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FACTORS AFFECTING THE DAMAGES ACEH AND INDONESIA RESPONDENT LEVELS (FACTORS AFFECTING INDONESIA-ACEH EMPLOYMENT RATE INQUALITY)

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ABSTRACT: *The study of the relation between unevenness of regional unemployment rate to national, with macro economic variable in region still relatively little studied by economic researchers. Whereas unemployment inequality is basically associated with various variables including non-economic variables as well as criminal rates. This study aims to analyze the factors that affect the imbalance of Aceh's unemployment rate to Indonesia. The data analyzed is quarterly data during the period of 2000-2015. The data analysis tool used is autoregressive distributed lag (ARDL). The study finds that in the short term the unemployment imbalance of Aceh to Indonesia is affected by unemployment imbalance itself, security condition, inflation, infrastructure investment, human resource investment and banking credit channeling. In the long run, all of the explanatory variables also affect the unemployment imbalance of Aceh towards Indonesia.*

KEYWORDS: Unemployment Unequal, Macroeconomic Variable, Crime Level and Autoregressive distributed lag (ARDL).

INTRODUCTION

Economic development is a process of per capita income of a country increased over a long period of time and the population below the absolute poverty line does not increase and the income distribution is unequal. Differences in the level of development will bring the impact of different levels of prosperity between regions in the end causing regional inequality between regions getting bigger (Suhartono, 2011). The regional inequality is not only related to income inequality, but also inequality in macroeconomic indicators. Inequality among regions in Indonesia can be seen from several indicators of macroeconomic variables including unemployment rate. The unbalance of unemployment rate between Aceh to Indonesia indicates a difference in economic performance with the performance of the national economy in general. Other imbalances in macroeconomic variables between Aceh and Indonesia are manifest in the unemployment rate. During the period of 2011-2015 the open unemployment rate (TPT) of Aceh was much higher when compared to the open unemployment rate in Indonesia, as shown in Graph 1.

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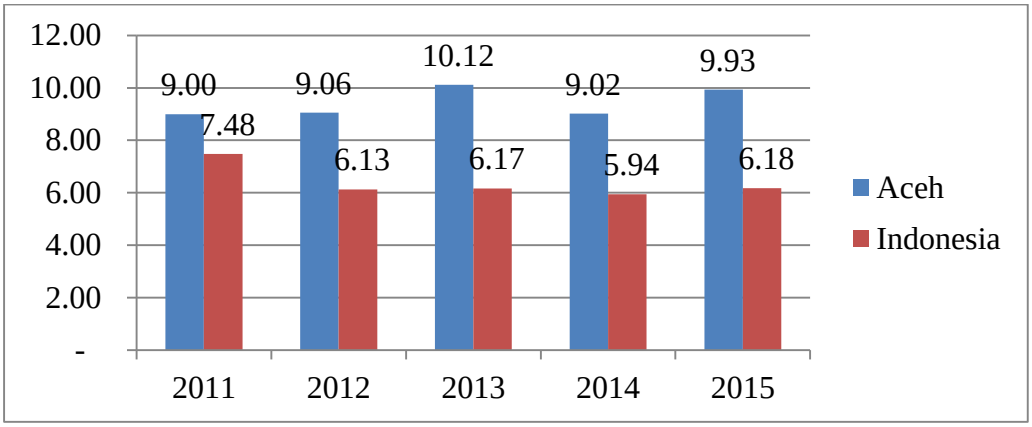

Graph 1

Comparison of Open Unemployment Rate (TPT) Aceh and Indonesia During the 2011-2015 Period

Theoretically there are many factors that can affect the condition of macro economic variables of a region. These factors have something to do with the economic variables themselves such as lending and inflation, for example, and some related to government policy in the form of local government investment. In addition, the macro economic condition of a region is also associated with non-economic factors such as security conditions for example. The linkage between credit channeling and macroeconomic variables has been widely evidenced by previous researchers (Osman, 2014, Tahir et al., 2015; Oladapo & Obalade, 2015). Previous Beck et al. (2001) and Inggrid (2006) also found that lending can affect macroeconomic variables such as economic growth and unemployment rates. Furthermore, the relationship between inflation with macroeconomic variables has also been proven by many researchers. Inflation can also affect unemployment (Mehrabani & Ghavam, 2008; Zabihi & Lotfi, 2012).

