Sultan Ageng Tirtayasa University and Its Impact on Social Economy

Sugeng Setiyadi[1]✉ , [2]Deris Desmawan, [3]Rizal Sayfudin, [4]Anita Widiastuti
Sultan Ageng Tirtayasa University

Article Information	Abstract
	The purpose of this research is to analize the impact of Sultan Ageng Tirtayasa University (Untirta) as one of the State Universities in Banten to social economy impact which is proxied by human development index and economy growth in Serang City. Generally, there are two subtansial problems. First, the impact of the existence of the Untirta campus has not much impact to the human development index Serang City. Second, the relationship between educational sector and economic growth rate requires to further study. This research uses Ordinary Less Square regression and Input-Output Analysis. According to the results of several regression models, there are consistent influence of government investment and student graduated of Sultan Ageng Tirtayasa University which lead to an increase in human development index of Serang City. Meanwhile, according to another regression model, investment has not significant influence to local economy growth. However, the student graduated of Sultan Ageng Tirtayasa University has positive relationship and significant to influence the local economy growth. Furthermore, Input-Output Analysis is an equilibrium model, where Sultan Ageng Tirtayasa University as services provide on the education sector. Education sector has ability to increase industrial growth upstream (backward linkage) and encourage the production of other sectors that use inputs from the education service sector.

⧉ Corresponding author :
 Address: Universitas Sultan Ageng Tirtayasa
 E-mail: sugeng.setyadi@untirta.ac.id

INTRODUCTION

The aims of this research are to analize the role of society around Untirta campus in order to manage the informal sectors, identify and analyse any factors that lead society economic around Untirta campus, and analyse the impac of Untirta campus to the economy of surrounding society. University has a key role in regional development. In realizing inclusive and sustainable development, the aspect that must be encouraged is human development to produce a productive workforce to integrate economic development and economic structures that can be enjoyed by all levels of society. This position is promoted by higher education as a place to educate human resources with the ability and efficiency. Globalization has created several challenges for higher education, especially in developing countries (Lambert, Hogan and Barton, 2003).

In Permenristekdikti of the Republic of Indonesia Number 13 of 2015, the strategic goal that the Ministry of Research and Technology wants to achieve for higher education in realizing the vision and motivation of the Ministry of Research, Technology and Higher Education is "increasing the relevance, quantity and quality of highly educated human resources, as well as the ability of science and technology and innovation for competitive advantage". The existence of the education area as a public facility and as a producer (service center for needs) will affect the concentration of the population as consumers. So that its existence will affect the development and development of the area. The influence exerted from its existence is not only on social factors, it is even one of the factors generating the region's economy and helping its physical and environmental development, but this influence can be positive or negative (Rawn, 1999).

Calder and Greenstain (2001) view the education area as an engine for economic growth and the development of the surrounding community. The existence of an education area will influence the construction of supporting facilities. According to (Sulistiawan and Dewi,

2014), one of the activities of the influence of higher education is the construction of boarding houses around the college campus location, making business owners take the initiative to build businesses for the daily needs of students, especially those who live around the college. The trading activities shown for students are daily necessities such as shops, restaurants, etc. which are located close to boarding houses. On the other hand (Bob Morgan, 2002) studied the position of the role of universities in economic development using the elite model and the outreach / diffusion model. In Wales, this model focuses on the bonds of several themes, namely skill formation and social reproduction, predictions of globalization, social capital development and social spending. Meanwhile, the elite model focuses on technology change and knowledge-based competency levels that are adaptable and sustainable at local, regional, and national levels.

According to the book of Development Master Plan 2001-2025 (Untirta, 2015) Untirta has three campuses. The first campus is located in Pakupatan, Serang City with total area as many as 2.7 Ha and the second campus in Krakatau Industrial Area, Cilegon City with total area as 6.7 Ha. The third campus is in Ciwaru, Serang City and the newest campus in Sindang Sari, Serang Regency with total area as many as 26 Ha.

The construction of a new campus in Sindang Sari can create various opportunities and job opportunities, with the presence of new jobs it can increase economic activity and can support the growth of other sectors. The growth of higher education in an area can provide potential if it is managed properly, it can be a significant source of regional income as well as a driving force for the regional economy. There is a multiplier effect from the campus to the surrounding area, in addition to profitable business opportunities as well as prestige if you have quality higher education (Bromley in Harris and Ernawati, 2015).

