ANALYSIS OF THE INFLUENCE OF HUMAN CAPITAL ON ECONOMIC GROWTH IN ASEAN COUNTRIES

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ABSTRACT

Every country or region must have good development to create a future for its people. Economic factors, natural resources, human resources, health, technology, and infrastructure will influence a country's economy. This research aimed to determine the extent of the impact of human capital on the economy in ASEAN. This research employed a quantitative method using secondary data from 2009-2019 in three countries. The analysis used was panel data regression analysis. This research indicates that human resources, which include labor and life expectancy, have a positive and significant influence. The level of education has a significant negative effect on economic growth. The factor that has the dominant influence on the economic growth of ASEAN countries is labor.

Keywords: human capital, labor, education level, life expectancy, economic growth

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INTRODUCTION

Economic growth is inseparable from human resources in a developing country. Effective human resources are the starter for a country's economic growth and necessary for economic growth. Human capital itself, in simple terms, is nothing but physical capital such as property, equipment, and financial capital. This capital has been defined as knowledge, skills, creativity, and individual health (Pasban & Nojedeh, 2016). Economic activity results depend on the efficient use of human resources, including an efficient workforce, the quality of education, and the level of health in each country. Given the diverse potential of each country, it is recommended that these countries determine the activities of the dominant sector (leading).(Raman, 1994).

Table 1 Per Capita GDP (current US$)

Year	Vietnam	Indonesia	Thailand
2009	1.217.269	2.261.247	4.213.006
2010	1.317.891	3.122.363	5.076.340
2011	1.525.116	3.643.044	5.492.121
2012	1.735.141	3.694.349	5.860.583
2013	1.886.672	3.623.912	6.168.263
2014	2.030.252	3.491.625	5.951.884
2015	2.085.101	3.331.695	5.840.647
2016	2.192.215	3.562.846	5.994.231
2017	2.365.622	3.837.652	6.592.915
2018	2.566.597	3.893.846	7.295.476
2019	2.715.276	4.135.569	7.806.742

Source : World Bank Data (2019)

GDP per capita is one indicator in assessing economic growth in that country. From Table 1.1 above, the economic growth in Vietnam has continued to increase inversely with Indonesia and Thailand, which experienced a decline in 2013 due to the global economic downturn. Human resource is an indicator of success or prosperity in a country. Operationally, improving the quality of human resources is carried out in various sectors, including education, health, labor sectors, and many others. The workforce and the education sector are closely related. Each country with good quality education will lead to optimal performance in the workforce to increase life expectancy.

Figure 1 School Enrollment, Primary (%gross)

