A comprehensive analysis of the creative economy's value addition in Lebak Regency, Indonesia

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ARTICLE INFO

Received: 09 August 2023
Received in rev. form: 04 Sept. 2023
Accepted: 12 September 2023

Keywords:
Added Value, Creative Economy, Value Chain, SME Product, Indonesia

JEL Classification:
O18, R11

ABSTRACT

The creative economy is one of the world's most dynamic economic development drivers. Countries that can effectively develop and utilize the creative economy will reap substantial economic benefits. The creative economy potential in Indonesia continues to grow, including in Lebak Regency, Banten Province. Lebak Regency possesses excellent natural, cultural, and human resources. Palm sugar is one of the most well-known Lebak Regency SME products. This study aims to identify the framework for the contribution of added value to the creative economy in the regional economy as a tool for monitoring and evaluating government policies. This is a qualitative study employing an exploratory, descriptive approach. Primary data was collected through in-depth interviews with informants chosen using purposive sampling. The findings of this study indicate that the production of nira, which is processed into creative products, has the potential to increase the added value contribution of the creative economy by IDR 126 billion in 2022. Therefore, the author recommends that the government of Lebak Regency develop a program that focuses on increasing the added value of processed nira products into other creative products.

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INTRODUCTION

The creative economy is one of the world's most dynamic drivers of economic growth (United Nations, 2022). By integrating innovation, creativity, and added value in various sectors such as art, design, media, technology, and entertainment, the creative economy can generate sustainable business opportunities, increase welfare, and create employment (Putri et al., 2021; Widyanti et al., 2021). Countries that can effectively develop and utilize the creative economy will reap substantial economic benefits. In addition to creating added value from an economic standpoint, the creative economy positively affects culture, the environment, and society (Utomo & Dewi, 2021).

Amid rapid economic change, the modern economy's foundation has shifted from manufacturing to service- and knowledge-intensive industries (Yuliana, 2021). This trait is evident in the creative economy sector, which relies on the inexhaustible intellectual capital of its human resources for its growth (Syahbudi et al., 2023). Therefore, it necessitates policies and approaches distinct from those of other economic sectors, which typically rely on natural resources as their primary production material. The literature has numerous approaches to assessing the creative economy at the global, national, and regional levels; However, the issue of the creative economy's sustainability needs to receive more attention (Fazlagić & Skikiewicz, 2019).

The creative economy in Indonesia has the potential to continue to expand and have competitive. (Setiawan, 2018) mentioned that the prospects for Indonesia's creative economy resides in the growing middle class as potential clients, which statistics shows is growing rapidly. This potential is supported by several factors, including the fact that Indonesia has a large number of young people, or a "demographic bonus" that is synonymous with creative talent, a wealth of cultural assets that power the creative economy, and government support so that the creative economy becomes one of the priority sectors in the national economic development plan.
The Creative Economy Agency (Bekraf) has revealed that the creative economy’s contribution to Indonesia’s Gross Domestic Product (GDP) continues to increase annually. The GDP increased 8.13 percent between 2018 and 2019, from IDR 1,066.64 trillion to IDR 1,153.4 trillion (Figure 1).

Lebak Regency, Banten Province, is one region in Indonesia with the potential for a creative economy that continues to expand. The commitment to develop this sector is stated in the 2019-2024 Medium-Term Development Plan, which highlights the creative economy as the government's top priority for the development of Lebak Regency (Andrea & Santoso, 2020). Moreover, Lebak Regency possesses exceptional natural, cultural, and human resource potential. Among the well-known Lebak Regency SME products are palm sugar, processed foods, woven bamboo and pandan handicrafts. The progress of the creative economy sector is also demonstrated by the existence of the Lebak Creative Economy community (Leekraf) and the National Creative Economy Movement (Gekrafs), as well as the election of Lebak Regency as the Kriya Creative Word in the Determination of Indonesia's Creative Districts/Cities in 2022.