In addition to the increasing human population, the development of the area in Sindang Sari can generate new land uses that are

used as facilities to support the campus existence. Higher education as a funded investment can function as a developmental pole that causes a multiplier effect on the surrounding area. As an educational institution, campus is a large community that has a need for goods and services to support all its activities (Wahyuni, 2002). The influence of campus existence can create physical changes in the surrounding area.

A very visible and measurable aspect is the change in the level of socioeconomic status of the surrounding population. Because the construction of higher education institutions in the regions will also be followed by the construction of other facilities, such as the construction of many shelters or boarding houses for students from outside the region. The large number of students or immigrants from outside the region will directly influence the pattern and outlook of life for the indigenous people of the area. It is estimated that the increase in income for the population will also have an impact, especially in the form of changes in the attitude of life of the population both in terms of socio-economy and their ideas about the education of their children. Although children's education can be influenced by various factors, including environmental factors, increased income is thought to increase parents' concern for their children's education compared to before an increase in income (Purwaningsih and Dkk, 1994:3). However, the impact of the existence of the Untirta campus has not had much of an impact on the human development index of the city of Serang. According to the data of Indonesian Central Bureau of Statistics the the average leght of school in Serang City shows in the lowest position if be compared with another municipal city in Banten Province.

Figure 1 shows that South Tangerang city is the greatest postion of avareage length of School during 2015 to 2020, then Tangerang city and Cilegon city. One of reasons the low number of average length of school in Serang City is due to the public awareness for school in Serang city still low.

Figure 1. Average Length of School
Source: Central Bureau Statistics, 2021

Development can be conceptualized into a process of continuous improvement of a society or a social system towards a better or human life (Rustiadi, 2003). From the economic aspect, sustainable development aims to maximize human welfare through economic growth and the efficient use of capital within the limitations and constraints of resources and technology, however, there must be a reduction in excessive exploitation of resources to avoid possible impacts. Sustainable development is closely related to the human need to keep developing to be more prosperous and more prosperous because it is supported by a better environment.

Palunsu in Hastuti (2001) suggests that sustainable development contains three definitions, namely: 1. Fulfilling current needs without sacrificing future needs. 2. Does not exceed the carrying capacity of the ecosystem. 3. Optimizing the benefits of natural and human resources by harmonizing human and development with natural resources.

The development plan begins by identifying the potential and needs of the beneficiary communities and those who bear the risks. Therefore, development activities which include planning, financing, implementation and monitoring and evaluation, will start from the desires and abilities of the beneficiary communities and those who bear the risks themselves. Regional governments in this era of autonomy are given full authority to explore the existing potential to support development. Likewise with the city government of Serang, which is the capital of Banten Province. Since its

establishment, it has had various social and economic problems.

The economy of a region is one of the main benchmarks in seeing the level of social welfare both at macro and micro levels, considering that people's lives are largely determined by the economy in terms of finance or needs. One of the problems that hinder the acceleration of the progress of Serang City is that the competitiveness of regional superior products is still not optimal, especially for products of micro businesses. On the other hand, innovation is not optimal yet is also a matter that needs to be considered in order to increase competitiveness as an important factor in increasing economic growth. Competitiveness in this regard is related to production capacity, innovation capacity, and the ability of the City of Serang to attract investment in the framework of improving the economic structure.

The involvement of higher education in the regional economy can be stimulated by growing the importance of science and information in the global economy. (Thanki, 1999) argues that higher education institutions have the potential to contribute significantly to economic development in their regions. Higher education has capacity to develop not only economic life in its region but also social, political and cultural life. The role of higher education in regional development is more focused on the aspect of economic growth through changes that adapt to the economy and recent policies.

Figure 2 shows the scatters plot between education sector and economic growth rate in Serang city. According to the figure, education sector and economic growth rate show have positif trend. This is has meaning that an increase in education sector will lead to an increase in economic growth rate. However, this case requires an in-depth study using a regression analysis tool. Therefore, the direction of relationship will more clearly visible.

