THE INFLUENCE OF POPULATION GROWTH, ECONOMIC GROWTH AND CONSTRUCTION COST INDEX ON THE LOCAL REVENUE OF TAX ON ACQUISITION OF LAND AND BUILDING AFTER THE IMPLEMENTATION OF LAW NO. 28 OF 2009

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Abstract: *This study examined the influence of Population Growth, Economic Growth and Construction Cost Index (IKK) on the Local Revenue of Tax on Acquisition of Land and Building (BPHTB) after the implementation of Law No. 28 of 2009. The population in this study was all 33 City/Regency Governments in North Sumatera Province. The samples in this study were 25 Regency/City governments in North Sumatera Province with purposive sampling method. The research result showed variables Population Growth, Economic Growth and Construction Cost Index had great impact on the Local Revenue of Tax on Acquisition of Land and Building (BPHTB) after the implementation of Law No. 28 of 2009.*

Keyword: *Population Growth, Economic Growth, Construction Cost Index and Revenue of Tax on Acquisition of Land and Building.*

1. INTRODUCTION

The implementation of Law of 2009 and Law of 2000 on local tax and local retribution causes the addition of several taxes, such as Rural and Urban Property Tax, Tax on Acquisition of Land and Building (BPHTB), and Tax on Swift Nest. Specifically, the transfer of Tax on Acquisition of Land and Building (BPHTB) from the central government to local governments is a step forward by Indonesia in reforming the national tax system. The policy is correct, but similarly important is implementing the policy so local regions can collect BPHTB well. Several regions have very high BPHTB because they're densely population, have rapid economic growth, and have relatively

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cheap goods and buildings, triggering the development of new buildings and land transfer from empty lots to new buildings, which are constructed and owned by third parties. Wijaya et al (2014) concludes that 1) BPHTB only significantly influences Regional Income before decentralization, 2) DBH only significantly influences Regional Income before decentralization, 3) BPHTB didn't significantly influence PAD, 4) the revenue of BPHTB declines after decentralization, 5) DBH increases after decentralization, 6) PAD contribution to Regional income after decentralization is still low. Hull (2013) concludes that the value of a land and building is determined by variable economic growth and impact unproductive wealth. Pangemanan *et al* (2013) stat that the revenue of BPHTB sufficiently contribute to Regional Income. Piffano's (2010) study in Argentina finds that tax burden in rural sector impacts property right of land. Economic foundation aspect should be evaluated because it has a huge role.

Colwell and Munneke (1999) and Mehmet (2008) conclude that accessibility impacts value of land and influences revenue of land tax. Muda et al (2015) finds that variable Construction Cost Index (IKK) plays a role in budget allocation and impacts local economic growth. BPHTB is only in regencies and Citiesand not collected at provincial level. Therefore, the question is what factor triggered the increase of the revenue of BPHTB? Was in the intensiveness of local governments in collecting or high awareness of BPHTB payers or because the region developed rapidly and people had high awareness in paying BPHTB. This study analyzed BPHTB from macro aspects. Macro analyzed was focused on analyzing various economic factors influencing BPHTB. This was performed with the assumption that the values of tax object, whether land or building, in a region is strongly affected by the economic condition of the region. BPHTB, which is generally calculated by taxable value (NJOP,) is strongly affected by population growth. The expectation and estimation of price change as a result of improves access, which is indicated by low Construction Cost Index (IKK,) will affect plan of revenue of BPHTB. Beside the variables, there are other economic variables suspected to affect taxable value. Therefore, dominant economic variable which influences BPHTB is determined to have more optimum main approximation or potential of BPHTB. The researcher was interested in studying the phenomenon with this background, so the title is the Influence of Population Growth, Economic Growth and Construction Cost Index on the Local Revenue of Tax on Acquisition of Land and Building (BPHTB) after the Implementation of Law No.28 of 2009. The research problem formulation was "how strong is the influence of Population Growth, Economic Growth and Construction Cost Index on the Local Revenue of Tax on Acquisition of Land and Building (BPHTB) after the Imlementation of Law No.28 of 2009?"

