



Creative Industries and Regional Economic Growth: Time Series Evidence from Aceh, Indonesia

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ABSTRACT

This study aims to provide an overview of the role of the creative industries in driving regional economic growth in Aceh, Indonesia. This study uses secondary data from official government agencies observed from 2011 to 2016. We use the Ordinary Least Squares (OLS) estimation to estimate the impact. The results showed that, partially, employment in the creative industries had a positive and significant effect on economic growth, while the value of exports in the creative industries had no significant effect. However, simultaneously these two variables have a positive and significant influence on economic growth. This finding implies the importance of stakeholder involvement to strengthen the performance and contribution of the creative industry in the future.

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1. INTRODUCTION

The creative economy is a sector that has the potential to increase income and expand employment opportunities (United Nations Conference on Trade and Development / United Nations Development Programs - UNCTAD/UNDP, 2008). The fashion, craft, and advertising industries are the main drivers for the growth of the creative industries. Based on the UNCTAD/UNDP report (2010), in 2006, the creative industry in Indonesia contributed 4.7

percent to GDP and, in 2008, grew 7.3 percent while accommodating 3.7 million workers (4.7 percent of the total workforce). Even though the national creative industry contributes below 5 percent, the contribution is essential and positively impacts the development of the national economy by increasing the value added to its products.

The study of mapping the creative industry shows that the contribution of the creative industry to the Indonesian economy is distinguished based on five leading indicators, namely GDP, employment, number of companies, exports, and the impact on other sectors. Since 2007, the Government of the Republic of Indonesia has mapped 14 creative industry sectors through the Ministry of Trade. Besides, to improve the performance of Indonesia's creative industries, the Ministry of Trade of the Republic of Indonesia has also prepared a 2009-2015 Creative Economy Development Plan (Ministry of Trade, 2008).

Because the creative industries play a role in generating income, creating jobs and increasing export revenue, increasing technology, increasing intellectual property, and other social roles, the industry can trust as a driver of economic growth and development of a nation (Suryana, 2013). Therefore, developing creative industries is an effort that must be spurred together to improve the national economy's performance.

UNCTAD (2008), in the Creativity Economy Report, argues that in an economic context, creativity shows a formulation of new ideas and how to apply these ideas to produce jobs from cultural arts products, scientific discoveries, and the application of technology. According to UNDP & UNESCO (2013), the creative industry is a term for broader productive groups, including goods and services produced by the cultural industry and people who depend on innovation, including various research and software development types. In line with that, the Ministry of Trade of the Republic of Indonesia (2009: 5) defines the creative industry as an industry that originates from individual creativity, skills, and talents to create prosperity and employment by generating and empowering the individual's creative and creative power.

Many previous research findings have supported this study, including a study conducted by Correa-Quezada et al. (2018) for Ecuador, who analyzed the role of the creative economy in driving regional and national economic growth. The findings of Marco-Serrano et al. (2014) for 271 regions in Europe regarding economic growth driven by creative industries also show that there is feedback or causality between GDP per capita and the intensity of work in creative industries.

In other words, the creative industry also directly impacts wage and labor growth (e.g., Innocenti & Lazzeretti (2019) for Italy; and Lee (2014) for the UK. Furthermore, in Indonesia, a study conducted by Sukma et al. (2018) shows that the sector also has the potential to encourage economic growth through increased exports. The analysis conducted by Yum (2016) also suggests that the number of creative industries has an impact on the economy in urban areas, as well as the Gouvea & Vora (2018) study for 57 countries also proves that government involvement in various countries can promote creative industries through various policies.

The government must be able to strengthen and develop strategies to utilize creative industries as drivers of economic growth through the diversity of creative industries. For this purpose, government involvement is needed to make various policies. In this case, Jayne (2005) states that the British government has promoted the creative industry because it is considered to accelerate the country's economic growth. Findings from a study conducted by Pacheco Pardo & Klingler-Vidra (2019) for South Korea, where government involvement in creative industry action plans is more effective in promoting small companies and their entrepreneurial ecosystems.

In addition to government policy, universities must also participate in promoting the creative industries, primarily through related curricula and research. According to Gilmore & Comunian (2016), universities and creative industries are interconnected and can significantly

stimulate innovation and the contribution of the creative industry sector through curriculum development and the involvement of various parties in teaching, research, and knowledge exchange. Likewise, in the study conducted by Moreton (2018), he stated the importance of the involvement of tertiary institutions as agents to shape and improve the performance of creative industries.

In general, the findings of related research conducted in various countries prove that government policies are needed to encourage creative industries' development sustainably. The synergy between the government and universities can support each other to improve the performance of the creative industries. Likewise, universities as agents that can give birth to various ideas or ideas, are also expected to contribute to promoting the creative industries, especially in the formulation of curriculum and research development.