The Lebak Regency Government strives to develop regional excellence by utilizing appropriate creative economic potential. A comprehensive and suitable policy plan is therefore required. Based on the results of a pre-survey conducted on regional officials in the creative economy sector, The Lebak Regency administration has to develop a method for quantifying the creative economy's additional value. Thus, monitoring and evaluation of strategies or policies can be done to provide an overview of how much the creative economy sector, particularly the culinary sub-sector, contributes to the regional economy. The authors' objective for this research was to understand how the creative economy adds value.

**Literature Review**

**Creative Economy**

The creative economy has driven economic growth in many countries, including Indonesia (Lestariningsih et al., 2018). According to (Guilherme, 2017), the creative economy is an economic system that focuses more on utilizing more resources than on limited resources. It is because the creative economy relies on ideas and creativity (intangible assets) for its development. In contrast, the industrial economic sector relies on tangible assets as production materials (Hidayat & Asmara, 2017).

The greatest uniqueness of the creative economy is its ties to diverse cultural manifestations in different places and regions. Therefore, the creative economy concept applies in both urban and rural settings. In urban areas, the creative economy is frequently associated with technological advances that typically occur in urban areas. However, the rural environment also contains creative human resources and a plethora of cultural heritage, which foster the development of the creative economy sector in rural areas (Agustina et al., 2020).

According to (Kukreja et al., 2022), three methods exist for assessing the creative economy:

i. **Industry-based approach.** This method estimates the creative economy’s contribution using a predetermined inventory of creative industries. The size of the creative industries is estimated using the industry classification system mapped to the list. The creative workforce is estimated by allocating labor in creative companies to industries determined based on the main product.

ii. **Occupation-based approach.** This approach goes beyond an industry-based approach and incorporates creative employment across all economic activities, allowing for a more comprehensive analysis of the creative workforce across time, regions, and countries.

iii. **Combining industry- and occupation-based approaches.** This approach is called the "trident" method in mapping the creative economy by combining industrial and occupational classifications. This approach provides a more thorough explanation for the distribution of employment within an industry.
Indonesian Standard Industrial Classification (KBLI)

According to Regulation of the Central Bureau of Statistics Number 2 of 2020, "Indonesian Business Field Standard Classification (KBLI)" refers to the classification of Indonesian economic activities/activities that produce products/outputs, both in the form of goods and services, based on the business fields used as standard references and tools for coordination, integration, and synchronization of statistics administration. At the same time, the KBLI in the Creative Economy Sector is a comprehensive classification of economic activities associated with Indonesia's creative economy sector. According to the KBLI 2015 Analysis of the Classification of Creative Economy Activities, business activities in the creative economy sector are divided into sixteen business sectors: 1) Film, Animation, and Video Production; 2) Application and Game Development; 3) The Music Industry; 4) Architectural Practice; 5) Visual Communication Design; 6) The Fashion Industry; 7) Handicrafts; 8) The Culinary Industry; 9) Interior Design; 10) Product Design; 11) Photography; 12) The Advertising Industry; 13) Publishing; 14) The Performing Arts; 15) The Fine Arts; 16) The Television and Radio Industry. Due to many non-creative culinary businesses in the culinary subsector, which originates in the agricultural and food and beverage industries, the culinary context within the creative industries has become more distinct. Due to this classification, several countries' creative non-culinary industry subsector includes fast food restaurants, fixed-menu restaurants, and conventional culinary businesses. The culinary subsector in Indonesia is separated into culinary services (food service) and culinary products. The capacity of a region to capitalize on cultural values and local content as a source of distinctiveness is reflected in culinary products packaged in a unique manner (specialty food), such as regional specialties included in the creative industry.