The linkage between government investment and inequality of macroeconomic variables has been studied by many previous researchers. Investment is the main source of economic growth in a region. Such investments in addition to physical infrastructure investments are also investments in human resources (Fleisher et al., 2010). Research Skare and Stjepanovic (2014) found that infrastructure investment and human resources as well as private investment have an effect on economic inequality. Investment in the field of human resources can also affect macroeconomic variables through improving the quality of human resources in the form of science (Cepar & Bojnec, 2012). Security conditions have an impact on macroeconomic variables. Because economic activity within a country requires security stability. Disruption of security stability in a country has an impact on the smoothness of economic activity which in turn adversely affects production output in the country (Goulas and Zervoyianni, 2015). In this study, security conditions are measured by the intensity of criminal rates occurring in an area. Inequality of Aceh's unemployment rate to Indonesia can certainly be predicted with various variables such as infrastructure investment, resource human investment, inflation, lending by banks and local security conditions.

Aceh government investment in the form of infrastructure expenditures and human resource upgrades tend to increase from year to year. In addition, Aceh's inflation rate tends to fluctuate. Likewise, security conditions based on the risk of a criminal population per 100,000 people also fluctuate. Furthermore, bank credit distribution tended to increase from year to year.

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Research that has been done by previous empirical evidence about the existence of interrelations between macroeconomic variables. Inflation, unemployment rate and security conditions are the variables that can explain the imbalance of macro economic variables between regions. Similarly, government expenditure in the form of infrastructure spending and human resource development can also explain the inequality of macroeconomic variables between regions, especially unemployment variables. Therefore, this study aims to analyze the relationship between macroeconomic variables with the unbalance of Aceh's unemployment rate to Indonesia.

LITERATURE REVIEW

Investment and Unemployment Rate

The main sources of economic growth in a region include investment. Such investments in addition to physical infrastructure investments are also investments in human resources (Fleisher et al., 2010). Investment in the form of physical infrastructure can be in the form of development of transportation infrastructure, communication and so forth. In relation to the imbalance of macroeconomic variables between one region and another, Skare and Stjepanovic (2014) found that infrastructure investment and human resource and private investment had an effect on the unevenness of economic variables including unemployment rate unemployment. Areas with relatively large investments will tend to experience low unemployment rates, because investment can increase employment. The role of investment gets a lot of attention because of its potential in improving technology and production (Liu, 2009).

Inflation and Unemployment

Inflation is one of the macroeconomic variables that can affect economic growth. High inflation has a negative and significant impact on economic growth (Pirayi and Dadvar, 2011). Dadgar et al (2006) found that there is a non-linier relationship between inflation and economic growth. High inflation causes economic activity to be more expensive, especially in developing country economies. This means that the rate of inflation in an area will affect economic growth and ultimately impact on other macroeconomic variables such as unemployment, investment and so forth. Mehrabani and Ghavam (2008) studies provide empirical evidence that there is a long-term relationship between inflation and unemployment. Zabihi and Lotfi (2012) in their study also proved that there is a relationship between inflation and output gap as a result of its effects on unemployment. High inflation disrupts the level of economic activity resulting in reduced output and ultimately affects unemployment. Furthermore, Hamid et al. (2013) proves a long-term relationship between inflation and unemployment.