2. REVIEW OF PREVIOUS STUDIES

Some previous studies related to the current study are shown in Table 1 below :

Table 1
Review of Previous Studies

No	Researcher	Title	Variable	Research Result
1	Fauzan and Ardiyanto (2012)	Akuntansi dan Efektivitas Pemungutan BPHTB dan kontribusinya Terhadap Pendapatan Daerah di Kota Semarang	Descriptive quantitative	Effective collection of BPHTB in 2008-2011 with very effective criteria. However, average contribution of BPHTB to Local Revenue is low
2	Santoso, & Pusung (2015)	Evaluasi Pemungutan Tax on Acquisition of Land and Building di Dinas Pendapatan, Pengelolaan Keuangan Dan Aset Daerah (DPPKAD) Kabupaten Halmahera Utara	Descriptive	The result of study in evaluation of collection of BPHTB isn't very good because a procedure doesn't match existing regulation.
3	Ananda (2012).	*Analisa Dampak Pengalihan Pemungutan BPHTB Kedaerah Terhadap Kondisi Fiskal Daerah*	BPHTB, economic growth and total population.	IKK change has negative influence on revenue of BPHTB. The higher the IKK, showing worsening conditions of infrastructure there, the smaller the venue of BPHTB.
4	Wijaya *et al* (2014)	Pengaruh Desentralisasi Bea Perolehan Hak Atas Tanah Dan Bangunan (BPHTB) terhadap Pendapatan Daerah Kabupaten Karangasem	BPHTB, Revenue Sharing Fund, Locally-generated revenue, emerging economies	Result : 1) BPHTB only significant influenced Local Revenue before decentralization, 2) DBH only significant influenced Locally generated income before decentralization, 3) BPHTB doesn't significantly influence PAD, 4) After decentralization, there is declined revenue of BPHTB, 5) DBH after decentralization increases, 6) PAD contribution to Locally-generated income after decentralization is still low.
5	Anushree Bhargava (2013)	Determinants of Property Values, Jaipur City	Property values, Hedonic Pricing Model	The results of the study show that there are measurement problems in the elaboration of the financial statements, and there is a need for a clarification in definitions, particularly in what concerns the distinction between public and private domain of State assets.

The model developed from the theories and hypothesis development was :
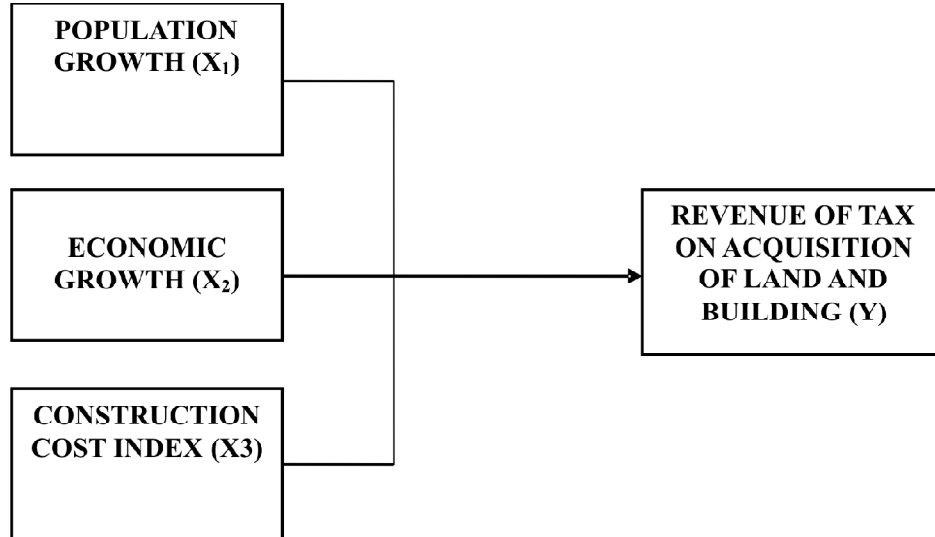

Figure 1: Research Model

The hypothesis in this study was : Population growth, Economic Growth and Construction Cost Index Influenced the Local Revenue of Tax on Acquisition of Land and Building (BPHTB) after the Implementation of Law No.28 of 2009.

