

## Analysis of Agricultural Sector as a Leading Sector in the Regency of Timor Tengah Utara

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**Abstract:** Agricultural sector is capable to give important contribution in the establishment of Product Domestic Regional Bruto (PDRB) and economic growth in the Regency of Timor Tengah Utara. Various efforts have been done by regional government aims to push the growth of agricultural sector. Obvious steps by regional government of Timor Tengah Utara are through the program of Food Labor Intensive which encourages agricultural extensification by expanding agricultural land and increasing production capacity of crops. This research was conducted in the Regency of Timor Tengah Utara. Data analysis being used was Location Quotient (LQ), Dynamic Location Quotient (DLQ) and Structural Equation Modeling-Partial Least Square (SEM-PLS). Result of data analysis found out that agricultural sector was a basis sector which able to push the growth of other sectors through the establishment of PDRB. However, the growth rate of agricultural sector as a basis sector turned out to experience a decline. The decline of agricultural sector as a basis sector was due to the factor of land area of leading agricultural crops which had shifted its function to become a residential area, traditional agricultural pattern, population urbanization to the cities to search for another jobs, young generation was not interested to enter agricultural sector. In addition, it was found that there was a positive value of direct relationship of crops product toward Product Domestic Regional Bruto and economic growth.

**Key words:** Crops, PDRB, Economic growth.

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### I. Introduction

Agricultural sector in the Regency of Timor Tengah Utara has succeeded to give important contribution in the establishment of Product Domestic Regional Bruto and economic growth. However, even though the importance of this sector, its growth is related with the growth of other sectors. As stated by Winoto (1996), agricultural economic development was said to be successful if the role of manufacture industrial sector was constantly increasing from time to time, both in production structure or in Gross Domestic Product.

Various efforts have been carried out by regional government with regulation and other approach aims to encourage the growth of agricultural sector. Obvious step by regional government of Timor Tengah Utara is through the program of Food Labor Intensive (PKP) which pushes for agricultural extensification by encouraging the expansion of agricultural land and multiplying the production of crops. Similarly, intensification approach is constantly encouraged by preparing farmer resources through trainings, preparing superior seeds, availability of seeds with affordable price and so on.

Real effort by government and participation of non-governmental organizations and public, agricultural sector is able to give positive contribution in the establishment of Product Domestic Regional Bruto and economic growth in the regency of Timor Tengah Utara. At a glance, the growth can be seen in the following table:

**Table.** Economic Growth, PDRB, Income Per Capita

Year	Economic Growth (%)	PDRB (ADHB) (millions)	PDRB ADHK (millions)	Income Per Capita (Rp)
2010	4,65	934.000	488.474	3.826.248
2011	4,76	1.040.969	511.716	4.157.421
2012	4,92	1.163.270,02	536.894,48	4.701.140
2013	4,52	1.277.858,47	561.160,49	5.102.200
2014	4,55	1.420.366,42	586.693,47	5.567.626

The role of relatively big crops agriculture is due to condition in the Regency of Timor Tengah Utara which is potential to develop the commodity of crops. Production of crops spreads all over the region and is adjusted with condition of climate, soil structure and topography. Production of rice and corn are still the main products and gives quite big contribution on crops production in the regency of Timor Tengah Utara. Production of soybeans is the least contribution of total production of crops and tends not to increase. In spite of this, efforts by regional government and all concerned stockholders keep pushing for the increase of production capacity of crops.

## **II. Theoretical Review**

### **2.1. Agriculture**

Agricultural sector is the source for food stock and raw material required. Agricultural sector can provide factors needed for expansion of other sectors especially industrial sector. Agricultural sector is to fulfill the needs and improve the life of family and society. TotokMardikanto (2007) stated that:

- a. Production improvement, through intensification or productivity increase by adding input of business units, and expansion of area or business scale.
- b. Diversification or business variety, either horizontal diversification or addition of business or commodity diversity, as well as vertical diversification namely product diversity from the same commodity.
- c. Business efficiency, namely income and profit improvement with or without addition of production cost. Efficiency did not always mean saving, but it could be done by adding the cost as long as the increase of income or profit was still greater than cost increase.
- d. Quality improvement or product added value, through standardization and grouping or selection (sorting), processing, packing and branding.
- e. Waste processing, namely waste utilization to become useful products (biogas, compos, enzyme, effective microorganism, and so on).
- f. Rehabilitation and conservation of natural resources and environment, through vegetative activities and construction of conservation buildings.

### **2.2. Theory of Economic Development**

Agricultural development aims to improve the quality outcome of the community, to increase the income and living standard of farmers, expansion of employment and business opportunity, sustaining the development of Indonesia and increasing the export. According to Todaro (2003), an energy of economic development based on the priority of agriculture and manpower needed three basic complementary elements, namely:

- a. Acceleration of output growth through a series of technology, institutional and price intensive adjustment which specifically designed to increase the productivity of farmers;
- b. The increase of domestic demand toward agricultural output which based on urban development strategy with orientation toward manpower management effort, and;
- c. Diversification of rural management activities on the non-agricultural work which directly and indirectly would sustain and being sustained by agricultural society.