Gross Regional Domestic Product (GRDP)

One indicator of a region's development's success is its economic growth rate. (Istiqomah et al., 2019) define economic growth as an increase in production per individual over a period of time, both at the national level and at a more local level, such as a province, district, or city. The Indonesian government employs the Gross Regional Domestic Product (GRDP) as a measure of population welfare to determine if society's basic needs are met to reduce poverty (Sururi & Septiyani, 2019). The calculation of GRDP performs a crucial role in the macroeconomic context, particularly in measuring economic activity (Oktaivana & Amalia, 2018), and serves as the foundation for formulating public policies for a region (Pasaribu et al., 2021). Economic interactions between households, the government, and the business sector are depicted in Figure 1. The household sector provides labor, the business sector provides wages and salaries, and the government regulates spending and taxes. Value added represents the total of all revenues and expenditures from all economic activities.

![Figure 2: Economic Interaction Between Economic Actors; Source: (Statistics department of IPB, 2019)](image)

Value chain

The value chain is a series of interconnected stages in the production of a product or service, from the idea to the end user, where each stage adds value, and the total value of the final product is the sum of the values added at each stage (Knez, K. & Stare, 2021). (Al-Sfan et al., 2022) added that value chain activities include research and development, design, production, marketing, distribution, and after-sales service in order to achieve strategic goals by increasing value for both the economic unit and customers, with a focus on providing high-quality products at low prices. Figure 3 illustrates the economic unit value chain.

![Figure 3: Economic Unit Value Chain; Source: (Al-Sfan et al., 2022)](image)
Michael Porter first introduced the concept of the value chain in 1985. It refers to a series of activities that create a competitive advantage for a product by adding value. Through value chain analysis, businesses can determine their position and analyze activities within the value chain and eliminate activities that do not contribute value to their products or services (Zhang, 2017). The value chain of competing businesses in the same industry can vary (Straková et al., 2020), depending on the company's strategy and traditions (Nagy et al., 2018). The creative economy is distinguished by value chains that incorporate intellectual property.

**Value-added**

(Deloitte, 2021) defines added value as the amount of money a person can earn through the production, sale, or purchase of particular products or services. Added value generally is separated into Economic Value Added (EVA) and Market Value Added (MVA). EVA is an effective method for evaluating a company's management and financial performance to increase shareholder value (Tikasari & Surjandari, 2020). EVA considers the cost of capital in exchange for using funds to finance investment (Saputra et al., 2019). In the meantime, the MVA method is used to assess the impact of a manager's actions on the market on shareholder profits (Sahara, 2018).

The creative process can be deemed an economic activity because it generates added value. The economic impact is not only associated with the creation of employment but also with the creative value chain, which includes distribution and consumption. In this study, measuring the added value of the creative economy is closely related to the Balanced Scorecard, which focuses on internal business processes. This perspective defines the evaluation procedure that enables a company to provide a value proposition that attracts and retains customers in its targeted market segments.

**Research and Methodology**

This qualitative research, with a descriptive exploratory approach, aims to comprehensively analyze and describe phenomena associated with preparing a framework for calculating the value-added contribution of the creative economy sector in the Lebak Regency. This study employs a literature review on the calculation of GRDP by BPS, then analyzes the framework for calculating GRDP for the creative economy in DKI Jakarta Province and Depok City. Next, a concordance must be established between the KBLI for the Culinary Subsector of the Creative Economy and the 2010 KBKI, which serves as the classification premise for estimating GRDP for the creative economy. Using information from the National Economic Survey and the National Labor Force Survey, data sources were triangulated to ensure data consistency. Following this, the KBLI and KBKI 2010 aligned with the GRDP data matrix products in Lebak Regency. The final step in producing the GRDP for the creative economy in the culinary subsector is the disaggregation of the data matrix to estimate its contribution to Lebak Regency.

This study aims to describe the stages involved in calculating the value-added contribution of the creative economy in the Lebak Regency, wherein each stage is holistic and interdependent. The triangulation procedure, which involves in-depth interviews with key informants, is one of the steps in preparing the GRDP for the creative economy. Purposive sampling was utilized to select key informants. Using purposive sampling techniques, researchers can include studies with a wide geographical distribution, much data, and a focus that is highly similar to the research objectives (Ames et al., 2019). The following are the criteria for determining key informants:

i. Understand how to calculate GRDP
ii. Know how to construct input-output tables
iii. Fully understand the contribution of the creative economy to the culinary subsector
iv. Comprehend the production value chain of the creative economy in the culinary subsector

Interviews were conducted to find problems, confirm and determine KBLI and creative economy coefficient values with the local government as policymakers and creative economy business actors. The list of key informants for this study is listed in Table 1.

