

Identification The Effect Of The Existence Of Campus Institut Teknologi Sumatera In The Land Use Changes And Prices In The Surrounding Area

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Abstract

This research identifies the presence of Institut Teknologi Sumatera in altering the land use of the surrounding area. The very rapidly changes around the campus ITERA is altering the land use at present. It is because of the need for the land in order to meet the needs of ITERA's students who come from outside the regions. These needs can be seen in the form of land use changes from agriculture, plantation, and vacant land into rented house, food stalls, and photocopy services as a provider of facilities for students ITERA. The data were collected through questionnaires, as well as interviews with stakeholders and community members in the ITERA campus' neighborhood. The analytical method adopted in this research is geographic information systems to describe a changes in altering the land use and prices. In addition this research explain how the alter land use are happening. The findings suggest that the presence of Institut Teknologi Sumatera, to some degree, has influenced how the land is being managed in the surrounding area and the price of the land.

Keywords: *land use changes, land price, Institut Teknologi Sumatera, geographic information system*

I. Introduction

The slow pace of technological development in Indonesia, making the government build and develop The State Institutions which focus on technology. In this case, the government sought to build technology-based universities outside Java so that the spread of science and technology can be evenly distributed throughout the territory of Indonesia. With the establishment of campus facility automatically affect the various aspects of the social, cultural, and economic including the land use changes in the surrounding area [6]. For instance, argues that the higher education academia (faculty member, student and employee) affects the local traders and service provider income pattern surrounded Universitas Padjajaran, Jatinangor [6]. Visible changes that have been seen very rapidly around the campus ITERA is a change in land use because of the need for land in order to meet the needs of the students ITERA who came from all regions. Visible changes that have been seen very rapidly around the campus ITERA is a change in land use because of the need for land in order to meet the needs of the students ITERA who came from all regions.

These needs can be seen from changes in the form of land use from agriculture, plantation, and vacant land into settlements, dormitory, food stalls, photocopy services and others that meet the needs of the ITERA's students.

As the result, an increase in the price of land around ITERA and will impact the change of land use in the vicinity. The dynamic development led to increasing demand progressively for land while the land itself is fixed. This resulted in the need for analysis of the change order and the price of land around the ITERA area to identify how much it has influence the land-use changing and prices.

With the existence of Campus ITERA since 2014, has triggered a change in land use and land prices. Changes in land use is a new use of the land with different form from the previous land use. This is consistent with the statement by [2], the general land use change involves a transformation in the allocation of land resources from one use to another use. ITERA trigger their campus externality activities according to a statement by [3], educational facility as an engine for economic growth and development of the surrounding communities.

The research is held in in the area closest to ITERA (the red colored zone in figure 1), which are Kelurahan Korpri Jaya, Kelurahan Korpri Raya, Desa Way Huwi, dan Desa Sabah Balau.

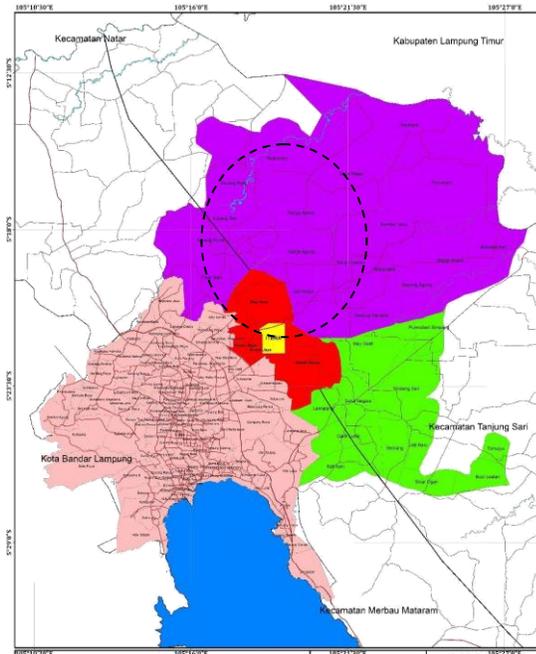


Figure 1. The Research Area

II. Research Methods

Methods of data collection in this study consists of a method of collecting primary data and secondary data. Primary data is received through questionnaires and interviews with questionnaires determination using purposive sampling method.