### **2.3. Regional Economic Development**

Regional economic development is a process in which regional government and community manage existing resources and form partnership pattern between regional government and private sectors to create new employment and stimulate the development of economic activities within the region. There are four roles performed by regional government in regional economic development according to Arsyat (1999) namely, entrepreneur, coordinator, facilitator, and simulator.

### **2.4. Theory of Location**

The theory states that location has an effect on regional growth particularly when associated with industrial area development. The right location selection as to maximize its chance to approach the market will be likely chosen by companies since it can minimize the cost.

### **2.5. Development of Leading Sector as Regional Development Strategy**

According to Arsyad (1999:108), basic problem in regional development lied on emphasis of development policies on the basis of distinctive nature of related region (endogenous development) by using human resource potential. This orientation led to initiatives taken which originated from that region in development process to create new employment opportunities and stimulated economic improvement.

### **2.6. Theory of Basis Economy**

To support a region, then it needs to encourage the growth of basis sector, since the growth of basis sector will encourage the growth of other sectors that is non-basis sector. For a specific region, then basis sector is a sector which sells its products outside of the region as well as activities which bring money from outside area. However, if an activity wants to be developed massively, then it needs to be seen whether outside market is still capable to accept expansion of their basis products (Robinson, 2002).

### **2.7. Relationship between Agricultural Development and Economic Growth**

Economic growth strategy which being driven by agricultural sector and employment according to Mellor (1987) had three elements. First, agricultural growth rate should be accelerated although available land area was constant. With technology advancement in agriculture then the problem would be overcome. Second, domestic demand on agricultural output should grow fast although the demand was not elastic. Third, demand on goods and services raised by low capital intensive processes should be increased. The three elements referred were continuously and mutually interacting to synergize so that economic growth strategy on the basis of agriculture would reach the objectives and goals.

## **III. Research Methodology**

### **3.1. Research Methodology**

Basic method being used in this research is descriptive method, namely a method which focuses on problem solving exists in present time actually and later data is collected, arranged, described, and analyzed (Surakhmad, 1994).

**3.2. Data Sampling Method**

1. Setting of Research Area

Research area was taken purposefully which based on certain considerations in accordance with the objective of research. This research was conducted at several districts in the Regency of Timor Tengah Utara.

2. Type and Source of Data

The method being used in this research was secondary method which being obtained directly from Statistical Center Agency of Timor Tengah Utara Regency. This data was in the form of Product Domestic Regional Bruto of Timor Tengah Utara Regency and Product Domestic Regional Bruto of the Province of Nusa Tenggara Timur as well as other data which still related with the objective of this research.

**3.3. Data Analysis Method**

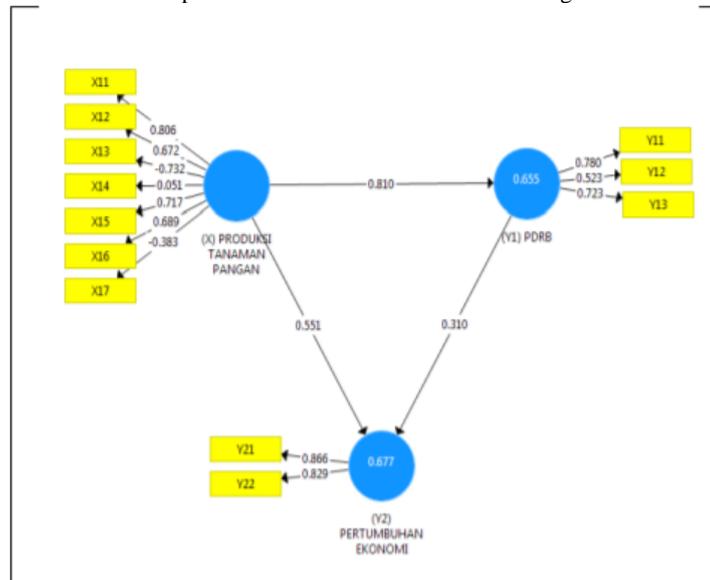
Analysis methods being used in this research are:

1. Analysis of Location Quotient (LQ).
2. Analysis of Dynamic Location Quotient (DLQ).
3. Smart PLS.

**IV. Discussion**

**4.1. The Role of Agriculture as a Leading Commodity**

Test results Outer model with the program SmartPLS 3.0 (Algorithm)  
Report Path Coefficient dan Outer Loading



Information:

- X11 : Rice plants
- X12 : Corn
- X13 : Cassava
- X14 : Sweet potato
- X15 : Peanuts
- X16 : Green beans
- X17 : Soybeans
- Y11 : Primary Sector
- Y12 : Secondary Sector
- Y13 : Tertiary Sector
- Y21 : Real regional income
- Y22 : Real income per capita
- X1 : Production of Food Crops
- Y1 : PDRB
- Y2 : Economic Growth Rate

Agriculture is a basis sector to encourage the growth of other sectors. Agricultural sector is a sector which has strategic role in economic development structure in the region of Timor Tengah Utara Regency. This sector gets a serious attention by the government of Timor Tengah Utara regency with program based on society namely Food Labor Intensive program. The main reason for the launching of this program by the government of Timor Tengah Utara regency is because it is a source of income for basic needs on clothing and food, biggest provider of employment and able to give dominant contribution on the establishment of Product Domestic Regional Bruto in Timor Tengah Utara regency.

