex. Labor is a very vital factor in production activities, because that power work is factor motor inputs which other, production no will be meaningless if there is no workforce owned. To increase production results, the labor productivity factor must be increased so that farmer income follows increase. Workers in farming have very different characteristics from workers in other non-agricultural businesses.

According to Bob Sadino in (Sembiring, 2018) capital formation can indeed come from within the company itself (internal funds) and from outside (external funds). The advantage of forming capital from internal funds is that the funds are free to use and are not obliged to return and pay flower. Whereas fund from outside (fund external) funds can be taken from various sources and the amount is also not limited. However, users of capital will be burdened with the obligation to repay debt plus the flowers. Capital is a factor of production. Capital is said to be *land saving capital* if with capital the could save use land. Capital is said to be *labor saving capital* if with this capital it can save the use of labor. In the activities of factors of production in agriculture, capital can be divided into two types, namely fixed capital and no capital permanent. Fixed capital is capital whose factors of production include buildings, machinery and land. Fixed capital can also be defined as costs incurred in the production process that are not used up in one production. While



variable capital is the cost incurred to buy seeds, fertilizers, medicines or to pay for the workers work.

Policy is an embodiment of action and is not merely a statement of the wishes of the government or public officials. In addition, the government's choice not to do something is also a public policy because it has the same influence (impact) as the government's choice to do something (Islamy, 2009). Government policy is a specific goal or a series of actions taken by the government in a certain period in relation to a subject or response to a crisis (Solichin, 2011). Government policies never arise in a special space. As Kraft and Furlong write, government policy is not made in a vacuum. Government policy is influenced by social and economic conditions, prevailing political values and the mood of the people at a time, government structures, and national and local cultural norms, are other variables (Nugroho, 2015).

In the development of human culture, from ancient times to ancient times man now, has happen a number of phase progress. Approaching At the beginning of the founding of ancient civilizations, people gathered and lived by moving from one place to the next. Food needs were met by gathering fruit, grain, or other agricultural products, or by catching animals. In this time of cultural transition and hunting, humans have become acquainted with what we know today as the technology of how to make weapons out of stone, this social era known as the old stone age (paleotic).

METHODS

This research approach is quantitative research which is research that aims to determine the relationship of two or more variables. In this research, a theory can be built that functions to explain, predict and control a symptom (Sugivono, 2016). This study discusses the welfare of rice farming in Kota Datar Village, Hamparan Perak District, Deli Serdang Regency with Confirmatory Factor Analysis including: land area, production, price, education, labor, capital, government policies and technology. The population is the total number of samples used in this study, namely rice farmers who are in Kota Datar Village, Hamparan District Silver Regency Deli Serdang which total the whole totaling 470 farmer. Technique taking sample in this study is the Nonprobably Sampling technique . Nonprobably Sampling is a sampling technique that does not provide equal opportunities for each element or member of the population to be selected. be a sample. In Nonprobably Sampling there are various ways of sampling, one of which is Accidential Sampling. Accidential Sampling is the selection of a sample from anyone who happens to be there or found by researcher in object study that is farmer which is at in Village Flat City Subdistrict Overlay Silver Regency Deli Serdang. People which Selected as a member of the sample is anyone who happens to be found or who is easy to find or reach without any consideration whatever. So that the sample in this study were 216 respondents. Data analysis using factor analysis.

RESULTS AND DISCUSSION

Results analysis on *Confirmatory Factor analysis* (CFA) show that of table *variances Explained* seen that only there is 3 factor which formed. Factor which originate from component 1 biggest that is price, component 2 biggest ie production and component 3 biggest that is wide land. Whereas research conducted by Anitha Irena Irnayati Asa (2021) states that the factors that affect welfare are land area and institutions which state that the higher the institutional value and the wider the land cultivated, the welfare will increase. Mellynia Rizky Haris Bahari Marpaung (2021) states that the factors which influence well-being is health that the more The better a person's health, the more his welfare will



increase. Gusti Ayu Radi Hartati et. al (2017) stated that the factors that affect the welfare of farmers are land area and capital. The results of his research stated that the wider the farming land, the higher the production yields so that it would also increase the income of farmers, then capital ownership is an absolute thing for a farmer, this is because agricultural business requires a lot of financing.

