

Analysis Of Potential Creative Economics Of North Sumatera Province

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ABSTRACT: This study aims to find out and analyze the creative economy subsector, which is a subsector with comparative/specialization excellence, competitive advantage, and subsector as progressive subsectors in North Sumatra Province. This study uses data on the creative economy Gross Regional Domestic Product (GRDP) of North Sumatra Province and Indonesia's creative economy GRDP. The analysis technique used in this study is the Location Quotient (LQ) analysis, the Growth Ratio Model (GRM) analysis, the overlay analysis, and the classic typology analysis. The results of this study conclude that the subsector has comparative/specialization advantages, namely the architecture, craft, and culinary subsector. Subsector that has a competitive advantage/competitiveness, namely the culinary subsector. Subsector as progressive subsector, namely architecture, craft, and culinary subsector.

KEYWORDS: LQ Analysis; MRP analysis; Overlay Analysis; Klassen Typology Analysis; Creative Economy.

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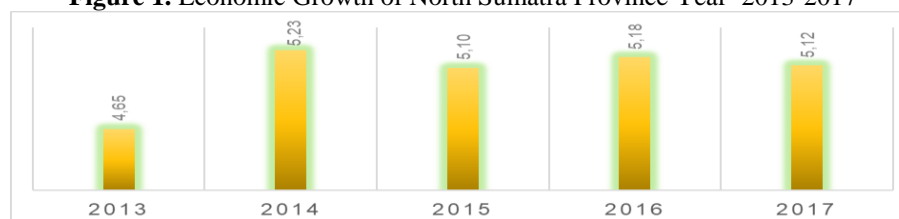
I. INTRODUCTION

Economic development is a multidimensional process that involves various fundamental changes in social structure, attitudes of society and national institutions, as well as accelerating growth, reducing inequality, and eradicating absolute poverty (Todaro and Smith, 2012). An increase in the economic growth of the region marked sustainable economic development in one area.

Apriyanto, et.al (2015) explained that in for urban development to be sustainable, policies that harmonize economic order, ecological order and social order are needed. These policies are intended to ensure the sustainability of the utilization of available natural resources, without reducing the opportunities for future generations to enjoy better conditions.

North Sumatra is one of the provinces in Indonesia that contributes significantly to national economic growth. During the period 2013-2017, the economic growth of North Sumatra Province experienced fluctuations. During the 2014-2017 period, the economic growth of North Sumatra Province was in the range of 5 percent. Based on the economic structure of the Province of North Sumatra in the agriculture, fisheries and forestry sectors; processing industry; large and retail trade; car and motorcycle repairs are the most significant contributors to the GDP of North Sumatra Province.

Figure 1. Economic Growth of North Sumatra Province Year 2013-2017



Source: Central Statistics Agency (2018)

Central and regional governments work together to increase the rate of national economic growth by encouraging sectors that are considered potential in various provinces. The creative industry is one sector that has a vital role in creating economic growth in a region. Although the development of the creative industry has not dominated the national and regional economies, creative industries are pillars in national economic development. As a developing country, Indonesia relies heavily on the creative industry in economic activities because the creative industry can encourage inclusive and sustainable economic growth. Creative industries defined as interrelated fields between culture, technology, science, and trade. The creative industry involves the supply of goods and services that contain substantial elements of artistic and intellectual activities related to the vital role of social and human development (Martinaitytė and Kregždaitė, 2015).