The data used is data from 2006 until 2016, to see the change order and the price of land before and after ITERA established and see how big its impact to the land use changes and land price around the research area.

The methods used in data collection are as follows:

1. Mapping Technique
2. Technical Documentation
3. Observation Technique
4. Interview Techniques
5. Questionnaire

III. Result and Discussion

To accommodate community needs, the availability of land play the significant role as a place for the activity. According to [13] of land use changes may occur if any changes or differences in the value of the land use before and after economic stakes are higher than ever before. One driving force is the increase in population and other activities. This is particularly happened in the area around campus ITERA. With the establishment of ITERA campus in the suburban city of Bandar Lampung has led to changes in land use around campus.

According RTRW South Lampung regency, Jati Agung sub district is designed for the use of plantations, fisheries, urban settlements, governance, land and security, as well as the designation of production forests.

From the analysis, it is illustrated in Figure 2 below. It was found that the change between the years 2011/2011 to 2012 are very large, due to the construction of Campus ITERA. Originally ITERA land whose use as a rubber plantation PTPN V11 turned into land for educational facilities that have been purchased by the Government of Lampung for granted as ITERA Campus with area of 285 ha.

Table 1 Land Use Changes in the Year of 2011 to 2016

Land Use	Housing Area	Paddy Field	Plantation	
Changes area	14.63 Ha	-15.99 Ha	-290.12 Ha	
Changes Percentage	3.28%	-4.25%	-36.5%	