RESEARCH METHOD

This study was a descriptive quantitative study, which is a study explaining an existing phenomenon and clearly describing research object. To describe the identified variables, the variable operations are shown in Table 2 below :

Table 2
Variable Operationalization

Variable	Definition	Indicator	Scale
Tax on Acquisition of Land and Building (Y)	Ta on acquisition of land and/ building.	Total BPHTB Balance in Local Budget	Ratio
Population Growth (X_1)	Growth of the population in a region.	Total residents in a region	Ratio
Economic Growth (X_2)	Economic growth by production approach calculated from PDRB in effect.	Growing Rupiah value	Ratio
Construction Cost Index (X_3)	The index describes comparison of TKK of a regency/city or pricince to National average TKK.	National Statistics	Ratio

The population in this study was 33 city/regency governments in North Sumatera Province. The samples in this study were 25 (twenty five) city/regency governments in North Sumatera in 2006-2015 with purposive sampling method. The analysis model was:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

where :

Y   = BPHTB

α   = Constant

ß   = Slope or regression coefficient

(X_1) = Population Growth

(X_2) = Economic Growth

(X_3) = Construction Cost Index

e   = error

The Classical Assumption Tests performed were Normality Test, Multicollinearity Test, Heteroscedacity Test and Autocorrelation Test. (Ghozali, 2005). To prove the hypothesis, F test, t test and Determination Coefficient Test (R^2) were performed.

RESEARCH RESULT AND DISCUSSION

5.1. Research Result

The descriptive statistics was presented in Table 3 below :

Table 3
Statistical Descriptive

	N	Minimum	Maximum	Mean	Std. Deviation
BPHTB_Y	200	4364,00	259114429,00	8751679,6600	29574931,86590
Populasi_X1	200	34542,00	2121053,00	475995,2300	497088,90970
Eco_Growth_X2	200	826,00	105400,00	8375,5100	15223,80310
IKK_X3	200	81,05	235,01	119,6074	35,36989
Valid N (listwise)	200				

Source: SPSS Output. (2016).

To produce an accurate data analysis, a regression equation should be free from classical assumptions which should be met, including autocorrelation, normality, multicollinearity and heteroscedacity tests. (Ghozali, 2005). Data normality test in the research was performed with various data normality model, including Figure 2 below:

- **Histogram Model**
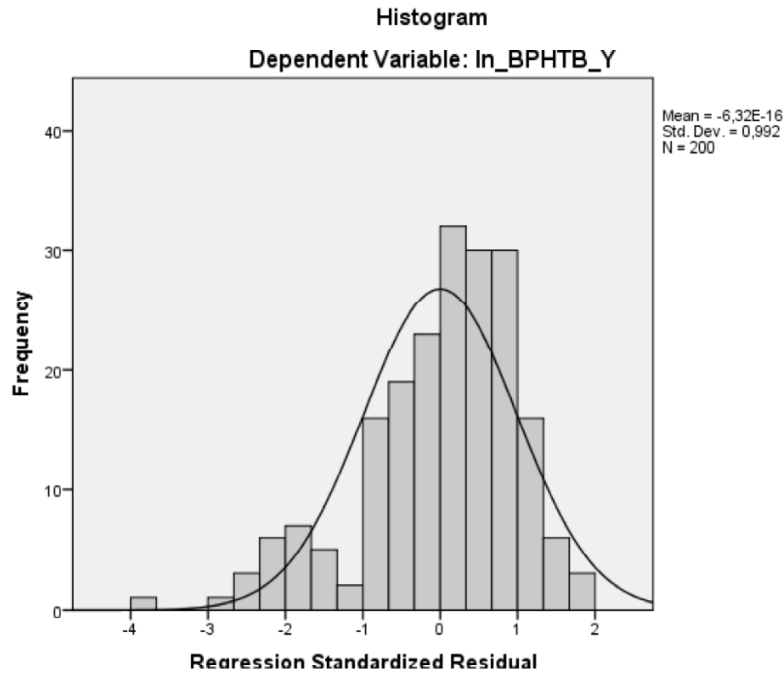
Figure 2: Data Normality Test Using Histogram

Based on the figure, after transformation (algorithm process) it is concluded that variants are normally distributed because trend polygon doesn't lean to the left or the right. Based on SPSS data processing, Table 4 was made:

Table 4
Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	*VIF*
1	ln_Populasi_X1	,272	3,673
	ln_Eco_Growth_X2	,263	3,798
	ln_IKK_X3	,890	1,123

a. Dependent Variable: ln_BPHTB_Y
Source: SPSS Output (2016)