Mutual support between the government and universities will positively impact the development of creative industries, especially in increasing the competitiveness of their products. Martinaitytė & Kregždaitė (2015) suggested that it is necessary to develop a model to assess the impact of the Creative Industry on the economy that can be used to identify opportunities and priorities to strengthen the regional economy. Creative industry development models must be considered according to economic potential, but the products produced must be able to reach many markets. Furthermore, Mardhani & Syahputra (2017) also suggested that to improve the competitiveness of creative industries, business assistance is desirable through various entrepreneurship management training, packaging, and product distribution to the market.

In this competitive era and openness, creative industries must be encouraged to grow and develop and have national and global competitiveness so that their presence can undoubtedly contribute to the national economy. The paper then consists of research methods, results, discussion, and conclusions.

2. METHOD

The data used for this study are publications from Statistics Indonesia, namely GRDP and Indonesia Agency for Creative Economy, namely the value of exports of creative industries and creative employment industry. The data is in the form of time series data reviewed from 2011 to 2016. All data are shown in Table 1.

Table 1. Variables and their formulas

Variables	Formula of the variable	Sources
Real Gross Domestic Regional Product (GDRP)	Natural Logarithm	Statistics Indonesia
Creative Industries Exports (CIX)	Natural Logarithm	Indonesian Agency for Creative Economy
Creative Industries Employment (CIE)	Natural Logarithm	Indonesian Agency for Creative Economy

Note: CIX has converted from US Dollars (US\$) to Indonesian Rupiahs (IDR)

Data analysis of this paper uses multiple regression models with the OLS approach. The model is shown in equation (1) below.

$$GDRP_t = \beta_0 + \beta_1 CIX_t + \beta_2 CIE_t + \varepsilon_t \quad (1)$$

Where *GDRP* is Real Gross Domestic Regional Product, *CIX* is Creative Industries Exports, and *CIE* is Creative Industries Employment. β_0 is constant, $\beta_1 - \beta_2$ is regression

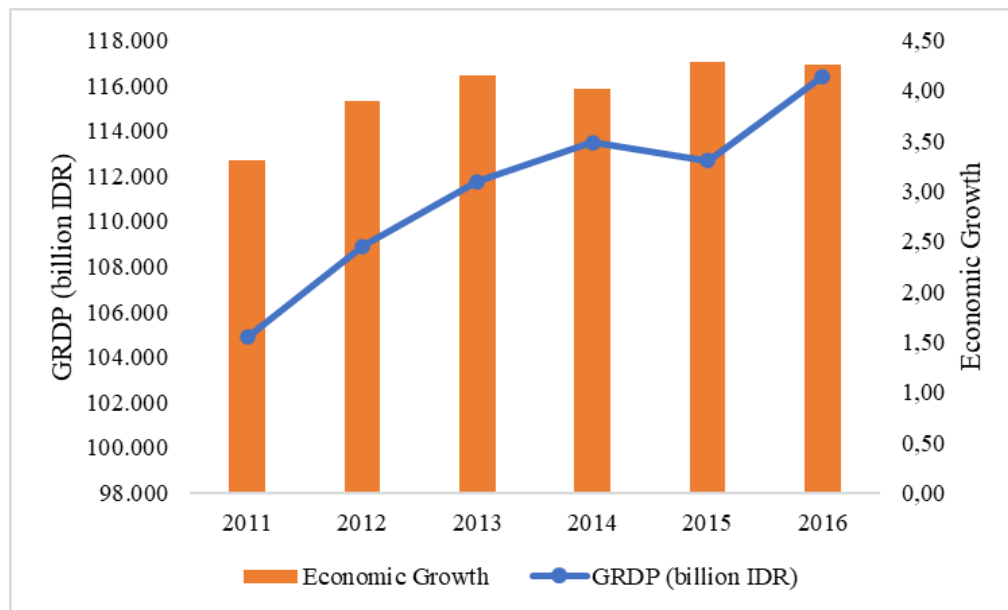
coefficient, t is time, and ε is the error term. All of these variables have transformed into natural logarithms.

3. RESULTS AND DISCUSSION

3.1 Results

Overview of Economic Growth and Creative Industries

GDRP is one indicator of the regional economy in a country that describes a state of regional economic progress. The development and growth of GRDP in Aceh Province are shown in Figure 1.



Source: BPS, Statistics Indonesia, 2019

Figure 1. The trend of Economic Growth in Aceh, Indonesia: 2011-2016

As an overview, the regional economic performance for the Province of Aceh, Indonesia, is shown in Figure 1. From 2011 to 2016, GRDP trends in the province tended to fluctuate. In the initial year of observation, economic growth was 3.3 percent. In 2012 and 2013, each increased to 3.9 percent and 4.15 percent. Furthermore, in 2014, the province's economic growth fell 0.13 percent, from 4.15 percent in 2013 to 4.02 percent in 2014. The same thing happened in 2015 and 2016, where economic growth increased to 4.28 percent in the final year of observation, back down to 4.26 percent. However, economic growth in the province is relatively stable.