Security Condition and Unemployment Rate

Security conditions have an impact on macroeconomic variables. Because economic activity within a country requires security stability. Disruption of security stability in a country has an impact on the smoothness of economic activity which in turn adversely affects production output in the country (Goulas and Zervoyianni, 2015). In this study, security conditions are measured by the intensity of criminal rates occurring in an area. Research findings conducted by previous researchers present relatively different empirical evidence of the linkage between criminal rates and macroeconomic variables. Chatterjee and Ray (2009) found a negative relationship between growth and crime. Unlike Detotto and Otranto (2010) research findings,

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there is a non-linear relationship between economic growth and crime rates. The study was consistent with the findings of Elven's (2004) study which concluded that there was a non-linearity between growth and crime rate. Previous research findings Demombynesa and Zlerb (2005) provide empirical evidence of a significant relationship between crime rates with income inequality. The findings of research conducted by Altindag (2012) and Saridakisa & Spenglerb (2012) also concluded the relationship between crime rates with unemployment. Even the relationship between the two variables is causal in which unemployment affects criminal and criminal rates also affects the crime rate.

Credit Disbursement and Unemployment Rate

Bank lending is expected to have a positive impact on the improvement of the economic activities of the community which ultimately can increase economic growth in the region. The positive impact of bank lending on economic growth is reinforced by some of the empirical research findings conducted by previous researchers. Inggrid (2006) finds that there is bidirectional causality between economic growth and credit volume. This means that the volume of banking credit affects economic growth, and vice versa. Osman (2014), Tahir et al. (2015) and Oladapo & Obalade (2015) found empirical evidence that bank lending could boost economic growth and reduce unemployment.

RESEARCH METHODS

The data used in this study are secondary data coming from various related agencies, among others: Central Bureau of Statistics (BPS), Bank Indonesia (BI) and other institutions. In addition, data sources are also obtained from books and magazines related to this research. The data used in this research is time series data during the period of 2000-2015 (n = 16 years). The data is then transformed into quarterly data form. The entire transformation process uses Eviews sotware. In accordance with the objectives to be achieved in the study, the analysis model used consisted of the Williamson Index and Autoregressive Distributed Lag (ARDL). The use of ARDL as a data analysis tool is due to the influence of an explanatory variable on the imbalance of Aceh's economic variables to Indonesia can occur in certain lag time horizons.

1. Williamson Index

The Williamson Index used to measure unbalance open unemployment rate **(TPT) is formulated as follows.** $Vw = \frac{\sqrt{\sum_i (Yi - Yb)^2 . fi/n}}{Yb}$

Where:

Yi: Aceh's unemployment rate in year t period.

Yb: Indonesia's unemployment rate in year t.

fi: The population of Aceh in the year t period

n: The number of Indonesians in the year t period.

Vw: Williamson Index Coefficients.

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

Autoregressive Distributed Lag (ARDL)

Autoregressive Distributed Lag (ARDL) is used to analyze the effect of inflation, human resource investment, infrastructure investment, credit distribution and security conditions to unemployment rate imbalance can be stated as follows (Rosadi, 2011).

Information:

Vw = Indices Williamson Acehn unemployment rate towards Indonesia

Iinf = Government investment for infrastructure development

ISDM = Government investment for increasing human resources.

Inf = Inflation

PK = Distribution of bank credit by commercial banks.

KK = Security conditions

α = Constants

ß = Regression coefficient

Operational Variable

1. The unemployment rate is the open unemployment rate of the province of Aceh within a certain period of time as measured by the percentage.
2. Government investment in infrastructure is the total government expenditure in the given year period allocated for infrastructure development in Aceh as measured by million rupiah.
3. Government investment in the field of human resources is the total government expenditure in the given year period allocated for the improvement of human resources in Aceh as measured by million rupiah.
4. Inflation is the tendency of rise in general prices in the year t period is calculated by the percent unit.
5. Loans disbursement is the distribution of credit by commercial banks in a certain period of time is calculated with million rupiah units.
6. Security condition, is the security condition of Aceh province as measured by criminal tendency in certain period of year. This variable is measured from people's risk of criminal acts per 100,000 people.