The table above shows that VIF value of each variable is < 10 and *Tolerance* no less thN 0,1. It shows that the regression model in this study didn't have multicollineartiy (homoscedaticity). Autocorrelation issue can be seen in Table 5 below :

Table 5
Durbin-Watson Value

Model	R	Std. Error of the Estimate	Durbin-Watson
1	,632[a]	1,28581	1,005

a. Predictors: (Constant), ln_IKK_X3, ln_Populasi_X1, ln_Eco_Growth_X2
b Dependent Variable: ln_BPHTB_Y
Source: SPSS Output. (2016).

The magnitude of Durbin-Watson is read as :

- D-W number below -2 means positive autocorrelation.
- D-W number between -2 and +2 means no autocorrelation.
- D-W number above +2 means negative autocorrelation.

Therefore it is concluded that there is neither positive nor negative autocorrelation.

Heteroscedacity issue is shown in Figure 3 :
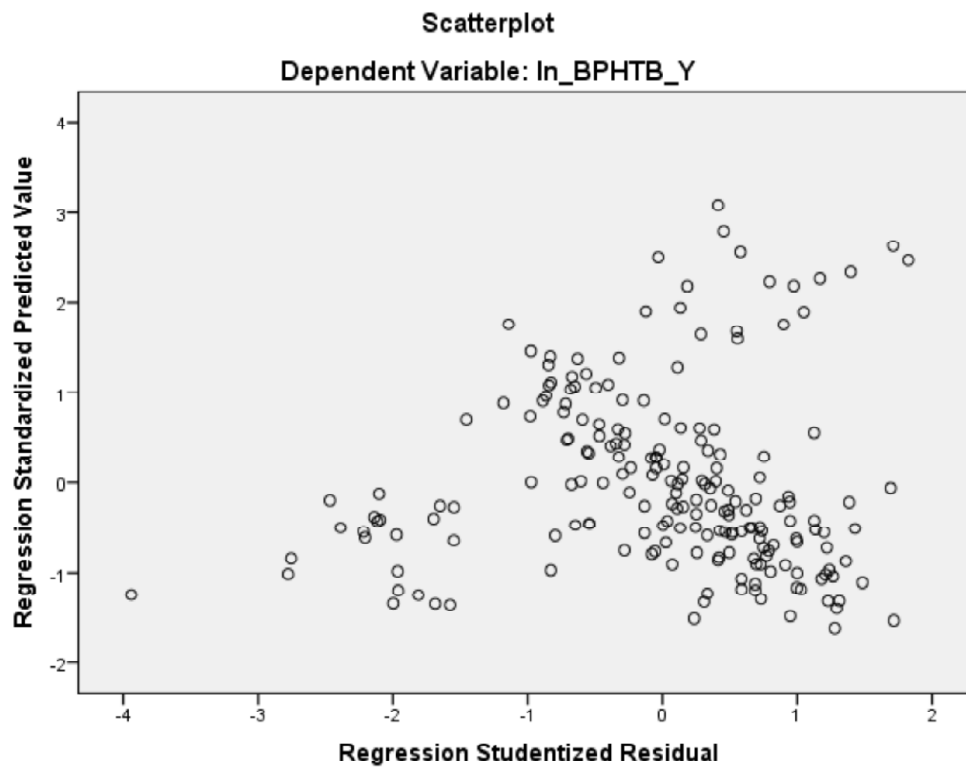
Figure 3: Heteroscedacity Test

Source: SPSS Output (2016).

The figure above shows no specific pattern and points are scattered above and below 0 in Y axis, so there isn't any heteroscedacity.

5.2. Hypothesis Test

The Adjusted R Square value is shown in Table 6 below :

Table 6
Goodness of Fit Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics	
					R Square Change	F Change
1	,632[a]	,399	,390	1,28581	,399	43,398

Source: SPSS Output (2016).