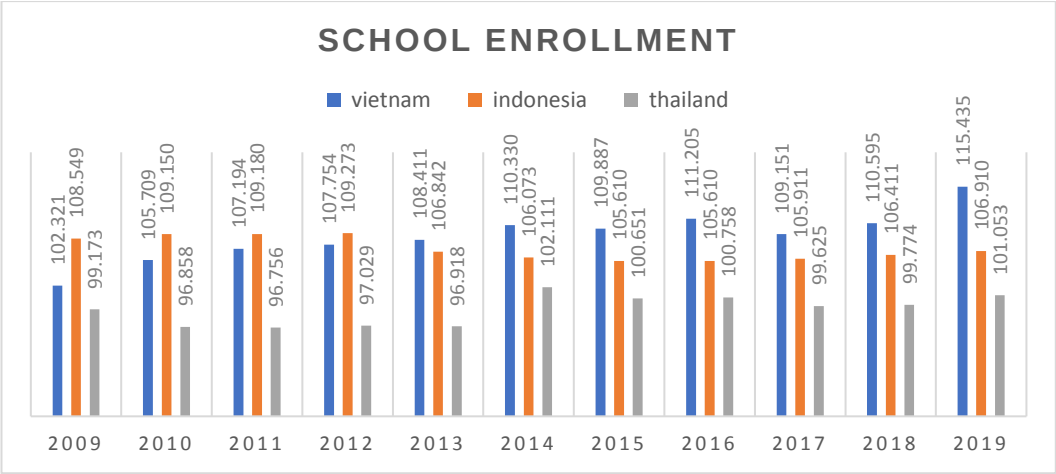


Figure 2 Total of Labor Force

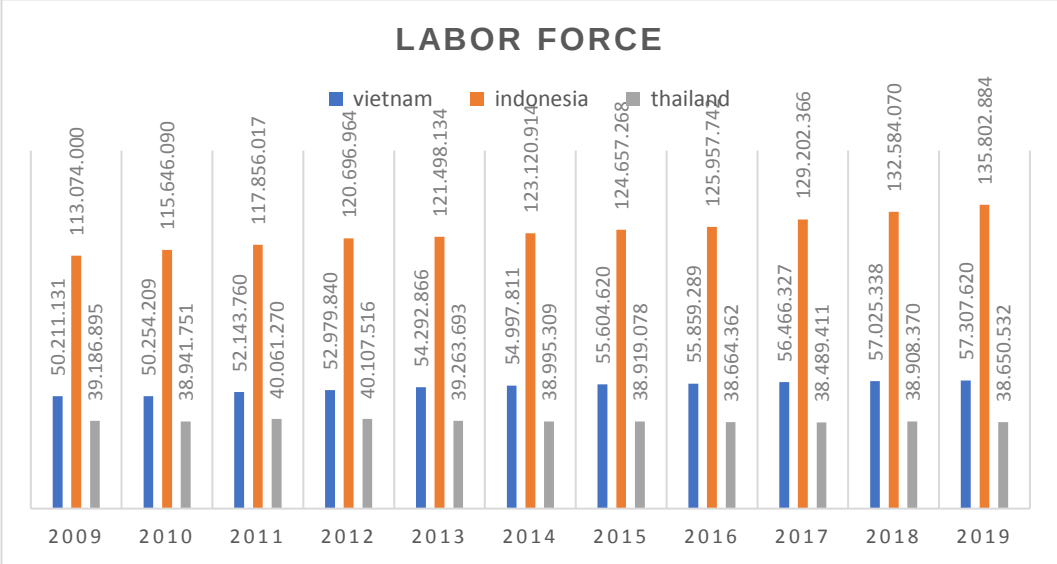
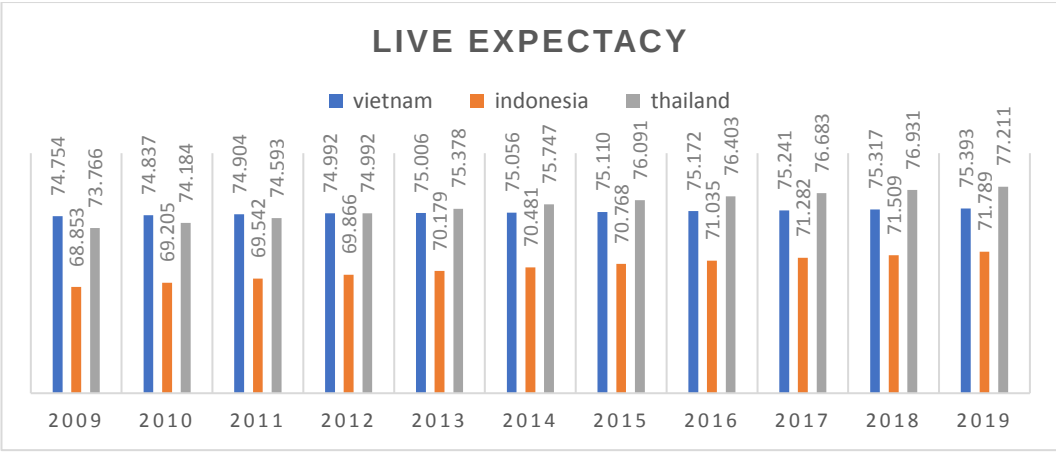


Figure 3 Life Expectancy at Birth, Total (years)



Source: World Bank Data (2019)

The three sectors such as school enroolment, labor force, and life expectancy are interrelated because creating good economic growth demands individuals to continue to higher education to become workers who can meet company criteria or can create jobs, and a high life expectancy supports individuals in achieving education and labor. Based on the period of labor force data from 2009 to 2019, the three countries experienced fluctuation every year with different factors. Based on this phenomenon, the researchers are interested in conducting research entitled "Analysis of the Influence of Human Resources on Economic Growth in ASEAN Countries."