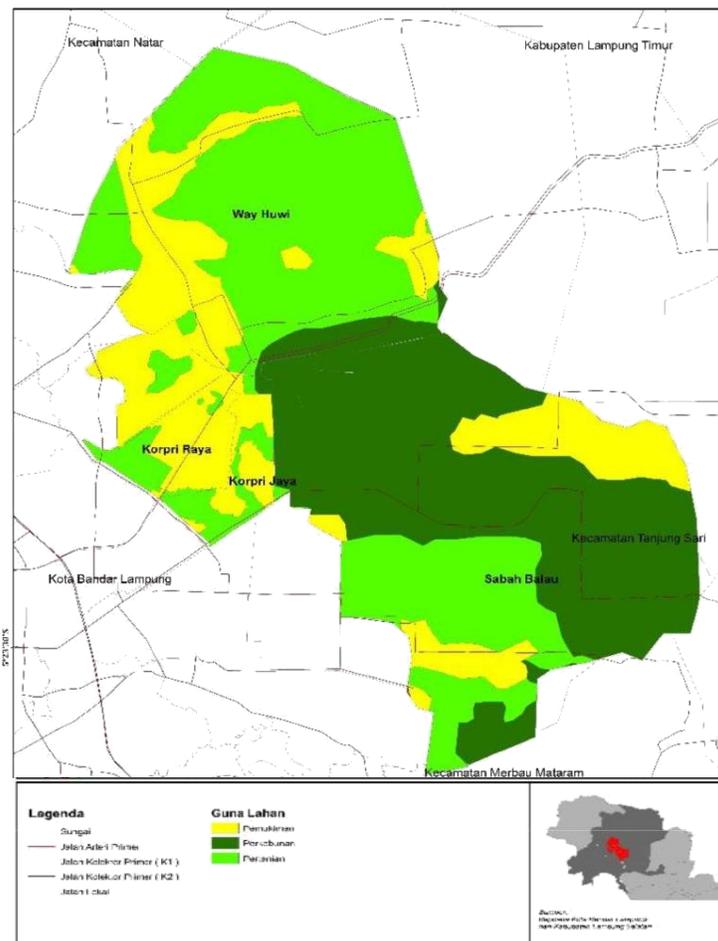


Figure 2. Land Use Map for the Year of 2011

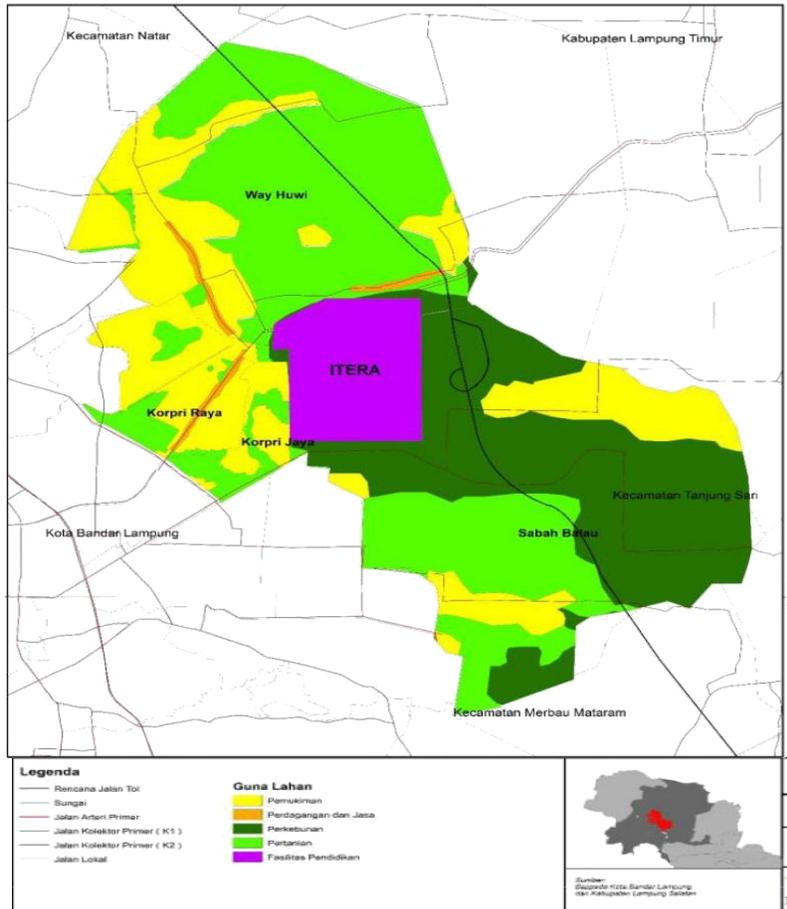


Figure 3. Land Use Map for the Year of 2016

The development between 2016 and 2011 shows that changes around campus ITERA is not too significant because the location is somewhat on the outskirts of town, so an increase in the activities of community activity is not too sharp. However, the activities growth variously since ITERA building exist, for examples, trade and services around campus, food stalls, photocopy, laundry, shop. As the result of the campus establishment, the surrounding communities begin to switch the function of a private home into a rental house and build a boarding house for the purposes of a student residence and development to support the campus activities, such as a dining area, laundry, and a photo copy. In addition to changes in land use, people also experience a change in their mindset towards more open and more forward to accept the construction of ITERA [13].

Next, the changes in the price of land around the area of campus ITERA, between the years of 2006, 2011, and 2016.