The results of this study are in line with research conducted by Mohammad Wahed (2018) which states that land area, production and prices have a significant influence on farmer welfare. The results of this study are in accordance with the theory put forward (Wiradi and Makali in Sofyan, 2009), the harvested area is one of the determinants in increasing the production of agricultural products so that it will increase welfare. The price of rice has a major influence on economic life. If the price of rice is low, the farmers' income will be low and they will become victims. If it is too expensive, consumers will become victims (Wahed, 2018:39). Rice production basically depends on the area harvested by considering that producer always attempted for reach profit maximum so that it automatically increases welfare (Vadimicum in Joko, 2011).

The results of the *Confirmatory Factor Analysis* (CFA) show that education is not a factor affecting farm welfare. The low level of education does not affect the level of income in increasing farming welfare. Education is related to level Skills and attitude a farmer which applied in world work. With higher education have more knowledge and attitudes good. However farmer which educated only until elementary school, JUNIOR HIGH SCHOOL, and SMA have not been able to master and develop technology regarding agriculture so that education is not a factor affecting welfare farming.

Farmers who have a higher level of formal or informal education have a broader understanding or insight, such as an understanding of the importance of the productivity of a farm. Awareness of the importance of productivity will encourage farmers to increase the amount of production produced so that it will have an impact on income levels or level well-being farmer (Mahendra in Nurhapsa, et. al, 2021).

The results of the *Confirmatory Factor Analysis* (CFA) show that labor is not a factor affecting the welfare of rice farming. Labor used in one harvest comes from the family and outside the family. This addition of labor does not affect the welfare of farming. Workers who come from families are not paid wages so labor costs are not counted. The results of the *Confirmatory Factor Analysis* (CFA) show that capital is not a factor affecting the welfare of rice farming. In addition, there are other factors, namely the low quality of labor in the area resulting in not maximizing productivity and contribution, which can lead to a decline in farming welfare.

The results of the *Confirmatory Factor Analysis* (CFA) show that capital is not a factor affecting the welfare of rice farming. This is because the average farmer uses capital from cooperative loans. Capital is expenditure that is used to purchase agricultural equipment, fertilizers and pesticides needed for the maintenance of rice production plants. This is the higher the capital issued by farmer so total income which be accepted farmer lower and reduce the level of welfare of farmers so that capital is not included in the factors that affect welfare farming.

The results of *Confirmatory Factor Analysis* (CFA) that the government policy no including factor which influence well-being rice farming. Whether or not there is a policy from the government is not a determinant of the welfare of farmers. In general, not all farmers feel or get it help agriculture as fertilizer, seed and tools agriculture and counseling provided by the government. However, the government has implemented policies to develop agricultural products, namely efforts to increase productivity and quality of agricultural



products through the provision of superior seeds, application of technology and supervision. However, this policy has not been successful because farmers have not been able to use technology in agricultural tools so they cannot be utilized and on finally policy government no is factors affecting well-being.

The results of the *Confirmatory Factor Analysis* (CFA) show that technology is not a factor affecting the welfare of rice farming. The dependence of farmers on traditional technology is very high, because the farming area is seasonal, so it requires traditional technology to carry out production activities. Advances in technology will tend to increase labor productivity. The use of modern technology can provide convenience to farmers in carrying out production activities. Technology is a factor production used in the process of production of agricultural crops. The use of technology in managing agricultural land can make it easier for farmers to manage agricultural land. Then the use of technology can help farmers save time and energy used in managing agricultural land. However, the high cost of buying modern technological equipment will reduce the income received from rice farming, so that technology is not a factor that affects the welfare of farming, paddy.

CONCLUSION

Based on the analysis and discussion of data regarding the welfare analysis of rice farming in Kota Datar Village, Hamparan Perak District, Deli Serdang Regency, the following conclusions can be drawn:

- 1. In the CFA test, it is known that of the eight factors, there are three factors that are feasible to influence the welfare of PDI farming, namely price, production and area. land.
- 2. Results test regression linear double show if happen enhancement price, the welfare of farming will increase, if there is an increase in the amount of rice production, the welfare of farming will increase and if the addition of land area occurs, the welfare of farming will increase. Results test hypothesis Partial show price, production and Land area has a significant effect on the welfare of rice farming in Kota Datar Village, Hamparan Perak District, Deli Serdang Regency. Getting taller price sell paddy, enhancement total results production and increasing area land which done will increase well-being farming. Vice versa if the price decreases, the amount of production decreases and the land area is narrow, the welfare of rice farming low.