The performance of the creative industries can be observed from the value of exports and the number of its workforce. If the value is increasing, it means that the performance is getting better; if the value is decreasing on the contrary, then the performance is considered deteriorating. Trends in the value of exports and labor in the creative industries are shown in Table 2.

Table 2 explains how the performance of the creative industries sector in Aceh Province. If we look at the export value of innovative products, performance appears to have declined dramatically. Where from 2,291 million in 2011 to 134 million in 2012. The lowest industrial export value occurred in 2015, but in 2016 it rose again to 158 million rupiahs. On the other hand, employment in creative industries shows an increasing trend. Where from 133 thousand people in 2011 to 211 thousand people in 2016. This shows that employment in creative industries is better than in export performance.

Table 2. Value of Exports and Employment in Creative Industries in Aceh, Indonesia: 2011-2016

Year	Values of Creative Goods Exports (million IDR)	Employment in the Creative Industries (person)
2011	2,291.46	133,923
2012	134.80	120,492
2013	266.59	148,690
2014	155.72	169,702
2015	13.16	171,075
2016	158.18	211,174

Note: The Value of Creative Industries Exports has been converted from US\$ to IDR using the middle rate of the Indonesian economic and financial statistics (SEKI) from Bank Indonesia.

Source: Indonesian Agency for Creative Economy, 2019

Descriptive Statistics

Descriptive statistics describe the variables used to estimate this research, which allows researchers to get a preliminary understanding — of the values for each variable shown in Table 3. Based on the descriptive statistical data presented in Table 3, it can be explained that the averages of the natural logarithmic data are relatively far from each other. This shows that the value of each variable is not the same. Also, the maximum and minimum values, as well as standard deviations, especially for creative industry export value variables, indicate that there is a possibility that the data contains some level of volatility.

Table 3. Descriptive Statistics

Variable	Mean	Std. Deviation	Minimum	Maximum
GRDP	32.343	0.036	32.388	32.284
CIX	18.968	1.648	16.393	21.552
CIE	11.961	0.200	11.699	12.260

Source: Author's calculations

The Findings of OLS Estimation

The equality of economic growth through the creative industries in Aceh Province consists of two dependent variables: the value of creative industries exports and the employment of creative industries. The OLS Model Estimation is used to analyze the impact of the creative industry on economic growth. The estimation results are explained in Table 4.

Table 4. Findings of OLS Estimation

Variable	Coefficient	t-statistic	Probability
CIX	-0.008	-1.319	0.279
CIE	0.131	2.769	0.070*
C	30.924	50.406	0.000
Adjusted R-squared	0.710		
F-statistic	7.114		
Prob(F-statistic)	0.073*		

Note: GRDP is the dependent variable, and * is the significance level at 10%.

Source: Author's calculations

Based on the estimation results using the OLS method shows that partially, the variable of employment in the creative industries is a variable that has a positive and significant effect on economic growth. Conversely, the export value variable in the creative industries did not

significantly influence economic growth in Aceh Province. Besides, simultaneous independent variables (export value and employment) have a positive and significant effect on economic growth, with F-statistics obtained 7,114 (at a 10 percent confidence level) so that H₀ is rejected and H_a is accepted. This means that simultaneously the independent variable significantly influences the economic growth variable.

The coefficient of adjusted R-squared obtained by 0.71 indicates that the ability of the creative industry variable export value and employment in the creative industry to explain the variation of economic growth variables is equal to 71 percent. Conversely, another 29 percent of variations in economic growth variables can be explained through variations in observations in this model.

3.2 Discussion

In line with the results of this investigation, several previous studies have strengthened this investigation. In Ecuador, findings (Correa-Quezada et al., 2018) prove that creative employment encourages regional economic growth. In Italy, creative employment encourages economic growth in each province (Innocenti & Lazzeretti, 2019). In contrast, the findings (Gouvea & Vora, 2018) investigated 57 countries and findings in most countries proved that exports of creative products increased the country's economic growth.

The creative industry is closely related to tourism, where the creative industry can encourage the growth of the tourism sector (Mardhani et al., 2021). The results of this investigation show the importance of the creative industry sector in creating jobs and encouraging regional economic growth.

4. CONCLUSION

Based on the OLS estimation results carried out in this study, it can be concluded that employment in the creative industries is a positive factor and significantly influences economic growth. In contrast, the export value in the creative industries is a negative factor and has no significant effect on economic growth in Aceh Province, Indonesia. These findings indicate that not all factors in the model affect economic growth. Therefore, the synergy of development between creative industry sub-sectors can be done through the involvement of all stakeholders to make policies that focus on future development. To strengthen the argument about this research, other causes that can increase productivity must be identified in future research.

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