LITERATUR REVIEW

Economic Growth

Economic growth is also known as an indication of success in the country. In this sense, it can be concluded that both developed and developing countries are not spared from efforts to spur economic growth. Indicators of success are seen from the achievement of high economic growth, as well as its success in carrying out the economic transformation from the primary sector to the secondary and tertiary sectors (Lonni, Kasnawi, & Uppun, 2012). An economy is said to be growing or developing if economic activity is higher than what has been achieved in the previous period. The economy is said to grow from the accumulation of (physical) capital that has just begun, economic growth, in a limited sense, is an increase in national income per capita, and it involves analysis, primarily quantitatively, of these processes, focusing on functional relationships between endogenous variables. In a broader sense, it consists in increasing GDP, GNP and NI, therefore national wealth, including production capacity, expressed in absolute and relative measures, per capita, also includes structural modifications of the economy (Muhamad, Che Sulaiman, & Saputra, 2018)

Level of Education

According to the KBBI (Kamus Besar Bahasa Indonesia) the level is an arrangement of layers or wobbles such as the sway of a house, pedestal on a ladder (tiers). It is similar to high and low class (position, position, the progress of civilization, rank, degree, and so on). The level is a rank, position, layer, or class of an arrangement. Level is very important in terms of position, which indicates a difference in the high and low of a position. In other words, level is a separator between high and low positions because level can be said to be the separator between high ranks to lower ranks.The definition of education, according to Law Number 20 of 2003 concerning the National Education System, is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious-spiritual strength, self-control, personality, intelligence, noble character, and skills needed by themselves, society, nation, and state. Experts put forward various meanings about education, including (Idris, 2010), who explains that "Education is a series of communication activities that aim between adult humans and students face-to-face or by using the media in order to assist in children's development as a whole.

Labor Force Theory

Human resources (HR) contain two meanings. First, human resources contain the meaning of work or services provided in the production process. In this case, HR reflects the quality of the effort given by a person in a certain time to produce goods and services. Everyone who works to produce goods and services to fulfill their needs and the community is called labor. (Mankiw, Manulang, Istighosah, & Istighosah, 2012) define labor as the population of working age (aged 15-64 years) of the total population in a country who can produce goods and services if there

is a demand for them and if they want to participate in the activity. In addition, it is explained that the workforce is an individual who offers the skills and abilities to produce goods or services so that the company can make a profit.

RESEARCH METHODS

Operational Definition of Research Variables

Everything that will be used as research objects is often referred to as research variables, while an operational definition is a definition given to a variable. This research examined three variables, namely one dependent variable and two independent variables.

1. Dependent Variable

   A variable is a representation of constructs that can be measured through various values. In this case, variables can provide a more specific picture of the generalized phenomena in construction. A variable is also an attribute of a group of objects under study that have differences between one object and another object. In the implementation of research, variables occupy an important position because before the researcher collected the data, they must first determine the variables that are the focus of the research. The dependent variable (dependent) is a variable whose value is influenced by the independent variable (free) (Sugiono, 2012).

   To see the contribution to economic growth conditions, the economic growth variable in the three countries can be seen using the GDP per capita of each country. In this research, the data used to measure economic growth is GDP per capita. The reason is that it shows the nominal value of goods and services produced by the country.

2. Independent Variable

   An Independent variable is a variable whose variations can affect other variables. This independent variable is a variable of labor, education, and life expectancy.

   - Labor

   In economic development, its success is influenced by production factors. To produce a good or service is technically defined as a factor of production. As an indicator of the factors of production, this research utilized data from the total workforce of each country.

   - Education

   Level of education in a country will show the quality of the population in that country. In this research, the level of education was measured by data on the enrollment level entering elementary schools because primary school is the basic level that residents must take. Because at this basic stage, the population has a literacy rate indicator.

   - Life expectancy

   Life expectancy is a tool for evaluating the government's performance in improving the population’s welfare in general and increasing the degree of health in particular. Low life expectancy in an area must be followed by health development programs and other social programs, including environmental health, adequate nutrition, and calories, including poverty eradication programs because life expectancy can be a health-related indicator in a country.

Research Design

In conducting this research, the researcher analyzed the effect of human resources on economic growth in ASEAN countries. Referring to the formulation of the problem, the method employed in this research was a quantitative approach. According to Apuke (2017), quantitative research measures and analyzes variables to get results.