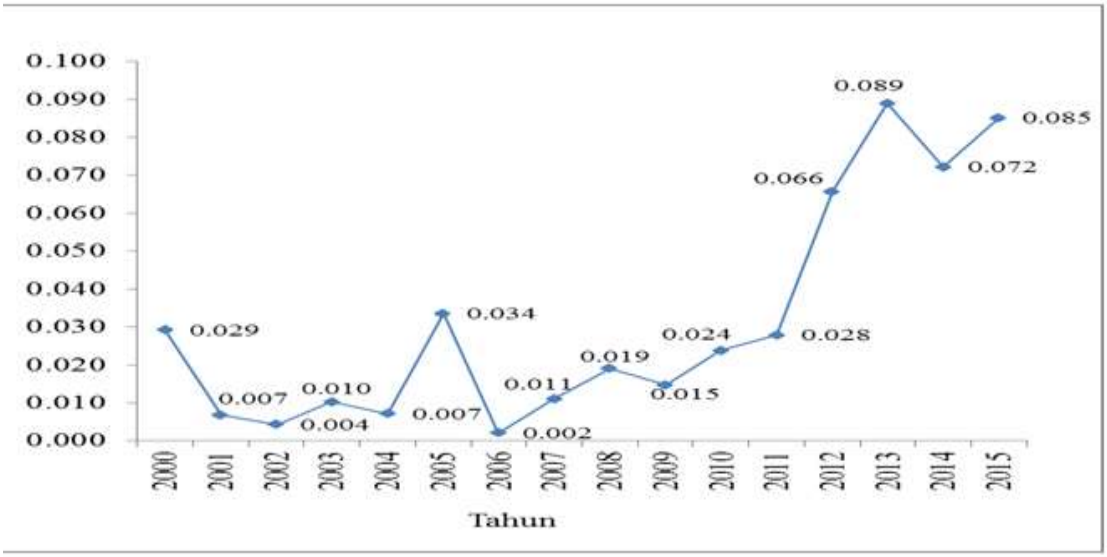
RESULT AND DICUSSION

The Development of Unemployment of Aceh's Unemployment Rate to Indonesia

Unemployment inequality between Aceh and Indonesia tends to fluctuate from year to year. In 2000, Aceh's unemployment rate was 4.795%, and in the same year period Indonesia's

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

unemployment rate was 6.08%. The calculation shows that the unbalance of Aceh's unemployment rate to Indonesia in the period of the year is 0.0292. Furthermore, in 2001 Aceh's unemployment rate increased to 7.705%, and in the same period of the same year Indonesia's unemployment rate was 8.10%. Although both data showed significant increases, unemployment inequality between Aceh and Indonesia decreased to 0.0068. In 2006, Aceh's unemployment rate was 10.43%, and Indonesia's unemployment rate for the period of the year was 10.28%. The inequality of both variables is 0.002 is relatively small. Until 2010, Aceh's unemployment rate was 8.371%, higher than Indonesia's unemployment rate of 7.14%. The williamson index of unemployment inequality in that year period is 0.024 bigger compared to the previous year's imbalance of 0.015. In the following year, Aceh's unemployment rate to Indonesia continues to increase until the period of 2015 to 0.072. Then increase again to 0.085 by 2015. For more details about the development of williamson index measures the unemployment imbalance of Aceh to Indonesia can be seen Graph 2.



Graph 2.

Growth of Williamson Indices Open Unemployment Rate

Against Indonesia During the 2000-2015 Period

Inequality of Aceh's unemployment rate to Indonesia tends to increase from year to year. The highest imbalance occurred in 2013 with williamson index of 0.089. In that year period, Aceh's unemployment rate was 10.117% much higher than Indonesia's unemployment rate of 6.17%. The tendency to increase Aceh's unemployment inequality to Indonesia is also caused by relatively less job opportunities in Aceh compared to other provinces in Indonesia. The lack of private sector roles in economic activity and the increasing number of labor force in line with the increase in population, is a major contributing factor to the increasing unemployment imbalances between Aceh and Indonesia.