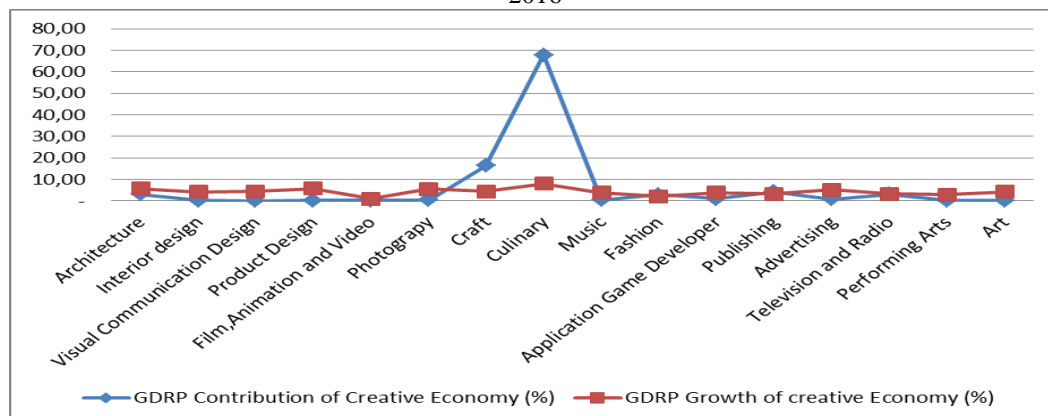
Creative Economy (Ekraf) is one sector that is expected to be able to become a new national economic power in the future, along with the condition of increasingly degraded natural resources every year (Central Statistics Agency, 2017). Today, the Creative Economy is not only seen as one of the most dynamic economic sectors, but also as a rapidly growing sector in income generation, job creation, and exports (UNDP, 2013, in the Central Statistics Agency, 2017).

According to the Creative Economy Development Plan 2025, the creative economy is an industry that originates from the utilization of creativity, skills and individual talents to create prosperity and employment through the creation and utilization of the individual's creative and creative power. Based on this definition, it the creative industry is an industry that utilizes creativity and innovation that aims to channel skills and talents so that creativity and innovation can create jobs (Ministry of Commerce, 2008, in Rusdi and Sukendro, 2018).

The creative economy not only contributes to the national economy, but also plays a role in strengthening national image and identity, developing renewable resources, fostering creativity that encourages innovation, and no less critical positive social impacts, including improving quality of life, equitable welfare and increasing tolerance social (Ministry of Tourism and Creative Economy of the Republic of Indonesia, 2014).

The development of the creative economy in Indonesia is a series of efforts and processes that are planned, integrated, gradual, and continuous in various fields. Ideas and creativity as a base for the development, which are sustainable resources and pouring that creativity into processing into creative products that aim to improve the quality of human life by optimally utilizing all renewable resources. The development is in line with the direction of the current government policy to carry out the process of economic transformation from an economy based on household consumption to investment and begin to leave natural resources without a process towards processing industries using sustainable resources that can increase added value and provide multiplier effects. High for improving the national economy. The process of increasing added value is a trigger for increasing economic growth and is expected to take sides in increasing community income and job creation (Central Statistics Agency, 2017). The following is a data on the GDP growth of the creative economy and the contribution of the creative economy subsector of the Province of North Sumatera in 2016:

Figure 2. Growth and Contribution of the Creative Economy Subsector of the Province of North Sumatera in 2016



Source: Central Statistics Agency (Data Processed)

In 2016 the highest creative economy subsector growth in North Sumatera Province was in the culinary subsector with a growth of 7.94 percent, the architecture subsector was second with a growth of 5.71 percent and third was the product design subsector with the growth of 5,65 percent. Based on the contribution of the creative economic subsector to the creative economy GRDP in 2016, the culinary subsector was the subsector with the most significant contribution to the creative economy GRDP, which amounted to 67.81 percent, the craft subsector was second with 16.31 percent and the publishing subsector in the order the third largest with a contribution of 4.07 percent. High economic growth needed the selection of priority sectors or subsectors in

achieving sustainable development goals. The creative economy has a significant contribution to the economy in the aggregate. However, it is necessary to map the potential of the creative economy.