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Position</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mr. Iman Hidayat</td>
<td>Head of the Economic Sector of the Lebak Regency Planning, Research and Development Agency</td>
<td>Policy maker</td>
</tr>
<tr>
<td>2</td>
<td>Mrs. Luli Agustina</td>
<td>Head of Tourism Resources and Creative Economy Division of the Culture and Tourism Office of Lebak Regency</td>
<td>Policy maker</td>
</tr>
<tr>
<td>3</td>
<td>Mr. Andhy Yuliandi</td>
<td>Chairman of the Leekraf Community and CEO of Aren Kula Nusantara</td>
<td>Creative economy actors</td>
</tr>
</tbody>
</table>

**Source:** Authors

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This study's analysis of the framework for assessing the contribution of added value to the creative economy was limited to the Lebak Regency area, with a case study research design focusing on creative economy actors Aren Kula Nusantara.

Conceptual Definition

The conceptual definition is a limitation used to direct research on particular problems, facilitating its implementation in the field. In order to comprehend and interpret the numerous theories relevant to this research, some conceptual definitions of the object of study will be provided, including the following:

i. A production approach is used to calculate each industry's output (supply). In each subsector of the creative economy, supply calculations are performed categorically. The primary data source and output calculations are based on information from the 2016 Economic Census and other data sources such as company financial reports. The 2016 output level was derived from the Economic Census results based on the 2015 five-digit KBLI. Next, a bridging procedure was conducted to derive the creative industry output 2016 based on the KBLI for 2015. After obtaining output based on the five-digit KBLI, product and industry-based aggregation was performed to classify creative economy and creative non-economic sectors.

ii. In this research, the production approach will be utilized to calculate the GRDP of the creative economy. On the production side, the added value of all economic activities is calculated by deducting intermediate consumption from each business discipline's total production/income (output) values. The calculation formula is as follows:

\[ Output_{b,t} = Production_{t} \times Price_{t} \]
\[ GVA_{b,t} = Output_{b,t} - Intermediate\; consumption_{b,t} \]

Where, Output\(_{b,t}\) refers to output/gross production value based on current prices in year-\(t\); GVA\(_{b,t}\) means Gross value added based on the year-\(t\) valid prices; Production\(_{t}\) means quantum production year-\(t\); Price\(_{t}\) refers to production price year-\(t\); Intermediate consumption\(_{b,t}\) means intermediate consumption year-\(t\).

Intermediate consumption refers to the value of goods and services used as inputs in the production process or the value of non-durable goods and services consumed during production.

Instruments Test and Data Analysis

The research instrument testing utilized triangulation of data sources through literature review, in-depth interviews, and mirror data. Literature studies are used to map related research, in-depth interviews are conducted to confirm and determine KBLI and the creative economy coefficient values of the culinary sub-sector with local government policymakers of Lebak Regency, and creative economy business actors, and mirror data are used to verify data consistency using industry survey data Large and Medium, Micro and Small Industry Survey, National Labor Force Survey, and National Socio-Economic Characteristics Survey.

Analyzing qualitative data involves data reduction, presentation, and verification (concluding). Data reduction consists of analyzing the creative economy GRDP calculation framework adjusted to BPS guidelines, grouping creative economy actor data based on the 2015 KBLI, and assembling creative economy GRDP data matrices. The presentation of data requires more in-depth processing of data to facilitate researchers' comprehension. Verification is accomplished by examining the data's accuracy and deriving precise conclusions from the research findings.