Some economic impact studies of high education in USA are referred to the economic impact of a group of universities or a university in an integrated area like Florida State University

(2001); Boston University (2003) and Berkeley Campus of the University of California on the City of Berkeley, the East Bay and the San Francisco Bay Area (University of California Berkeley 2001).
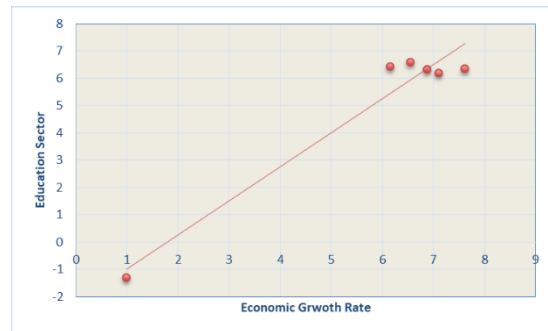

Figure 2. Relationship between Educational Sector and Economic Grwoth Rate.
Source: Central Bureau Statistic, 2021

In this current time, the role of tertiary institutions in spurring the acceleration of development in a dynamic and planned manner is very necessary. At present, this role can be started from the community around the campus, which will then contribute to the regional development of Higher Education in spurring the acceleration of dynamic and planned development is needed. The dynamic growth at the regional level will certainly add to the roar of the accelerated pace of development on a national scale.

Some previews researchers have conducted reserachs about the impact of campus to the socio economy sector, such as: Raneen and Valero (2018) examine the economic impact of universities in some countries in the world. Their research analyses the influence of GDP per capita growth, population, GDP percapita of regions and states, and the growth of universities. The research results show that GDP percapita and universities have positive significant correlation to the growth of population. Then, the growth of GDP percapita has significant correlation to the growth of universities. Iriyanto and Noviani (2016) analyze the impact of integrated campus estabilishment at the University of Muhammadiyah Semarang on the surrounding community. Their results show that the development or existence of an integrated campus

for the community around Unimus has a positive influence on education. Then, the level of awareness to maintain and increase the importance of family and environmental health increase, and the construction of the Unimus integrated campus has a positive effect on mobilizing and developing religious preaching in the community.

Suharyanto (2007) analyzes the the impact of the existence of IPB on the economy of the community around the campus and its contribution to the rconomy of Bogor Regency. The resuls show that the economy of the community around the campus is related to the existence of IPB, the level of education has a significant effect on the income of business actors, and location in IPB, which means the location of the informal sector business is carried out on the campus of IPB and is directly related to IPB's activities, has a greater chance of gaining greater profits than business actors whose business for reasons originating from other factors.

Susanti (2013) analyzes the impact of the existence of the UNNES campus on the economic and educational conditions of the population of Sekaran Village, Gunungpati District, Semarang City. The results show that the existence of the UNNES Campus greatly affects the livelihoods of the population, as many as 36.92% of families in the current village have an income of between Rp. 2,000,000 - Rp. 3,500,000 and the smallest percentage is 8.46% of families in the kelurahan now with an income of > Rp. 5,000,000. Then, the highest percentage of families incurred expenses, namely 35.38% or equivalent to Rp. 300,000 - < Rp. 450,000 for school needs and the lowest percentage is 15.38% of families spend > Rp. 600,000. The existence of the UNNES campus increases parents' motivation towards children's participation to continue their education to a higher level with an effective contribution of 0.271 or 27.1%.

(D. T. Tae, Setijawan and Gai, 2019) analyze the effect of the existence of State Universities in Malang on the economy in the Surrounding Area. The research results show that

the largest ownership status of rental activities or contract activities, namely photocopies and prints and street vendors, and then, there are 5-8 economic activities in both services and trade sectors in the analysis of the area and significant distance from the campus to the lots in knowing which activities dominate at a distance.