II. RESEARCH METHODS

This study used several analytical methods for analyzing, namely location quotient (LQ) analysis, growth ratio model analysis (MRP), overlay analysis, and Klassen typology analysis.

a. Location Quotient analysis

Location quotient (location quotient) or abbreviated as LQ is a comparison of the magnitude of the role of a sector/industry in an area to the size of the role of the sector/industry nationally (Tarigan, 2012). Sectors classified into local base economies are sectors that involve income and employment. LQ analysis provides a framework for understanding the stability and flexibility of an economy to change conditions by analyzing industry or sector levels in society (Heilbrun, 1987, in Kharisma, 2019). The formula of this as follows:

$$LQ = \frac{\frac{X_i}{PDRR}}{\frac{X_i}{PNB}}$$

Where :

- X_i : Added value of sector i in an area
- GDP : Regional Gross Regional Domestic Product
- X_i : Added value of sector i in national
- GNP : Gross National Product

The values obtained based on the location quotient analysis criteria are three possibilities, namely:

1. $LQ > 1$, meaning the role of sector i in the area is more prominent than the role of the sector nationally. Production of these commodities has exceeded the consumption needs in the area so that the excess of it can export the commodities to other regions (base sector).
2. $LQ < 1$, meaning that the role of sector i in the area is smaller than the role of the sector nationally so that the production of these commodities is not sufficient for consumption in the area, or in other words the sector is unable to export commodities to other regions (non-base sector)
3. $LQ = 1$, meaning the sector i in the area has the same level of specialization compared to the same sector in the reference area, another word, the sector can meet the needs of its region.

b. Growth ratio model analysis

The MRP analysis is carried out to see the description of economic activities, especially the economic structure of an area/region that emphasizes growth criteria both externally (reference area) and internal (study area). There are two criteria in this analysis, namely the reference area growth ratio (RPr) and the growth ratio of the study area (RPs).

The growth ratio of the reference area (RPr) compares the growth of each sector in the provincial context with the regency/city GRDP or in the national context with the provincial GRDP.

$$RPr = \frac{\Delta E_{iR}/E_{iR}}{\Delta ER/ER}$$

Where:

- ΔE_{iR} : Change sector i GRDP in the reference area
- E_{iR} : Sector i GRDP in the reference area at the beginning of the research year
- ΔER : Change in GRDP in the reference area
- ER : Total GRDP in the reference area at the beginning of the study year

The growth ratio of the study area (RPs) compares the growth of each sector in the district city context with the growth of the provincial sector or in the provincial context with the growth of the national sector.

$$RPs = \frac{\Delta E_{iJ}/E_{iJ}}{\Delta E_{iR}/E_{iR}}$$

Where:

- ΔE_{iJ} : Change in GRDP sector i in the study area
- E_{iJ} : Sector i GRDP in the study area at the beginning of the research year

i_eR : Change sector i GRDP in the reference area
 E_iR : Sector i GRDP in the reference area at the beginning of the research year

The results of the MRP analysis consist of four classifications, namely:

1. Sectors that have the value of $RPr (+)$ and $RP_s (+)$ means that the activity in the reference area and study area has prominent growth. This activity referred to as dominant growth.
2. Sectors that have the value of $RPr (+)$ and $RP_s (-)$ mean that these activities at the reference area level have prominent growth, but at the study area level it has not been prominent.
3. Sectors that have the value of $RPr (-)$ and $RP_s (+)$ means that the activities at the regional level of reference growth are not prominent, while at the study area level stands out.
4. Sectors that have $RPr (-)$ and $RP_s (-)$ values mean that the activity is at the reference area level, and the study area is not prominent.

c. Overlay analysis

Overlay analysis is an analysis technique used to identify superior sectors/subsectors both in terms of contribution and growth. This analysis technique combines the results of LQ and MRP analysis. The results of the LQ and MRP analysis are then given a notation (+) and (-), where the results of the analysis are more than one, then given the notation (+) and the results of the analysis with a value of less than one, then given a notation (-). Based on the notation from the results of LQ and MRP analysis, it can be categorized as follows:

1. Rotated LQ (+), meaning that the contribution of sector/subsector i to GRDP in the study area is higher than the contribution of the same sector/subsector to GRDP in the reference area.
2. Patterned LQ (-), meaning that the contribution of sector/subsector i to GRDP in the study area is lower than the contribution of the same sector/subsector to GRDP in the reference area.
3. Rotated RPR (+), meaning that the growth of the sector/subsector i is higher than the total growth in the reference area.
4. RPr is rotated (-), meaning that the growth of the sector/subsector i is lower than the total growth in the reference area.
5. Rotated $RP_s (+)$, meaning that the growth of sector/subsector i in the study area is higher than the growth of the same sector/subsector in the reference area.
6. RP_s are rotated (-), meaning that the growth of sector/subsector i in the study area is lower than the growth of the same sector/subsector in the reference area.

d. Klassen typology analysis

The Klassen typology analysis is used to obtain the classification of regional economic growth. The Klassen Typology analysis produces four sector classifications with different characteristics as follows (Robot et al., 2016):

<p>Quadrant I developed sector $s_i > s$ and $sk_i > sk$</p>	<p>Quadrant II Stagnant sector $s_i < s$ dan $sk_i > sk$</p>
<p>Quadrant III Developing sector $s_i > s$ dan $sk_i < sk$</p>	<p>Quadrant IV underdeveloped sector $s_i < s$ dan $sk_i < sk$</p>

Figure 3. Classification of the Klassen Typology

Where:

S_i : Economic growth rate of regional GDP sector i
 Sk_i : Contribution of the regional sector i
 S : The economic growth rate of the reference area
 Sk : Contribution of the reference area sector

III. RESULTS AND DISCUSSION

a. Location Quotient Analysis (LQ)

LQ analysis is an analytical technique that compares the role of the sector/subsector in a region (study area) to the role of the sector/subsector at the provincial/national level (reference area). In the results of the LQ analysis if the value of $LQ > 1$, it means that the sector/subsector is the base sector and the sector/subsector can meet the demand both in the region and outside its territory. LQ value < 1 means that the sector/subsector is a

non-base sector/subsector, where the sector/subsector has not been able to meet demand in the region, while $LQ = 1$ means that the sector/subsector has the same specialization as the reference sector where the sector/subsector is able to meet demand in its area. The following is the result of LQ analysis of the creative economy sector in North Sumatera Province for 2014-2016:

Table 1. Analysis of Location Quotient (LQ) of Creative Economy in North Sumatera province 2014-2016

No	Subsector of Creative Economy	2014	2015	2016	Average LQ	Result
1	Architecture	1.45	1.42	1.39	1.42	Basic
2	Interior design	0.42	0.41	0.40	0.41	Nonbasic
3	Visual communication design	0.76	0.72	0.68	0.72	Nonbasic
4	Product Design	0.37	0.37	0.36	0.37	Nonbasic
5	Film, Animation and Video	0.71	0.66	0.60	0.66	Nonbasic
6	Photography	0.89	0.87	0.84	0.87	Nonbasic
7	Craft	1.10	1.06	1.07	1.08	Basic
8	Culinary	1.49	1.52	1.53	1.51	Basic
9	Music	0.89	0.87	0.82	0.86	Nonbasic
10	Fashion	0.16	0.16	0.15	0.16	Nonbasic
11	Application Game Developer	0.49	0.48	0.46	0.48	Nonbasic
12	Publishing	0.71	0.70	0.68	0.70	Nonbasic
13	Advertising	0.86	0.84	0.81	0.84	Nonbasic
14	Television and Radio	0.37	0.35	0.32	0.35	Nonbasic
15	Performing Arts	0.82	0.80	0.74	0.79	Nonbasic
16	Art	0.79	0.77	0.75	0.77	Nonbasic

Source: Central Statistics Agency (Data Processed)

Based on the results of the LQ analysis, there are three subsectors of the Kretaif economic sector, which are the base / superior subsectors, namely the architecture, craft, and culinary subsectors. The three subsectors have LQ values > 1 , which means that these subsectors can provide commodities according to demand in their regions and also the commodities produced can be exported to other regions. Subsectors belonging to the base subsector are expected to be able to provide a strong impetus to economic growth and also have a positive impact on other subsectors.