Unit Root Test Results

The first step of research time series data is to test unit root (unit root test) against each research variable. Unit root test in this research using ADF (Augmented Dickey Fuller) and Phillips-Perron (PP) test. The root unit test test using the ADF test shows that at the level of only

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

statistical imbalance of the declared PMDN. This is indicated by the prob value of 0.023. On the contrary, PDRB inequality, export imbalance, import imbalance, budgetary imbalance, infrastructure investment, human resource investment, inflation, credit distribution and security condition variable are not stationary. Furthermore, by using Phillips-Perron test at variable level stated stationary consist of PMDN inequality with prob value equal to 0,056, IPM inequality with prob value equal to 0,058 and and inflation with prob value equal to 0,083. Unit root test is then continued on the first diference. At this stage all variables are stationary, either by using ADF test or Phillips-Perron test. For more details about the unit root test results can be seen Table 1.

Table 1 Root Test Results Unit (Unit Root Test)

No	Variabel	Augmented Dickey-Fuller				Phillips-Perron			
		Level		First		Level		First	
		t-stat	prob	t-stat	prob	t-stat	prob	t-stat	prob
1	Unemployment Inequality (UI)	0.139	0.966	-3.346	0.017**	-0.287	0.920	-4.268	0.001***
2	Infrastructure Investment (II)	-1.282	0.632	-3.974	0.003**	-1.018	0.742	-4.044	0.002***
4	Human Resource Investment (HRI)	-1.198	0.669	-4.176	0.017**	-1.267	0.639	-4.149	0.001**
5	Inflation (Inf)	-1.634	0.459	-3.102	0.032**	-2.679	0.0832*	-4.947	0.000**
6	Distribution of Credit (DC)	1.748	0.999	-4.588	0.011**	3.179	1.0000	-4.494	0.012**
7	Security Condition (SC)	-1.346	0.602	-4.465	0.012**	-1.144	0.693	-4.326	0.000***

Source: Research Result, 2017 (Processed).

Information:

*): stationary at 90% confidence

**): stationary on 95% confidence

***): stationary on 99% confidence

Based on Table 1 above it can be seen that all variables are stationary at first difference. So the use of ARDL on the first diference can be done

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

Analysis of the Influence of Infrastructure Investment, Human Resources Investment, Inflation, Distribution of Banking Credit and Security Conditions to Unemployment Inequality

Aceh's unemployment inequality to Indonesia is basically not so great. Time series data during the period 2000-2015 shows that in certain period of year Aceh's unemployment rate is lower than national unemployment rate. In 2000 and 2001 for example, Aceh's unemployment rate for the two periods of the year amounted to 4.795% and 7.705%. In the same year period, Indonesia's unemployment rate was 5.08% and 8.10%, respectively. In 2004 the unemployment rate in Aceh was still lower compared to the national unemployment rate. Increased unemployment rate in Aceh compared to national unemployment rate occurred in 2005 to 2015. Cointegration tests to see whether or not there is a long-term relationship between unemployment disparities (VwPG) with infrastructure investment, human capital investment, inflation, credit distribution and security conditions are also based on bound tests. The test results showed a F-statistic score of 34.339 with optimal lag (4, 4, 4, 0, 4, 4) as shown in Table 2.Tabel 2. *ARDL Bound Test* Pengaruh Investasi Infrastruktur, Investasi SDM, Inflation, Distribution of

Banking Credit and Security Conditions to Unemployment Inequality

Model Ketimpangan Pengangguran		K	F-Statistik
VwPG = F(II, ISDM, Inf, PK, KK)		5	Lag (4, 4, 4, 0, 4, 4) 34,339
Signifikansi	Nilai Kritis (*Critical Value*)		
	Lower Bound I(0)	*Upper Bound* I(1)	
10%	2,26	3,35	
5%	2,62	3,79	
2,5%	2,96	4,18	
1%	3,41	4,68	

Source: Research Result, 2017 (Processed).

Based on Table 2 above it can be seen that the F statistic of 34.339 is greater than the upper bound of the critical value at the 10% confidence level of 3.35, the 5% confidence is 3.79, the 2.5 confidence of 4.18 and 1% confidence of 4.68. It can be concluded that there is a long term relationship (cointegration) of unemployment imbalances (VwPG), infrastructure investment (II), human resource investment (ISDM), inflation, credit channeling and security conditions. The selection of the best ARDL model with optimal lag combination is done automatically through selected eviews software based on Akaike Info Criterion (AIC). Based on AIC selection, the best ARDL model for this research model is ARDL (4, 4, 4, 0, 4, 4). The value of Adjusted R-squared in the model of 0.9601, can be interpreted to be only 96.01% of unemployment variations of Aceh to Indonesia (VwPG) can be explained by the five explanatory variables (infrastructure investment, human capital investment, inflation, banking credit and security conditions).