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REFERENCES

Adi, I. R. (2015). Kesejahteraan Sosial. Jakarta: RajaGrafindo Persada.

Ali, F., & Alam, S. (2012). Study Kebijakan Pemerintahan. Bandung: Refika Aditama.

Arifin , Z., & Setiyawan, A. (2012). *Pengembangan Pembelajaran Aktif Dengan ICT.* Yogyakarta: T. Skripta Media Creative.

Assauri, S. (2014). Manajemen Pemasaran. Jakarta: Raja Grafindo Persada.

Fahrudin, A. (2014). *Pengantar Kesejahteraan Sosial.* Bandung: Rafika Aditama. Ghozali, I. (2018). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 25.* Semarang: Badan Penerbit Universitas Diponegoro.



- Islamy, M. I. (2009). *Prinsip-prinsip Perumusan Kebijaksanaan Negara.* Jakarta: Bumi Aksara.
- Marufah, A. (2020). Analisis Pemahaman Petani Tembakau Terhadap Kebijakan Cukai Rokok (Studi Empris Petani Tembakau di Dusun Gayam). Ponorogo: Fakultas Ekonomi.
- Nugroho, R. (2015). Public Policy. Jakarta: Elek Media Komptindo.
- Onibala, A. G., Sondakh, M. L., Kaunang, R., & Mandei, J. (2017). *Analisis Faktor- Faktor Yang Mempengaruhi Produksi Sawah di Kelurahan Koya Kecamatan Tondano Selatan*. Agri-SosioEkonomi Unsrat, 237 242.
- Putri, I. C. (2013). *Analisis Pendapatan Petani Kakao di Kabupaten Parigi- Moutong.*Jurnal EMBA, 2195-2205
- Ritohardoyo, S. (2013). Penggunaan Dan Tata Guna Lahan. Yogyakarta: Ombak.
- Rusiadi, Subiantoro, N., & Hidayat, R. (2013). *Metode Penelitian Manajemen, Akuntansi Dan Ekonomi Pembangunan Konsep Kasus Dan Aplikasi Spss, Eviews, Amos Dan Lisrel.* Medan: Usu Press.
- Sarwono, J. (2012). Metode Riset Skripsi Pendekatan Kuantitatif Menggunakan Prosedur SPSS (Edisi Pertama). Jakarta: Elex Media Komputindo.
- Sasana, H. (2009). Peran Desentralisasi Fiskal Terhadap Kinerja Ekonomi Di Kabupaten/Kota Provinsi Jawa Tengah. Jurnal Ekonomi Pembangunan, 103-124.
- Sembiring, P. D. (2018). Analisis Faktor-Faktor Yang Mempengaruhi Kesejahteraan Petani Padi Sawah di Kecamatan Tiganderket. Medan: Fakultas Ekonomi dan Bisnis Universitas Sumatera Utara.
- Solichin, A. W. (2011). Analisis Kebijaksanaan, dari Formulasi Ke Implementasi Kebiajaksanaan Negara. Jakarta: Bumi Aksara.
- Sugiyono. (2016). Metode Penelitian Kuantitatif, Kualitatif dan R&D. Bandung: Alfabeta.
- Sugiyono. (2018). Metode Penelitian Kombinasi (Mixed Methods). Bandung: Alfabeta.
- Suharto. (2012). Membangun Masyarakat Memberdayakan Rakyat (Kajian Strategis Pembangunan Kesejahteraan Sosial & Pekerjaan Sosial). Bandung: Refika Aditama.
- Suharto, E. (2017). *Membangun Masyarakat Memberdayakan Rakyat.* Bandung: Refika Aditama.
- Syukur, F. (2008). *Teknologi Pendidikan*. Semarang: Rasai Media Group. Tumoka, N. (2013). *Analisis Pendapatan Usatani Tomat di Kecamatan Kawangkoan Barat Kabupaten Minahasa*. Jurnal EMBA. 345-354.
- Tupi, R. D. (2016). Evaluasi Kesesuaian Lahan dan Keunggulan Wilayah Untuk Pengembangan Kacang Tanah (Arachis Hypogeae L) di Kabuapten Gorontalo Utara. Gorontalo: Universitas Negeri Gorontalo.



Zulfitriani, E. (2016). *Analisis Faktor-Faktor Yang Mempengaruhi Pendapatan Petani Jagung di Kecamatan STM Hulu kabupaten Deli Serdang*. Medan: Fakultas Matematika dan Ilmu Pengetahuan Alam.