b. Growth ratio model analysis

The Growth Ratio Model (MRP) is one of the analytical techniques used to see the potential of a sector/subsector in the economy. The following are the results of the Growth Ratio Model (MRP) analysis:

Table 2. Analysis of the Growth Ratio Model (MRP) of Creative Economy in North Sumatera in 2014-2016

No.	The Subsector of Creative Economy	RPr	Nominal value	RPs	Nominal value
1	Architecture	0.03	-	0.87	-
2	Interior design	0.03	-	0.82	-
3	Visual communication design	0.05	-	0.54	-
4	Product Design	0.02	-	0.92	-
5	Film, Animation and Video	0.04	-	0.11	-
6	Photography	0.03	-	0.79	-
7	Craft	0.02	-	0.97	-
8	Culinary	0.02	-	1.70	+
9	Music	0.04	-	0.64	-
10	Fashion	0.02	-	0.58	-
11	Application Game Developer	0.03	-	0.63	-
12	Publishing	0.02	-	0.94	-
13	Advertising	0.03	-	0.74	-
14	Television and Radio	0.05	-	0.31	-
15	Performing Arts	0.04	-	0.43	-
16	Art	0.03	-	0.78	-

Source: Central Statistics Agency (Data Processed)

According to the analysis of the Growth Ratio Model (MRP), there is no subsector included in classification 1, where RPr (+) and RPs (+) and also classification 2, where RPr (+) and RPs (-). The subsector included in classification 3 is the culinary subsector, meaning that the culinary subsector in North Sumatera Province stands out, while at the national level it does not stand out. Subsectors that fall into classification 4, where RPr (-) and RPs (-) are architectural subsectors; interior design; visual communication design; product design; films, animations and videos; photography; craft; culinary; music; fashion; application and game developer; publishing; advertising; television and radio; performing Arts; art. The sectors included in classification 4 mean that the subsector in North Sumatera Province and at the national level is not prominent.

Based on the analysis of the Growth Ratio Model (MRP) shows that the creative economy subsector in North Sumatera Province still needs to be addressed to support economic growth both at the provincial and national levels. The role of the culinary subsector as the only subsector in the creative economy sector that has a prominent potential in North Sumatera Province can give a multiplier effect to the subsectors or even other sectors. Therefore, the role of the government as a policymaker determines the development of the creative economy sector in the future.

c. Overlay analysis

An overlay looks at potential economic categories and subcategories related to GRDP contribution and growth (Kharisma, 2019). The following is the result of an overlay analysis of the creative economy sector in North Sumatera Province for 2014-2016:

Table 3. Analysis of the Overlay of Creative Economy in North Sumatera in 2014-2016

No.	Subsector of Creative Economy	Average LQ	RPr	RPs	Nominal value
1	Architecture	1.42	0.03	0.87	(+--)
2	Interior design	0.41	0.03	0.82	(---)
3	Visual communication design	0.72	0.05	0.54	(---)
4	Product Design	0.37	0.02	0.92	(---)
5	Film, Animation and Video	0.66	0.04	0.11	(---)
6	Photography	0.87	0.03	0.79	(---)
7	Craft	1.08	0.02	0.97	(+--)
8	Culinary	1.51	0.02	1.70	(+++)
9	Music	0.86	0.04	0.64	(---)
10	Fashion	0.16	0.02	0.58	(---)
11	Application Game Developer	0.48	0.03	0.63	(---)
12	Publishing	0.70	0.02	0.94	(---)
13	Advertising	0.84	0.03	0.74	(---)
14	Television and Radio	0.35	0.05	0.31	(---)
15	Performing Arts	0.79	0.04	0.43	(---)
16	Art	0.77	0.03	0.78	(---)

Source: Central Statistics Agency (Data Processed)

Based on the results of the overlay analysis, the culinary subsector shows the values of LQ (+), RPr (-) and RPs (+) notation, which means that the contribution of the culinary subsector in North Sumatera Province is higher than the contribution of the culinary subsector at the national level. Meanwhile, the growth of the culinary subsector in North Sumatera Province was higher than the growth of the culinary subsector at the national level with the growth ratio of the study area (RPs) of 1.70 percent. The growth of the culinary subsector is lower than the total growth at the national level, with the reference area growth ratio (RPr) value of 0.02 percent.