In this research, the data were sourced from data published by World Bank Data. This research is a descriptive analysis that describes in more detail the characteristics of efforts to

determine the frequency of occurrence of the effect of each independent variable on the dependent variable. Besides, the researcher also tested the theory related to the hypothesis, whether the hypothesis was accepted or rejected. This research aimed to use a descriptive approach to explain the facts contained in the variables, namely the analysis of the effect of human capital on economic growth in ASEAN countries.

Location and Time of the Research

This research aimed to determine the effect of human capital on economic growth in ASEAN countries, and the countries selected by the researcher are Vietnam, Indonesia, and Thailand. The researcher selected the three countries because Vietnam's economic income was under Indonesia, and Thailand was above Indonesia. At the same time, Indonesia was chosen because Indonesia is the researcher's country of origin. Time retention examined was ten years from 2009 to 2019.

Data Collection Methods

Data collection method used in this research is the documentation technique. Documentation technique is obtained based on past events or can be in the form of notes. The data used in this research is secondary data. Secondary data is data obtained from other parties or, in this case, in the form of related institutions. The data used is cross-section data from 2009 to 2019 obtained from World Bank Data.

FINDINGS AND DISCUSSIONS

Estimation Results of Random Effect

The Chow and Hausman tests were used to compare which model was the best among the three existing models before any estimation. Based on the Chow test and the Hausman test, it was found that the best model used was the Random Effect Model.

Table 2 Result of Random Effect Model

Variable	Coef	Std. Error	t-Statistik	Prob.
Cons	-33401.06	161172.2	-0.21	0.836
Lab force	.0353546	.0145397	2.43	0.015
Sch enroll	-3.039694	.4856306	-6.26	0.000
Life expect	4.961466	2.068433	2.40	0.016
Adjusted R-squared	0.6150			
F – statistic	46.33			
Prob (F-statistic)	0.0000			

Source: Stata 14, 2021 (data processed by the researcher)

Based on the test results using the Random effects model in Table 4.6 with the regression model, it can be concluded that

EG : -33401.06 + .0353546 LF -3.039694 SE + 4.961466 LE + e

From the equation model above, it is explained that the value of the regression constant is 33401.06, meaning that if the labor force, school enrollment, and life expectancy are 0, then economic growth will have a fixed value of -33401.06.

a. The labor force variable has a probability value of 0.015, it means this value is smaller than the significant level of (5%), so it can be concluded that the labor force variable has a significant influence on economic growth. To find out the relationship pattern between labor force and economic growth, this research did a direction test by looking at the sign (+/-) on the coefficient of the labor force variable. The sign (+) on the labor force coefficient indicates that the labor force variable has a significant positive effect on economic growth. The assumption is that if there is a 1% increase in labor force, it will increase the economic growth by .0353546%.
b. School enrollment variable has a probability value of 0.000 which means this value is smaller than the significant level (5%), so it can be concluded that the School Enrollment variable has a significant influence on economic growth. To find out the relationship pattern between school enrollment and economic growth, this research did a direction test by looking at the sign (+/-) on the school enrollment variable coefficient. The sign (-) on the school enrollment coefficient indicates that the school enrollment variable has a significant negative effect on economic growth. The assumption is that if there is a 1% decrease, it will decrease the economic growth by -3.039694%
c. Life expectancy variable has a probability value of 0.016 which means this value is smaller than the significant level (5%), so it can be concluded that the life expectancy variable has a significant effect on economic growth. To find out the relationship pattern between life expectancy and economic growth, this research did a direction test by looking at the sign (+/-) on the coefficient of the variable life expectancy. The sign (+) on the life expectancy coefficient indicates that the life expectancy variable has a significant positive effect on economic growth. The assumption that if there is a 1% increase in life expectancy, it will increase the economic growth by 4.961466%.

R-squared

The R-Squared value from the panel data regression results using the random effects model is 0.9750 or 97.50% with the interpretation that the independent variables, namely labor force, life expectancy, and school enrollment, can explain the dependent variable, namely economic growth. Meanwhile, the rest is explained by other variables outside the model. It illustrates that the three independent variables are quite influential on economic growth.