Findings and Discussions

Research Object Description

Lebak Regency is one of Banten Province's eight autonomous regions. Rangkasbitung is the provincial capital of Lebak. In 2014, Lebak Regency had a land area of approximately 3,044.72 km\(^2\) and a population of approximately 1.26 million people. Except for a few subdistricts, such as Rangkasbitung, Cibadak, Kalanganyar, and Warunggunung, the population density of Lebak Regency is still modest despite its size. The plurality of subdistricts in Lebak Regency has a population density of fewer than 500 residents per square kilometer, with some even below 200 residents per square kilometer. The Lebak Regency is comprised of 28 sub-districts and 345 villages, with the Cibeber sub-district having the greatest area (40.96 km\(^2\)) and the Kalanganyar sub-district having the smallest area (2,830 km\(^2\)).

GRDP of the Creative Economy in Lebak Regency

Currently, the industry contributes significantly to the regional economy. In an era of free trade and advanced technology, the industrial sector significantly impacts both domestic and international markets. The creative economy is one of the industrial sectors experiencing accelerated expansion. From 2016 to 2020, the GRDP of Lebak Regency's Creative Economy increased from IDR 784,34 billion to IDR 956,86 billion. The culinary subsector contributed the most to the economy over the past five years, generating an average of IDR 248,43 billion annually. The next two sub-sectors regarding average income over the past five years are fashion and craft, with average incomes of IDR 217,82 billion and IDR 218,53 billion. The visual arts and visual communication design
subsector has generated the least GRDP revenue over the past five years, averaging IDR 4,52 billion and IDR 2,55 billion, respectively. Table 2 displays the GRDP value of each creative economy subsector in Lebak Regency for 2016-2020.

Table 2: GRDP of Creative Economy Lebak Regency Constant Price 2016-2020 (IDR billion)

<table>
<thead>
<tr>
<th>Sub-sector</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culinary</td>
<td>211.84</td>
<td>236.79</td>
<td>265.00</td>
<td>263.81</td>
<td>264.73</td>
<td>248.43</td>
</tr>
<tr>
<td>Art</td>
<td>2.54</td>
<td>2.44</td>
<td>2.53</td>
<td>2.54</td>
<td>2.71</td>
<td>2.55</td>
</tr>
<tr>
<td>Design interior</td>
<td>27.16</td>
<td>28.68</td>
<td>28.82</td>
<td>30.09</td>
<td>29.94</td>
<td>28.94</td>
</tr>
<tr>
<td>Fashion</td>
<td>184.21</td>
<td>208.12</td>
<td>232.73</td>
<td>231.43</td>
<td>232.61</td>
<td>217.82</td>
</tr>
<tr>
<td>Photography</td>
<td>19.15</td>
<td>21.69</td>
<td>23.80</td>
<td>23.79</td>
<td>24.35</td>
<td>22.55</td>
</tr>
<tr>
<td>Visual communication design</td>
<td>4.22</td>
<td>3.54</td>
<td>4.44</td>
<td>5.22</td>
<td>5.19</td>
<td>4.52</td>
</tr>
<tr>
<td>Film, Animation, Video</td>
<td>16.78</td>
<td>17.59</td>
<td>20.77</td>
<td>20.03</td>
<td>20.61</td>
<td>19.15</td>
</tr>
<tr>
<td>Performing Arts</td>
<td>13.88</td>
<td>16.39</td>
<td>16.91</td>
<td>14.82</td>
<td>16.07</td>
<td>15.61</td>
</tr>
<tr>
<td>Product Design</td>
<td>12.35</td>
<td>14.80</td>
<td>15.52</td>
<td>15.26</td>
<td>15.87</td>
<td>14.76</td>
</tr>
<tr>
<td>Architecture</td>
<td>16.31</td>
<td>17.85</td>
<td>20.22</td>
<td>20.95</td>
<td>20.37</td>
<td>19.14</td>
</tr>
<tr>
<td>Television and Radio</td>
<td>21.84</td>
<td>24.08</td>
<td>24.45</td>
<td>24.25</td>
<td>24.53</td>
<td>23.83</td>
</tr>
<tr>
<td>Crafts</td>
<td>193.52</td>
<td>217.38</td>
<td>232.59</td>
<td>226.73</td>
<td>222.44</td>
<td>218.53</td>
</tr>
<tr>
<td>AGD</td>
<td>14.45</td>
<td>16.90</td>
<td>17.77</td>
<td>18.28</td>
<td>18.34</td>
<td>17.15</td>
</tr>
<tr>
<td>Publishing</td>
<td>18.43</td>
<td>20.42</td>
<td>23.22</td>
<td>22.84</td>
<td>23.73</td>
<td>21.73</td>
</tr>
<tr>
<td>Total</td>
<td>784.34</td>
<td>880.00</td>
<td>963.11</td>
<td>955.20</td>
<td>956.86</td>
<td>907.90</td>
</tr>
</tbody>
</table>