In the short term, the variables that significantly affect unemployment unemployment are the unemployment itself, security conditions, inflation infrastructure investment, human resource investment, and lending. The inflationary effect on Aceh's unemployment disparity towards Indonesia occurs in lag 0 (positive). This means that the increase in the price of goods (inflation) encourages the labor force to obtain employment so that the unemployment rate decreases. Lowering the unemployment rate makes unemployment unemployment between

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

Aceh and Indonesia also declining. Human Resource investment negatively affects unemployment unequal in lag 0 and lag 4 (negative). Increasing government spending to finance education has an impact on improving the quality of human resources so that they will find it easier to find jobs so that the unemployment rate will decline. The declining unemployment rate has resulted in less Aceh's unemployment inequality in Indonesia. For more details about ARDL infrastructure investment, human resource investment, inflation, credit distribution and security conditions for Aceh unemployment imbalances to Indonesia can be seen Table

Table 3. Estimation of ARDL Infrastructure Investment, Human Resources Investment, Inflation, Distribution of Banking Credit and Security Conditions to Unemployment Inequality

Model selection method: Akaike info criterion (AIC)
Dynamic regressors (4 lags, automatic): DKK DINF DII DISDM DPK

Fixed regressors: C
Number of models evalulated: 12500
Selected Model: ARDL(4, 4, 4, 0, 4, 4)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
DPG(-1)	0.065041	0.068008	0.956376	0.3458
DPG(-2)	0.014645	0.069477	0.210782	0.8344
DPG(-3)	-0.013279	0.068633	-0.193485	0.8478
DPG(-4)	**-0.157159**	**0.056231**	**-2.794873**	**0.0086**
DKK	-1.67E-05	2.12E-05	-0.784585	0.4383
DKK(-1)	2.93E-06	1.54E-05	0.190754	0.8499
DKK(-2)	2.01E-06	1.54E-05	0.130493	0.8970
DKK(-3)	2.93E-06	1.53E-05	0.191536	0.8493
DKK(-4)	**-0.000101**	**1.71E-05**	**-5.878368**	**0.0000**
DINF	**0.000663**	**7.03E-05**	**9.433610**	**0.0000**
DINF(-1)	-9.14E-05	9.71E-05	-0.941670	0.3532
DINF(-2)	-2.02E-05	9.98E-05	-0.202916	0.8404
DINF(-3)	1.74E-05	9.87E-05	0.176017	0.8614
DINF(-4)	**-0.000324**	**0.000106**	**-3.066606**	**0.0043**
DII	**3.40E-09**	**8.56E-10**	**3.972553**	**0.0004**
DISDM	**-2.65E-08**	**2.57E-09**	**-10.32603**	**0.0000**
DISDM(-1)	1.17E-09	2.59E-09	0.449317	0.6561
DISDM(-2)	5.78E-10	2.61E-09	0.221915	0.8257
DISDM(-3)	6.59E-10	2.59E-09	0.254527	0.8007
DISDM(-4)	**-9.06E-09**	**3.04E-09**	**-2.982359**	**0.0053**
DPK	**-2.98E-09**	**7.62E-10**	**-3.910138**	**0.0004**
DPK(-1)	4.16E-10	8.13E-10	0.511540	0.6124
DPK(-2)	4.18E-11	8.26E-10	0.050572	0.9600
DPK(-3)	-2.77E-10	8.22E-10	-0.336815	0.7384
DPK(-4)	**9.25E-09**	**8.68E-10**	**10.65365**	**0.0000**
C	-0.000221	8.30E-05	-2.665696	0.0118
R-squared	0.977301	Mean dependent var		0.000357