T-test

The T-test aims to determine the influence of the independent variable on the dependent variable but individually. The t-statistic value with a value greater than 11 states the influence of the independent variable individually on the dependent variable. Based on the findings of panel regression with the chosen model of random effects, the t-statistical values obtained are as follows:

1. Labor force variable with a t-statistic value of 2.43, which means the value is greater than 11. It can be stated that the labor force variable has an individual effect on economic growth.
2. The school enrollment variable with a t-statistic value of – 6.26, which means the value is smaller than 11. It can be stated that the school enrollment variable has no individual effect on economic growth.

3. Life expectancy variable with a t-statistic value of 2.40, which means its value is greater than 11. It can be stated that the life expectancy variable has an individual effect on economic growth.

F- Test

The F -Test aims to test the independent variables on the dependent variable but simultaneously. Based on the results of panel data regression, the probability value of the F -statistic is 0.0000. This value is smaller than the significance value of (5%). It can be stated that the three independent variables, namely labor force, life expectancy, and school enrollment simultaneously (together) have an influence on economic growth.

Labor Force on Economic Growth

Labor force variable has a probability value of 0.015, which means this value is smaller than the significant level (5%). It can be concluded that the labor force variable has a significant influence on economic growth. To find out the relationship pattern between labor force and economic growth, this research did a direction test by looking at the sign (+/-) on the coefficient of the labor force variable. The sign (+) on the labor force coefficient indicates that the variable has a significant positive effect on economic growth. The assumption is that if there is a 1% increase in freedom of trade, it will increase the economic growth by .0353546.

Labor refers to everyone who can produce goods or services through work, which cannot only meet their own needs but also serve the community. As a productive workforce, it can be seen by how large the population is economically active as workers. The workforce itself is a potential resource that can be used as a driver and implementer of development to advance national development in the future. An increase and decrease in the number of workers absorbed by the sector economy will affect the country's economic growth. A high unemployment total may have a negative impact on the economy because unemployment will be a burden not only for the government but also has an impact on families, the environment, and others. Low unemployment means the number of workers has increased. It can reflect good economic growth and an increase in the quality of life of the population. Therefore, the welfare of the population increases.

The reason why labor has an influence on economic growth is that the more people who become workers and earn income, then they have good purchasing power so that they can trigger country’s economic growth. Economic progress cannot be separated from the productivity population when a company hires someone because a person produces goods or services to sell to consumers. The increasing demand of companies for labor depends on the increase in public demand for goods produced. The demand for labor is almost the same as the demand for goods and services in economics. The demand for labor is the number of workers demanded by a company at a certain level of wages. Whereas demand in economics is the number of goods demanded by consumers at a certain price level. So that productive workers are not only able to work in the company, but it is also possible to open up jobs and open for employment. This can improve the economy of a country. If companies are able to open a job area, companies must have sufficient capital, namely: physical and non-physical capital. This will also affect the level of purchasing power of the work so that the absorption of local labor is adequate.

School Enrollment on Economic Growth

Variable has a probability value of 0.000 which means this value is smaller than the significant level (5%). It can be concluded that the School Enrollment variable has a significant influence on economic growth. To find out the pattern of the relationship between school enrollment and economic growth, this research did a direction test by looking at the sign (+/-) on the school enrollment variable coefficient. The sign (-) on the school enrollment coefficient indicates that the school enrollment variable has a significant negative effect on economic

growth. The assumption is that if there is a 1% increase in freedom of trade, it will increase the economic growth by -3.039694%.

Education is one of the main capitals that needs to be met by human resources, which will affect economic growth in every country. With quality human capital, economic performance is also believed to be better. It is hoped to increase humans' dignity and improve the quality of human resources. Results indicate the importance of intrahousehold competition on schooling enrollment. At higher levels of income, this effect is diminished, presumably because there are other members (e.g., servants) who can perform household chores. Human resources who enroll in schools for higher education values can reduce employee poverty. Education itself is one of the basic needs for every individual, so efforts to educate the nation's life need to be carried out by every country Moreover, some countries have problems with low rates in school enrollment. There are several factors why parents do not enroll their children in schools, such as illiteracy, poverty, low levels of motivation, lack of understanding, child labor, and corporal punishment.