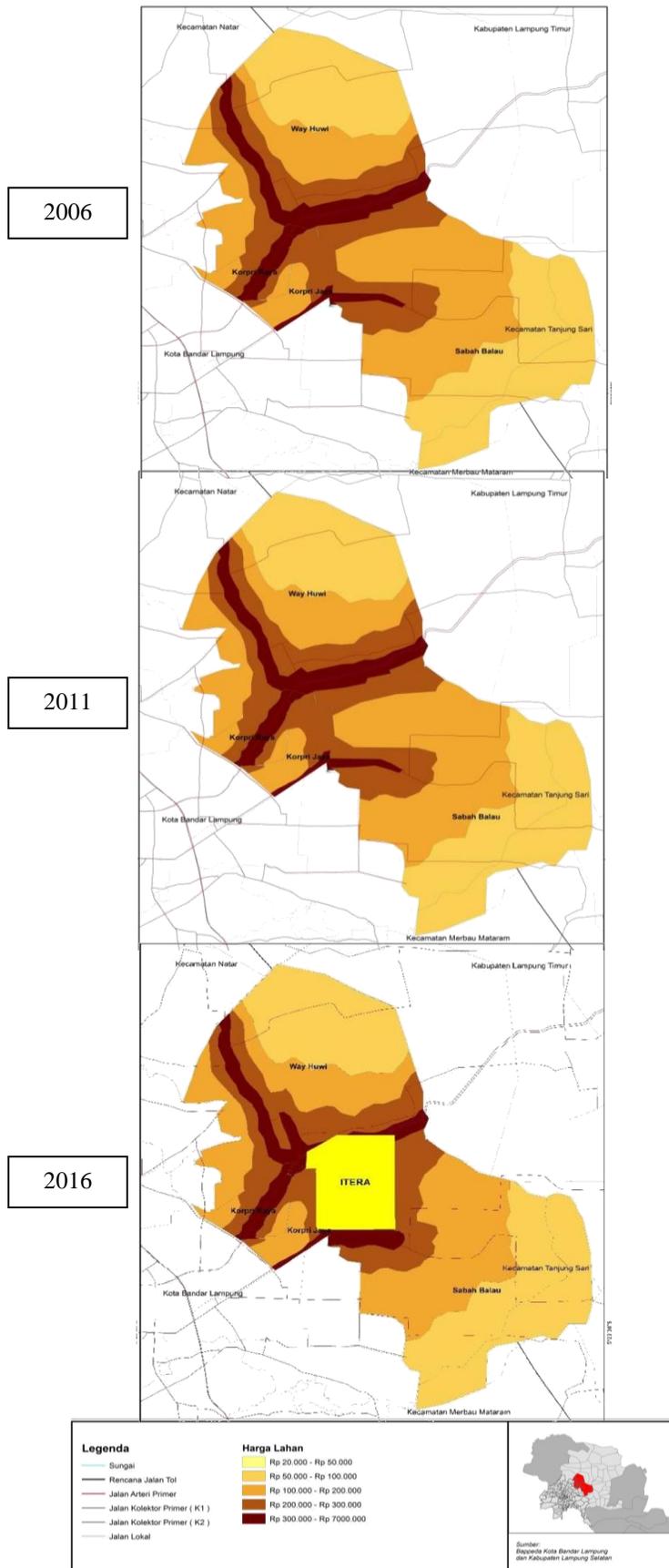


Figure 4. Land Price of Study Area (in 2006, 2011, & 2016)

Based on the analysis, it is found that in 2006 to 2011 and from 2011 to 2016 there was an increase in land prices in the area around the campus ITERA. Land prices is higher if it is located in a side street and closer to campus ITERA while prices decrease if the land is far from the main road and Campus ITERA. The analysis showed that changes in land prices from 2006 to 2011 amounted between 100%-200%, while in 2011 to 2016 changes in the price of land is significantly increase around 200%-600%. This is because of the construction of the Campus ITERA in the late 2012 has made the price of land in the surrounding area to be increased tremendously.

It can be said that the pattern of land prices around campus ITERA from year to year is increasing, especially the land price where located closer to the campus. Moreover, the highest price of land are located along Ryacudu Street. The pattern of land prices occurred is accordance with the theory of location proposed by Von Thunen, who said that land prices will increase when getting close to the town center or center of activity (in this case is the central campus ITERA). Land prices will also increase when approaching the main road and will decrease when away from the main road (in this case is Ryacudu Street).

IV. Conclusion and Recommendation

Changes in land use that occurred around the study area of agricultural land from 2011 to 2016 amounted to -4.2%. Changes in land use that occurred in the study area of land settlements from 2011 to 2016 by 3.2%. Changes in land use, the largest in the study area of plantations from 2011 to 2016 amounted to - 36%. The pattern of changes in land use around the locations of the campus residential land, vacant land, farms, and plantations form the undeveloped land for economic activities. Such as boarding, food stalls, shops, photocopy, laundry. Village KORPRI Raya has the highest land prices, followed by KORPRI Jaya Village, Village Way Huwi, and the village of Balau Sabah.

Furthermore, the pattern of land prices will increase when getting close to Campus ITERA and the main street. Based on the survey results and analysis has been done, it can be deduced that there is a link between the presence of the Institut Teknologi Sumatra to the land use changes and the increasing of land price in the surrounding region. Changes in land use that occurred around the Campus construction site triggers a change in land use in the vicinity too. Land use changes in the year 2006 to 2011 was not significantly change, still dominated by rubber plantations and rice fields, as well as the settlement followed. Changes in land use in 2011 to 2016 considerable changes in the use of farm land due to land conversion to be ITERA Campus. There are changes in the function of settlements into the economic activities, such as boarding house, house rent, food stalls, shops, photocopy shops, and laundry. Changes in the price of land around campus ITERA in 2006 to the year 2011 amounted to 100%-200%, while in 2011 to 2016 was very significantly increased for about 200%-600%. This is because of the demand for land around the campus is quite large which is mainly used for economic activity as well as a student residence.

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