(Said, 2017) analyzes the Influence of the existence of campus II UIN Alauddin Makassar on the socio-economic life of farmers in Samata Village. The research resuts show that the correlation of the existence of campus II UIN Alauddin Makasar towards the level of education shows a very strong level of association, namely r = 0.86. The correlation between the existence of Campus II UIN Alauddin Makassar on Social Interaction shows a moderate level of relationship, namely r = 0.45. The correlation between the existence of Campus II UIN Alauddin Makassar on the level of income shows a very strong level of relationship, namely r = 0.87. The correlation of the existence of campus II UIN Alauddin Makassar on Asset Ownership shows a strong level of relationship, namely r = 0.65. Birmingham (2017) conducted research about the Economic, social, and cultural impact of the University of Birmngham. This research analyzes the influence of employment, contribution of teaching to the economy, and student exchange to the economy, social and culture of the University of Birmingham uses descriptive analysis. This research is concluded that the University of Birmingham supports 15,545 jobs in the West Midlands, nearly 48% after graduating students live in the region with a contribution to the economy of £ 1.34 billion, eight additional undergraduate international students will add £ 1 million to the economy, and the University of Birmingham has a significant contribution to the economy of Birmingham, West Midlands, and England.

Moreover, the defference of this research with some previous researches is not only uses regression analysis but also uses input-output analysis. Regression analysis is used to analysis the influence of government investment and

student graduated of Sultan Ageng Tirtayasa University which lead to an increase in human development index of Serang City. Then input output-analysis is used to identitfy the spilover effect from the existence of Untirta campus to the growth micro, small and medium enterprises around campus.

According to the theories, economy growth can be defined as an increase in total of output or total of services and goods production in one time period. Economic growth is very important and necessary because as one of the benchmarks to see the development to what extent the success of a set policy. Economy growth can be measured uses some indactors, such as an increase in total output, infrastructure development, ability of employment, and an increase in income both household and production sector. The Harrod-Domar theory explains the importance of the formation of investment capital, investment has an influence on the economy. First, investment has a positive relationship with state income. Second, investment can increase the production capacity of the economy by increasing the capital stock. Both, meaning that investment can affect demand and also affect supply. In the long run, investment does not only affect aggregate demand but also affects aggregate supply through changes in production capacity, this is because investment has two characteristics, namely creating income and increasing the production capacity of the economy by increasing the capital stock.

In essence, investment is also the first step in economic development activities. The dynamics of investment affect the high and low levels of economic growth, reflecting the high and sluggish development levels. Meanwhile, Simon Kuznet describes economy growth as an increase in production capacity of a country to reach the economy needs of citizen. Then, an increase in production capacity can be led by a change in technology, ideology, and institution.

According to Florax (1992) and some modifications of (Garrido-Iserte and Gallo Rivera, 2010), the impacts of university existence can influence in several sectors. First, on the political sector, the existence of university leads to an increase in political structure, citizen, and participation, then lead to improvement in the organizational of political processes. Second, on the demography sector, the existence of university has impact on the population growth, the population structure and the population mobility. Third, on the economy sector, the existence of university leads to an increase in regional income, industrial structure, job market, and labor mobility. Fourth, on the infrastructure sectore, the existence of university leads to an increase in housing, traffic, healthcare services and retail. Fifth, on culture sectore, the existence of university leads to an increase in the cultural goods, and the cultural environment. Sixth, on the attractiveness sector, the existence of university leads to an increase in regional image and regional identity. Seventh, on the education sector, the existence of university leads to an increase in participant rate and a change in human quality. Then, on the social aspect, the existence of university leads to an increase in quality of life, student quality, regional image, and regional identity.

Futhermore, Dusek (2003) explains that the existence of university has input and output impact. The inputs impact consist of three factors, such us households, local authority, and business. The impact of university existence on the household will lead to an increase in income, employment, and consumtion. Then, the impact of university existence on the local authority will lead to an increase in taxs and services, and then the impact on the business leads to an increase in volume of business. Moreover, some output impacts of university existence are human capital, knowledge, attractiveness, and bussines. The impact on the human capital lead to an increase in qualification, new firm, and migration. Then, the impacts on the knowledge will lead to an increase in university-bussines relation, and extensive use of resources. In addition, the impact on the attractiveness leads to an increase in location choice of households and firm. And then,

the impact on bussines will lead to an increase in research and development, and exibitions.