Low socio-economic conditions of the student's families will have limitations to take education. Besides that, the government should pay more attention to education in the community. Such as the construction of schools that are evenly distributed in the regions, as well as conducting socialization to parents of students to enroll their children in school. Since the standards of each country for education are different, the growth experienced in each country is also different.

Thailand has the highest participation rate, which applies nine years of compulsory education and 12 years of free education until completing high school. Although there is no obligation for children to register for kindergarten before entering elementary school, most parents send their children to kindergarten. With the implementation of compulsory education, the gross enrollment rate for the elementary school level is quite high. Dropouts are caused by various factors, but the dominant factor is the economic factor. The economic factor here is closely related to the family income. If the level of public participation entering high school is high, it can affect the quality of human resources, which will later encourage economic growth in each country.

This research shows positive and significant negative results, meaning that each school enrollment rate in the three countries has a negative effect on school enrollment in that country. However, these three countries have good quality economic growth because there are other factors such as education of the head of household or people. Parents with stable income and are educated will enroll their children in school to a higher level.

Life Expectancy on Economic growth

Life Expectancy Variable has a probability value of 0.016, which means this value is smaller than the significant level (5%). It can be concluded that the Life Expectancy Variable has a significant effect on economic growth. To find out the relationship pattern between life expectancy and economic growth, this research did a direction test by looking at the sign (+/-) on the coefficient of the life expectancy variable. The sign (+) on the life expectancy coefficient indicates that the life expectancy variable has a significant positive effect on economic growth. The assumption is that if there is a 1% increase in freedom of trade, it will increase the economic growth by 4.961466%.

Life expectancy can be seen from several aspects, namely health, education, and the economy. Among them, life expectancy plays an important role, one of which is the health of the people in the country. Without good health, education will not run smoothly, and the community's economy is unlikely to improve because people cannot become productive workers. On the other hand, without a strong economy, public health and education are unlikely to improve. In addition to the factors mentioned, other factors that can affect the number of AHH may include fertility (birth rate) and mortality (death). Decreased fertility and mortality will increase life expectancy.

Life expectancy is one of the factors that can be used to assess the health status of a country's population. In this case, health can affect or impact the economy of a country. Some

of the programs that can be implemented include programs that provide general financial assistance, such as the purchase of medical equipment and special financial assistance to pay for health insurance and maternity insurance.

Indicators that affect life expectancy are the food production index, total participation rate, population growth, inflation, per capita income, and carbon dioxide emissions. In addition, per capita income, education, government spending on health, unemployment, and exchange rates show that life expectancy has a direct relationship with social welfare, human health, and economic growth. Moreover, a productive workforce will affect economic growth in the country. From the results of study on life expectancy, it is known that life expectancy has a very significant effect on economic growth in the three countries. It can be said that the higher the life expectancy, with a good quality of life, high income, high purchasing power, will also encourage higher economic growth.

CONCLUSION

Conclusions

Research shows that the workforce and life expectancy have a significant effect. The influence of a large number of workers and the more educated the workforce causes the country's growth to increase. Some of the programs that can be implemented are programs that provide general financial assistance, such as the purchase of medical equipment and special financial assistance to pay for health insurance and maternity insurance. Furthermore, school enrollment has a significant negative result but is significant for economic growth caused by various factors in the three countries. Factors such as education of the head of household or parents with a stable income and are educated will enroll their children in school to a higher level.

Suggestions

Based on the conclusions presented previously, there are suggestions put forward in this research:

1. The government should massively invest in human resources and prepare strategic steps in the labor sector and prepare infrastructure development. In addition, the increasing labor productivity in various sectors should be facilitated by providing skills training for prospective workers.
2. The government should also focus on determining the value of wages appropriately to improve a decent life, at the same time, without harming the company.
3. School enrollment in each country has different education level indicators, the lack of data information obtained by the researcher is also a factor that information related to school enrollment in each country is different, and each country has its policy in terms of school enrollment.
4. The government should further optimize its role in dealing with problems related to implementing character education policies in schools. The government also should provides facilities, information, and education to the public about education so that the educational equity program can be implemented.
5. The government can provide health compensation to senior workers or citizens. a better health system and adequate health facilities in each country may affect the level of economic growth in each country.
6. The government can socialize insurance for public services, which needs to be leveled in the lower class to the upper class.

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