The architecture and craft subsectors show the values of LQ (+), RPr (-) and RPs (-) notation, which means that the contribution of the architecture and craft subsector in North Sumatera Province is higher than the contribution of the architecture and craft subsector at the national level. Meanwhile, the growth of the architecture and craft subsector in North Sumatera Province was lower than the growth in the architecture and craft subsector at the national level with the growth ratio of the study area (RPs) of 0.87 percent in the architecture subsector and 0.97 percent in the subsector craft. Meanwhile, the growth of the architecture and

craft subsector is lower than the total growth at the national level with the reference area growth ratio (RPr) value of 0.03 percent in the architecture subsector and 0.02 percent for the craft subsector, respectively.

Interior design subsector; visual communication design; product design; films, animations and videos; photography; music; fashion; application and game developer; publishing; advertising; television and radio; performance and visual arts show the value of LQ (-), RPr (-) and RPs (-) notation, which means that the contribution of these subsectors in North Sumatera Province is lower than the contributions of these subsectors at the national level. Meanwhile, the growth of these subsectors in North Sumatera Province was lower than the growth of the same subsectors at the national level, while the growth of these subsectors was lower than total growth at the national level.

d. **Klassen typology analysis**

The following is the result of the classification of Klassen typology of the creative economy subsector in North Sumatera Province:

The typology of the class is one of the analysis techniques that can be used to classify sectors or subsectors in the economy at the regional level. The typology analysis of the class can provide an overview of the advantages of a sector in an area. Thus, the regional government can formulate a policy that is prioritized based on the superiority of the regional sector.

<p>Quadrant I $s_i > s$ dan $sk_i > sk$</p> <ul style="list-style-type: none"> • Culinary 	<p>Quadrant II $s_i < s$ dan $sk_i > sk$</p> <ul style="list-style-type: none"> • Architecture • Craft
<p>Quadrant III $s_i > s$ dan $sk_i < sk$</p> <ul style="list-style-type: none"> • InteriorDesign • Product Design 	<p>Quadrant IV $s_i < s$ dan $sk_i < sk$</p> <ul style="list-style-type: none"> • Visual Communication Design • Film, Animation, and Video • Photography • Music • Fashion • Aplikasi dan Game Developer • Publishing • Advertising • Television and Radio • Performing Arts • Art

Figure 4. Classification of the Klassen Typology of the Creative Economy Sector of North Sumatera Province

The results of the typology analysis of the creative economy subsector of North Sumatera Province show that there is only one subsector that is in quadrant I, the culinary subsector. The culinary subsector is the only subsector in the creative economy sector of North Sumatera Province which classified as a developed sector, or in other words having prime growth. In quadrant II there are only two subsectors, namely the architecture and craft subsector. The architecture and craft subsectors are classified as advanced but depressed subsectors, or have potential growth. Whereas, in quadrant III consists of the interior design subsector and product design, where the subsector is a potential subsector or can still develop. The subsector of visual communication design; films, animations, and videos; photography; music; fashion; application and game developer; publishing; advertising; television and radio; performing Arts; fine arts are in quadrant IV, where these subsectors classified as relatively underdeveloped subsectors.

IV. CONCLUSION

Based on the results of this study, the conclusions as follows:

- a. Creative economy subsector which is a subsector with comparative / specialization excellence, namely architecture, craft, and culinary subsector. Creative economy subsector which is a subsector with competitive advantage/competitiveness, namely the culinary subsector. While the creative economy subsector which is a progressive subsector, namely the architecture, craft, and culinary subsector.
- b. Priority subsector in terms of increasing economic development in North Sumatera Province, namely the architecture, craft, and culinary subsector.

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