RESEARCH METHODS

In this study, the method used is explanatory research. This method is very suitable for social studies that try to see, measure and test hypotheses. While the nature of this research is verification, which examines the relationship and influence between the independent variables and the dependent variable and will be tested for the relationship between variables by statistical and econometric tests to obtain conclusions.

This research was conducted by taking secondary data from various sources, such as the Central Bureau of Statistic (BPS), Sultan Ageng Tirtayasa University (Untirta) and other secondary data sources. This research uses quarterly time series data on the period of 2010 to 2019. Data analysis uses multiple regression models which are used to determine the impact of the Untirta Campus and the Investment of the City of Serang to the Human Development Index and the Economy.

The model equation below is assumed to have a linear relationship, so the form of the equation can be formulated in such a way that it meets the requirements of the linear regression model. So that the equation becomes:

$$HDI_t = \alpha_0 + \alpha_1 \, LnINVEST_t + \alpha_2 \, GRADUATE_t + \alpha_3 \, GROWTH_t + e_t \quad ....(1)$$

$$GROWTH_t = \beta_0 + \beta_1 \, LnINVEST_t + \beta_2 \, GRADUATE_t + \beta_3 \, HDI_t + e_t \quad ....(2)$$

Where, HDI is Human Development Index; GROWTH is Economic Growth (percent); GRADUATE is Graduated Student of Unirvisity (person); LnINVEST is Investment (IDR); t is Year (quarterly); e is error terms; $\alpha/\beta1,2...5$ is coefficient; and $\alpha/\beta0$ is constant.

Moreover, Input-Output (I-O) analysis is used to analysis the sectoral lingkages and the direct backward linkages as the existence of Untirta. I-O table presents information about transactions of goods and services that occur between production sectors in an economy in the form of a matrix presentation. The numbers in Table I-O show trade relations between sectors in the economy of a region. Each row details the sales volume of a sector, which is listed in the seller column, to various sectors, which is written under the buyer's label. In simple terms, the simplification of Table I-O can be seen in Table 1. From Table I-O in Table 1, two balanced balance equations can be made.

Line:

$$\sum_{j=1}^{n} Xij + fi = Xi \qquad \forall i = 1, ..., n \quad ....(3)$$

Column:

$$\sum_{i=1}^{n} Xij + Vj + mj = Xj \qquad \forall i = 1, ..., n \quad (4)$$

Table 1. I-O table of implications

Seller Sector	Buyer Sector				Final Consumption	Total Production
	1	2	...	N		
1	x_{11}	x_{12}	...	x_{1n}	F_1	X_1
2	x_{21}	x_{22}	...	x_{2n}	F_2	X_2
.	.	.	...	.	.	.
.	x_{l1}	x_{l2}	...	x_{ln}	.	X_3
.	.	.	...	.	.	.
n	x_{n1}	x_{n2}	...	x_{nn}	F_n	X_n
Value added	V_1	V_2	V_j			
X	X_1	X_2	X_j			

Source: Data Processed, 2020

Where xij is the value of the flow of goods or services from sector i to sector j; fi is the total final consumption; vj is added value and mj is import. The definition of a balanced balance sheet is the amount of production (output) equal to the amount of input.

Sectoral Linkages: The analysis of sectoral linkages is one of the main analyzes used to see the key or leading sectors in an economy. The greater the relationship between a sector, the more potential that sector will drive the economy. The analysis of sectoral linkages basically looks at the impact on output from the fact that basically the sectors in the economy influence each other or are related. In this study, sectoral linkage analysis was carried out by utilizing Input Output Table data which has been developed with direct backward linkage analysis, total backward linkage, direct forward linkage, and total forward linkage.

Direct Backward Linkages are a measure to look at backward linkages of economic sectors within a region. A sector is said to have a high spread power if the growth of these sectors has a strong effect on other sectors or has a strong push towards other sectors.

In the Input Output table, the relationship between the output and the final query is spelled out in the formula:

$$X = (I - A)^{-1} F^d \quad \text{...................................} (3)$$

Or it can be written in the form of a matrix as follows:

$$\begin{bmatrix} X_1 \\ X_i \\ X_n \end{bmatrix} = \begin{bmatrix} b_{11} & b_{1j} & b_{1n} \\ b_{i1} & b_{ij} & b_{in} \\ b_{n1} & b_{nj} & b_{nn} \end{bmatrix} \begin{bmatrix} F_1^d \\ F_i^d \\ F_n^d \end{bmatrix} \text{................}(4)$$

Where, b_{ij} is matrix cell $(I - A)$-1 in row i and column j; X_i is sector i output; F^d the final demand of sector I; $i, j = 1, 2,...$n.