The Adjusted R Square value in Table 6 above is 0,390. The remaining 61% is affected by other variables not described in this research model. To test whether Adjusted R^2 coefficient parameter is significant or not, Fisher method statistical test (F Test) with 95 % confidence level was performed. The test criteria is if $F_{cout} > F_{table}$ then Ho is rejected; and if $F_{count} \leq F_{table}$ then Ho is accepted. Test summary is shown in Table 7 :

Table 7
F Test

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	215,249	3	71,750	43,398	,000[b]
	Residual	324,048	196	1,653		
	Total	539,298	199			

a. Dependent Variable: ln_BPHTB_Y
b. Predictors: (Constant), ln_IKK_X3, ln_Populasi_X1, ln_Eco_Growth_X2
Source: SPSS Output (2016).

Table 7 shows that F_{count} is 43.398 with significance level 0,000. It shows that the influence of independent variables on BPHTB was overall accepted. The partial test shows :

Table 8
Result of t Test

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2,531	2,010		-1,260	,209
	ln_Populasi_X1	,436	,192	,241	2,267	,024
	ln_Eco_Growth_X2	,669	,178	,405	3,754	,000
	ln_IKK_X3	1,253	,347	,212	3,612	,000

Source: SPSS Output (2016)

Partially, variables total population, economic growth and Construction Cost Index had significant influences on revenue of BPHTB. It's shown by significance value below alpha 5%.

5.3. Discussion

Tax is the main capital to fund government activities in development. Most sources of state revenue are taxes, so taxes pay a major role in developing a country. When government purchases goods and services, there is flow of revenue from government to society. In this case, it includes several multiplier effects, such as employment creation and increased output. Increased income of the society will stimulate demands and in relatively limited supply, price tends to increase or inflation rate tends to increase. When some of the increased income of the society is taken by government through tax to finance the following budget deficit, it's called forced saving. Forced saving can be utilized to create capital. Tax also serves as an effort to regulate the allocation of income of the society. By collecting tax consistent with the mechanism, the government can allocate income to investments which can be enjoyed by a lot of people. With a lot of investments, employment will be created. So, the government indirectly reallocates and redistributes income. So the correct tax collection indirectly opens opportunity for public welfare and maintains stability by creating employments.

The best taxation in terms of economy is tax system which has the best effect or at least gives the least bad effects. Taxation to produce goodness is a principle stated by Adam Smith as cannon of taxation. If goods is taxed, the price paid by consumers will be higher than the price received by producer or seller, because some of the price is paid to the government. In some cases, tax will create greater burden than the collected value. Over-taxing is called welfare cost of taxation. It's important to clearly differentiate indirect cost (the welfare cost taxation) and direct cost (direct cost of taxation) in relations with collective productive sources from the private sector. This condition means there is no direct cost of a tax, because there is no tax revenue which can be collected by the government. However, clearly there is burden for the society due to tax because the product isn't produced while it's required by the society. Therefore, there is misallocation of production sources, so consumers are unhappy and lose their welfare, meaning they bear tax burden. In this case, there is welfare cost of taxation, although there is no direct cost of taxation. If the sales tax is collected at a certain level which produces some tax revenue, welfare cost of taxation and direct cost of taxation will occur. The efforts of local government to intensify or extend components of BPHTB could be observed from the development and size of the scope. Moreover, mayors and regents gave incentives to heads of sub-districts/notaries who have impressive revenue of BPHTB. There were variables which might influence BPHTPB, depending on local condition. The variables analyzed above are those considerd dominant and general in influencing NPOP and NJOP. Variables, such as local regulation or other regulations which support BPHTB, are proxies of efforts to increase scope by intensification or extension should receive attention. Moreover,

differing policies in every region influenced, especially power. To appropriately anticipate the variables, careful vision and analysis and continuous review are required.

CONCLUSION AND SUGGESTION

Conclusion

Variables Population Growth, Economic Growth and Construction Cost Index significantly influence the local revenue of Tax on Acquisition of Land and Building (BPHTB) simultaneously and partially after the implementation of Law No.28 of 2009.

Suggestion

1. The government should provide aids for regions with very low revenue of BPHTB. The aids should be focused on improving the condition of internal factors, such as trainings to increase human resources capacity, including improving skill in appraisal to produce NJOP which approach transaction value, guidance to formulate regulation and program, training to improve data quality, guidance to formulate mechanism of cooperation with notary, etc., and training to utilize information technology.

2. Construction Cost Index played a dominant role in influencing the amount of BPHTB in a region. The government's strategic step should be reinforcing infrastructure because declined IKK value will impact BPHTB.

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