To see the growth of agricultural sector, LQ approach is used. Calculation result shows that the growth of agricultural sector is 1.77 times greater than LQ. It shows that agricultural sector is a basis sector which capable to push the

growth of other sectors through the establishment of PDRB. Meanwhile growth rate of agricultural sector as a basis sector turns out to be decreased by 0.93. It shows that although as a basis sector but its growth is declining from time to time.

Result of research shows that declining of agricultural sector as a basis sector is due to land area of leading agricultural factor which shifting its function as residential area, agricultural pattern is still traditional with cutting and burning approach, urbanization to cities to search for another job, young generation psyche who interprets agricultural sector as a conventional job and lies in low strata.

#### **4.2. The Role of Agricultural Sector toward PDRB and Economic Growth**

Direct effect of crops production (X1) toward Product Domestic Regional Bruto of Timor Tengah Utara regency is positive (0.810). It shows that the role of agriculture on the establishment of Product Domestic Regional Bruto is very important and gives significant contribution on the Product Domestic Regional Bruto increase particularly in primary sector (agricultural sector and three other sectors). Similarly toward economic growth, the role of crops production gives positive effect (0.551) toward economic growth in Timor Tengah Utara regency.

Analysis result of smart PLS is clearly seen that agricultural sector which gives positive impact and meets the requirement in crops production is production of rice (0.806), peanuts at 0.717, green beans at 0.689 and corn at 0.672. It illustrates that those four sectors are leading sectors in crops production in Timor Tengah Utara regency. Therefore, government attention toward other sectors which in average are below 0.5 (cassava, sweet potato, soybeans) required extra government attention with various approaches and real program in order to be able to give positive value toward the improvement of crops production in Timor Tengah Utara regency.

In spite of this positive trend of crops production toward establishment of Product Domestic Regional Bruto but primary sector which dominated by contribution from agricultural sector still experiencing increasingly declining growth (diminishing of return). Many factors lead to the decline of primary sector. The main cause is external factors which is natural (prolonged dry season, critical soil, rocks structure and so on) and internal factors such as availability of skillful human resources, traditional agricultural pattern with cutting and burning approach, still many wastelands have not been managed well, and so on.

In general it shows that agricultural production and Product Domestic Regional Bruto is capable to give positive result toward economic growth in Timor Tengah Utara regency. Construct relationship between crops production and Product Domestic Regional Bruto give contribution on economic growth in Timor Tengah Utara regency.

R square value is at 0.655 (from flowchart) or 0.598 (from text output). This value has the meaning that the amount of latent variable effect of crops production (X) with its seven indicators toward latent variable of Product Domestic Regional Bruto (Y1) is at 0.655. It interprets that Product Domestic Regional Bruto construct is described by crops production by 0.65 percent and the rest of 0.35 percent is described by other variable outside of the model.

Meanwhile the value of R square at 0.677 has the meaning that the amount of latent variable effect of crops production (X) with its seven indicators toward latent variable of economic growth (Y2) is at 0.677. It interprets that economic growth is described by construct of crops production and PDRB by 0.67 percent and the rest of 0.33 percent is described by other variable outside of observation or model.

From path coefficient value is clearly seen that variable of crops production (X) has positive effect toward PDRB and economic growth. It can be seen in relationship between Product Domestic Regional Bruto and economic growth in Timor Tengah Utara regency.

## **V. Closing Chapter**

### **5.1. Conclusion**

Based on data analysis and discussion, then conclusion can be drawn as follows:

1. Agricultural sector is a basis sector and capable to give positive contribution toward economic development in Timor Tengah Utara regency. It can be seen in data model analysis by using Location Quotient (LQ). The result shows that agricultural sector is a basis sector which able to give support to other sectors.
2. The growth of agricultural sector gives positive contribution on economic development but its growth rate experiencing a decline over time.
3. Expectation of economic growth especially from agricultural sector within five (5) years ahead will still dominate the establishment of Product Domestic Regional Bruto and economic growth. But from data analysis using smart PLS, it finds positive value of direct relationship of crops product toward Product Domestic Regional Bruto and economic growth.

### **5.2. Suggestion**

1. Agricultural sector continues to serve as basis sector of Product Domestic Regional Bruto establishment and economic growth, but it needs extra attention from government and all concerned stockholders since contribution of that sector experiencing a decline (diminishing of return).
2. Other sectors which still unable to give big contribution, it needs extra attention in order to create positive trend. It is because agricultural as basis sector slowly experiencing a decline due to various problems, both internal and external.

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