According to the matrik we can see that a change in 1 unit of demand at the end of sector 1 (X1) will lead to a change in sector 1 itself by b11, to sector 2 (X2) by b21 onwards. Back-to-back interconnected numbers are directly calculated based on the column summation of the input coefficient matrix element.

RESULTS AND DISCUSSION

The impact of untirta campus to human development index: Untirta commites to find some alternatives and solutions for the student who graduated. After those students graduated, they will make some comunities of alumni that can contribute to improve the human development index. This can be seen from the table of estimated model results that affect it below.

Table 2. Results for Human Development Index

VARIABLE	HDI (Model 1)	HDI (Model 2)	HDI (Model 3)	HDI (Model 4)
LnINVEST	7.860		7.995	7.801
	(35.83)**		(36.61)**	(14.98)**
GRADUATE		-1.731	0.386	0.402
		(1.37)	(2.04)	(2.05)
GROWTH				-0.048
				(0.41)
_cons	1.341	82.011	-2.461	-0.530
	(0.70)	(9.61)**	(0.94)	(0.10)
R^2	0.98	0.06	0.98	0.98
N	30	30	30	30

Note: * $p<0.05$; ** $p<0.01$
Source: Data Processed, 2020

In the long run, increased investment spending in the education sector will increase people's income levels, and poverty rates decrease. Variable approval in model 2 shows a negative but insignificant effect on the human development index in Serang City, obtained a coefficient value of -1,731 with a value of R2 of -0.06. Based on the results of this test means that

the approval has no significant effect on the Human Development Index of the city. A negatively marked coefficient means that the influence of investment on IPM moves in the direction, meaning that the increase in investment is followed by a decrease in IPM or vice versa.

Different things Variable graduation and investment in models 3 and 4 shows a positive influence on the Human Development Index in Serang City. This result similar with the research result of Setyadi, et al, (2020) which is investment of human resources lead to an increase in economic growth and productivity.

The impact of UNTIRTA Campus leads to economy growth in Serang City. Serang city's economic growth tends to be higher than national economic growth and Banten Province. In 2018, Serang City's economic growth was 6.47 Percent, while national economic growth was 5.17 percent and Banten Province by 5.81 percent. Nevertheless, serang city's economic growth still needs to be accelerated again in an effort to improve people's welfare, such as poverty and unemployment.

According to Sunariyah (2003) "Investment is an investment for one or more assets owned and usually over a long period of time in the hope of making a profit in the future." Based on economic theory, investment means the purchase (and production) of capital of goods that are not consumed but used for future production (production goods). The regression result (model 5) using the analysis of the path between investments to economic growth of the city, obtained a coefficient value of -4,127 with a value of R2 of -0.84. Based on the results of this test means the investment has no significant effect on the economic growth of the city.

The negatively marked Regeresi coefficient means that the influence of investment on economic growth is not in the same direction, meaning that the increase in investment is followed by a decrease in economic growth, or vice versa.

Table 3. Results for Local Economic Growth

	GROWTH (Model 5)	GROWTH (Model 6)	GROWTH (Model 7)	GROWTH (Model 8)
INVESTASI	-4.127		-4.009	-2.938
	(11.91)**		(11.04)**	(1.12)
GRADUATE		1.397	0.336	0.387
		(2.02)	(1.06)	(1.13)
HDI				-0.134
				(0.41)
_cons	43.184	-2.476	39.879	39.550
	(14.20)**	(0.53)	(9.19)**	(8.83)**
R^2	0.84	0.13	0.84	0.84
N	30	30	30	30

* $p<0.05$; ** $p<0.01$
Source: Data Processed, 2020

The contributing factors of investment negatively and insignificant to economic growth. The average investment growth is not comparable to average economic growth. This indicates that investment has not been able to drive the economy which can increase economic growth to be higher than investment growth. In serang city, theaverage investment ineconomic growth is 0.05 percent while the average economic growth of serang city is 6.97 percent.