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

Adjusted R-squared	0.960104	S.D. dependent var	0.001585
S.E. of regression	0.000317	Akaike info criterion	-12.97765
Sum squared resid	3.31E-06	Schwarz criterion	-12.06212
Log likelihood	408.8406	Hannan-Quinn criter.	-12.62026
F-statistic	56.83190	Durbin-Watson stat	1.004701
Prob(F-statistic)	0.000000		

*Note: p-values and any subsequent tests do not account for model selection
Source: Research Results, 2017

In the short term, banking credit distribution also affects the unemployment imbalance of Aceh towards Indonesia. In lag 1, credit distribution has a negative effect, which means that lending in Aceh over a certain period of time (t) has an impact on the decline in Aceh's unemployment rate in the next period (t + 1). Credit channeling by financial institutions can have a positive impact on the development of community businesses so that employment opportunities are wider. In turn, the condition will decrease the unemployment rate so that unemployment imbalance between Aceh and Indonesia is getting smaller. Output eviews showing the long-term equality between unemployment disparities (VWPG) between Aceh and Indonesia as a function of security conditions (DHO), inflation (DINF), infrastructure investment (DII), human resources investment (DISDM), and lending (DPK) such as shown in Table 4.

Table 4. Long Term Estimation Result Influence Infrastructure Investment, Human Resource Investment, Inflation, Distribution of Banking Credit and Security Conditions to Unemployment Inequality

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DKK	**-0.000100**	**0.000025**	**-4.032349**	**0.0003**
DINF	**0.000224**	**0.000109**	**2.058846**	**0.0475**
DII	**0.000000**	**0.000000**	**4.178402**	**0.0002**
DISDM	**-0.000000**	**0.000000**	**-10.135089**	**0.0000**
DPK	**0.000000**	**0.000000**	**10.512263**	**0.0000**
C	**-0.000203**	**0.000077**	**-2.647418**	**0.0123**

Source: Research Result, 2017 (Processed).

The coefficient value of long-term security condition (DKK) to unemployment inequality shows negative number with probability value of 0.0003. This means that the increase in criminal activity in Aceh as a security benchmark has a negative impact on the unemployment rate of Aceh and Indonesia. The worse the security situation in Aceh, the greater the unemployment rate between Aceh and Indonesia. The worsening security conditions can cause the unemployment rate to increase, resulting in Aceh's unemployment rate being higher than the national average unemployment rate. This is what causes in the long run, security conditions have a significant impact on the increase in unemployment rate between Aceh and Indonesia. DISDM value shows a negative number which means the bigger investment in human resources, the less unbalance the unemployment rate between Aceh and Indonesia. Based on the probability value of 0,0000 can be interpreted the increase of human resource

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investment can significantly impact on the decrease in unemployment rate between Aceh and Indonesia.

CONCLUSION AND SUGGESTION

This study aims to analyze the factors that affect the imbalance of Aceh's unemployment rate to Indonesia. The data analyzed is quarterly data during the period of 2000-2015. The study finds that in the short term the unemployment imbalance of Aceh to Indonesia is affected by unemployment imbalance itself, security condition, inflation, infrastructure investment, human resource investment and banking credit channeling. In the long run, all of the explanatory variables also affect the unemployment imbalance of Aceh towards Indonesia. Referring to the conclusion of the above, the Aceh government should seek to minimize the unbalance of Aceh's unemployment rate to Indonesia. With a relatively large regional budget, the Aceh government is expected to be able to take a development policy that is oriented towards improving the development of the business world, increasing investment so that the unemployment rate can be lowered. In turn, Aceh's unemployment imbalance to Indonesia will be smaller. In addition, the allocation of local budgets in the form of infrastructure spending, human resource expenditures should also be oriented to the expansion of employment in the regions so that employment opportunities for the labor force increase in order to reduce unemployment.

REFERENCES

Altindag, D. T. 2012 Crime and unemployment: Evidence from Europe, *International Review of Law and Economics* 32, 145– 157

Beck, T. et. al. 2001. *Financial Structure and Economic Development: Firm, Industry, and Country Evidence*. Cambridge: MIT Press.