Different things Variable graduation in model 6 shows a positive influence on the economy in Serang City, in model 7 investment still shows negative to economic growth while graduates show positip. Model 8 shows investment and negative human development index, and graduates have a positive relationship.

This result is similar with the result of Alexander and Yuriy (2015). The reason is because many graduates are not innovative, and the lack of active role of universities involves their graduates in innovative activities such as participation in campus business incubators. Furthermore, Input-Output analysis is used to analysis the the structures of economy growth according to economic expenditure structure.

Economic Expenditure Structure: The I-O table according to its utilization is distinguished into household consumption, government consumption, investment, net exports, and stock differences. The structure according to these five groups is shown in table 4. The spending structure can also be seen according to the composition per commodity of each of the above groups. This structure allows us to see the pattern of serang city people spending their money for consumption purposes, the pattern of serang city local government using its funds, the pattern of the business world making investments as well as conducting trade transactions with outside parties both through

exports and through imports. The spending patterns according to the commodity group are shown in each of the following subsections.

Community Consumption Structure: Public consumption is indicated in classification code 301. The value of all consumption of Serang city reached Rp16.26 trillion or about 74.44 percent of the total gross output value of goods and services. Judging by the commodity details, the consumption of serang city community is shown that consumption for the food, beverage & tobacco industry sector is still a big role. About 19 percent of public spending is used for food, drinking & tobacco consumption purposes, 12.51 percent for construction, 11.45 percent for the transportation, machinery & equipment industries of YTDL, 6.01 percent for the textile, finished clothing, leather, leather goods from leather and foot tools and so on. This consumption pattern is a common pattern for people in Indonesia.In the following table are given the 10 most commodities for consumption purposes.

Table 4. Top Ten Major Commodities for Government Spending of Serang City on 2015

No.	Code	Sectors	Value (Billion RP)	Percentages
1	38	Education Services	3,490	51,11
2	39	Health Services and Social Activities	0,794	11,64
3	22	Construction	0,761	11,16
4	23	Wholesale & Retail Trade, Cars, Motorcycles and Their Repairs	0,609	10,10
5	31	Warehousing and Supporting Services for Transport, Post and Couriers	0,260	3,79
6	37	Government Administration, Defense and Mandatory Social Security	0,093	1,36
7	16	Base Metal Industry, Metal Products, Computers, Electronic Goods, Optical and Electrical Equipment	0,089	1,31
8	14	Chemical, Pharmaceutical and Traditional Medicine Industry, Rubber, Rubber and Plastic Products	0,075	1,11
9	25	Public Transportation	0,074	1,10
10	20	Electricity & Gas Supply	0,063	0,93
		Lainnya	0,44	6,38
Total			**6,82**	**100,00**

Source: Data Processed, 2020

Investment Structure: Investment is an expense intended to increase economic business capital. In the I-O literature, this investment is the same as the Establishment of Fixed Gross Capital abbreviated as PMTB. This investment can be made by a legal entity such as PT. Krakatau Steel, a small company, even by households that conduct economic activities and by provincial governments, districts / cities, sub-districts, and villages / villages. Economic investment is indicated in classification code 303. The value of all investments of Serang City's economic unit is Rp. 13.48 trillion or about 61.70 percent of the total gross output value of goods and services.

Judging by the commodity details, Serang City's economic investment is shown that construction output shows a large portion. Almost Rp. 12.41 trillion or about 92.05 percent of Serang City's investment value is used for the purpose of building infrastructure and physical economic facilities. The rest is used in the output of the YTDL transport, machinery, and equipment industry sector by 1.01 billion or about 7.47 percent. On the table be showed the top ten commodities for investment purposes. Tabel 5 shows the top ten major commodities for government spending of Serang City on 2015.

Table 5. Top Ten Major Commodities for Investment of Serang City on 2015

No.	Code	Sectors	Value (Billion Rp)	Percentage
1	22	Construction	12,41	92,05
2	17	Transport Equipment, Machinery & Equipment Industry ytdl	1,01	7,47
3	16	Base Metal Industry, Metal Products, Computers, Electronic Goods, Optical and Electrical Equipment	0,05	0,33
4	4	Farm	0,008	0,06
5	25	Public Transportation	0,002	0,01
6	3	Plantation	0,002	0,01
7	40	Other Services	0,002	0,01
8	38	Education Services	0,001	0,01
9	26	Ferry Transport	0,001	0,01
10	3	Industry of wood, goods made of wood and cork and plaiting from bamboo, rattan and others	0,001	0,01
		Others	0,003	0,03
Total			**13,48**	**100,00**

Source: Data Processed, 2020

Export and Import Structure: In the regional I-O, exports and imports implicitly include inter-district/city, as sales to Jakarta are also considered as the export of Serang city to West Jakarta, and purchase from Bandar Lampung is considered an import of Serang City from Bandar Lampung. Net exports are a combination of exports minus imports. The two groups are often combined in economic analysis because these two activities are mutual activities in the sense of interchangeable. For example,

serang economic unit sells through timber entrepreneurs a number of woods outside Serang City, Jakarta. At that time the timber company received the sale of the wood, then this fund was partially or entirely used to buy paper, oil and other office packaging from Jakarta. Automatically, there are export and import activities of Serang City carried out by timber business units. Similarly, for other businesses in Serang City that conduct transaction activities

with economic units outside Serang City including those abroad.

Serang City Economic Multiplier: In macroeconomic models, a terminology is known asmultiplierthat describes the impact that occurs onendogenous variables) akibat perubahan pada variabel eksogen (dueto changes inexogenous variables. The multiplier in question is, for example, a national income multiplier formulated as 1/ (1 - MPC) in which MPC = marginal propensity to consume or marginal tendency to consume goods and services. The multiplier explains that changes in national income are determined by the size of the MPC; the larger the MPC the greater the national income.

In the I-O table, such multipliers can also be obtained, not only is one multiplier but even a group ofmultipliers expressedin the form of multipliermatrix. Similar to the multiplier in the macroeconomic model described above, the multiplier matrix in the I-O table also describes a change that occur in various endogenous mods as a result of changes in one or more exogenous mods. The multiplier matrix in the I-O table is used to perform impact analysis, such as output impact analysis, revenue impact analysis, labor impact analysis and interconnectedness analysis. This analysis is widely used to know and predict the outcome of a future policy. Suppose that the Serang City Government intends to hold a new policy of attracting new taxes on all or some economic activities in Serang City with the intention of increasing the local original tax receipts then with this I-O model can be known which sectors will be effectively affected by the policy. Some sectors will be exposed on a low scale, but others will be exposed in large numbers, depending on the economic interconnectedness of Serang City.

CONCLUSION

The conclusion of this study is the result of estimating several models of regression equations that we built showing the consistency of the influence of government investment and the

approval of Untirta on the increase in IPM in Serang City. This is in accordance with research from (Siegfried et al., 2007) which mentions the large role of higher education in improving education, a new culture for the local population, this is due to the emergence of new communities (students, faculty, staff and visitors). While the different results of the model that affect the local economy, which investment turns out to have no effect on the economic community but the impact of Untirta graduates has a positive effect on the economic growth rate of Serang City. This similar with research that be conducted by (Siegfried et al., 2007) stating the impact of colleges includes: direct work around campus, tax expenditures that ultimately boost PAD, and the city's local economy. On the other hand, the results of this estimate show that the factors affecting the economy of the surrounding community are educational factors, which have a real influence on economic growth, so that in the future there needs to be special attention by local governments in terms of allocation of development funds especially that support the sustainability and development of untirta campuses.

Meanwhile as well as the results of research by (Alexander and Yuriy, 2015) universities are expected to provide an active role to students in business unit activities to bring about business innovation so that after graduation can drive local economic growth. Not only that research and development activities also need to be done to meet the needs of industry and other sectors so that college graduates can apply their ideas in an effort to improve their competence.

Studies related to the impact of the existence of untirta campus need to continue to be carried out mainly related to the economic and social impact integrated from the four campus locations untirta its influence on the surrounding communities in serang district, cilegon city and serang city.

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