Cepar, Z. dan Bojnec, S., 2012. Probit model of higher education participation determinants and the role of information and communication technology. *Ekonomska istraživanja - Economic Re search*, 5(1), 267-288.

Chatterjee, I., Ray, R., 2009. *Crime, corruption and institutions*. Working Paper No. 20. Monash University.

Dadgar, E., Keshavarz, Gh. and Tiatrej, A. (2006). Explaining the relationship between inflation and economic growth in Iran, *Journal of Economic Essays*, 5, 59-88.

Demombynesa, G., dan Zlerb, B. O. 2005. Crime and local inequality in South Africa, *Journal of Development Economics* 76, 265– 292.

Detotto, C., Otranto, E., 2010. Does crime affect economic growth? Kyklos 63 (3), 330–345.

Fleisher, B., Li, H., dan Zhao, M. Q. 2010. Human capital, economic growth, and regional inequality in China, *Journal of Development Economics.* 9(2), 215–231.

Goulas, E., dan Zervoyianni (2015). Economic growth and crime: Is there an asymmetric relationship?, *Economic Modelling* 49, 286–295.

Hamid, B. A., Habibullah, M. S., & Noor, Z. M. 2013. Crime and Its Socio-Macroeconomics Determinants: A Panel-Error-Correction Cointegration Analysis, *Jurnal Ekonomi Malaysia* 47(2); 13 – 24.

Inggrid, 2006. Sektor Keuangan Dan Pertumbuhan Ekonomi Di Indonesia: Pendekatan Kausalitas Dalam Multivariate Vector Error Correlation Model (VECM), *Jurnal Manajemen dan Kewirausahaan*, 8(1), 40-50.

ISSN 2053-4086(Print), ISSN 2053-4094(Online)

Liu, Zhiqiang, 2009. Human capital externalities and rural–urban migration: evidence from rural China. *China Economic Review*. 19, 521–535.

Mehrabani, V., dan Ghavam, M. 2008. Inflation, preventing or stimulating economic growth. *Journal of development strategy*, 15, 39-57.

Oladapo, F., dan Obalade A. A. 2015. Sectoral Allocation of Banks' Credit and Economic Growth in Nigeria, *International Journal of Academic Research in Business and Social Sciences* 5(6),161-169.

Osman, E. G A. 2014. The Impact of Private Sector Credit on Saudi Arabia Economic Growth (GDP): An Econometrics Model Using (ARDL) Approach to Cointegration**,** *American International Journal of Social Science,* 3(6), 109-117.

Peri, G., 2004. Socio-cultural variables and economic success: evidence from Italian provinces 1951–1991. B.E. J. Macroecon. 4(1), 1–34.

Pirayi, Kh. and Dadvar, Bahare. (2011). the impact of inflation on economic growth in Iran with an emphasis on uncertainty, *Economic Research Quarterly Journal,* 1(11), 67-80.

Saridakisa, G., & Spenglerb, H. 2012. Crime, deterrence and unemployment in Greece: A panel data approach, *The Social Science Journal 49*, 167–174

Skare, M., dan Stjepanovic, S. 2014. Income Distribution Determinants And Inequality – International Comparison, *Economic Interferences,* 16(37), 980-993.

Suhartono. 2011. Struktur Ekonomi, Kesempatan Kerja dan Ketimpangan Pendapatan Di Provinsi Jawa Tengah**,** *Jurnal Organisasi dan Manajemen,* 7(2), 86-101.

Tahir, S. H., Iqra S., Ishfaq A., dan Muhammad, R. U. 2015. Impact of Bank Lending on Economics Growth in Pakistan: An Empirical Study of Lending to Private Sector, *American Journal of Industrial and Business Management,* 5(3), 565-576.

Zabihi, M., & Lotfi, M. (2012). Checking dimensions of unemployment and its relationship with two variables of inflation and economic growth, *the first National Conference of Industrial a nd Systems Engineering*.

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