Source: Central Bureau of Statistics, processed (2023)

From 2016 to 2020, the GRDP of the creative economy in the Lebak Regency grew positively. Even though the GRDP income of the creative economy sector is still lower than the GRDP income of the non-creative economy, the income has increased each year. In 2016, the creative economy generated IDR 784.34 billion in GRDP revenue. Then, in 2017 and 2018, the revenue was respectively IDR 880 billion and IDR 963.11 billion. The COVID-19 pandemic caused a slight decline to IDR 955.20 billion in 2019. Overall, the creative economy GRDP growth in Lebak Regency, Banten, indicates a positive outlook for a rise in regional income. Figure 4 depicts the growth of the GRDP for the creative economy of Lebak Regency from 2016 to 2020.

Figure 4: Development of Lebak Regency's Creative Economy GRDP (IDR Billion); Source: Central Bureau of Statistics, processed (2023)

During the period between 2016 and 2020, the creative economy sector of the Lebak Regency’s GRDP contributed an average of 4.65 percent to the regional economy. Each subsector of the creative economy is experiencing growth and plays a significant role in the generation of value addition and regional income. In 2020, the creative economy sector has increased compared to 2016. Figure 5 illustrates Lebak Regency's Creative Economy Contribution for 2016-2020.
Based on the classification of the creative economy business scale in Lebak Regency, the creative economy sub-sector with the highest business scale is the culinary sub-sector with 33 percent, followed by the fashion sub-sector with 17 percent and the design sub-sector with 10 percent design. Apart from that, there are several sub-sectors with the smallest percentage, including advertising, crafts and fine arts, each of which has a percentage of 1 percent. The largest GRDP was contributed by the culinary sub-sector (264,73 billion), followed by fashion (232,61 billion) and craft (222,44 billion). The visual arts and communication design sub-sectors were the smallest contributors to GRDP, with 2,71 billion and 5,19 billion, respectively. The classification of Lebak Regency's creative economic business scale can be seen in Figure 6.

**Figure 5:** Creative Economy Contribution of Lebak Regency in 2016-2020; Source: Authors

Aren Commodity in Lebak Regency

Based on 2023 Central Bureau of Statistics data, Lebak Regency is the largest sugar palm-producing area in Banten Province, producing 3,688 tons of palm sugar in 2022. Approximately fifty percent of the creative economy actors in Lebak Regency are employed in the palm sugar processing industry. Lebak Regency has eleven palm sugar centers of excellence districts, with 11,000 business units and 22,000 employees. The organic plants that thrive in the hills and mountains of Lebak Regency are renowned for producing the best palm sugar in Indonesia. This palm sugar is produced without chemical fertilizers and has a natural aroma, taste, and durability. Palm sugar is an excellent sweetener for beverages, food, and cooking.

In the palm sugar supply chain and value chain map in Figure 7, the various actors involved in the brown sugar supply chain can be seen. The longest flow occurs to actors involved in the palm sugar industry: farmers, collectors, traders, retailers, and consumers. Meanwhile, short value chains occur in production activities carried out directly by Aren farmers, involving farmers, traders/retailers, and consumers.

**Figure 6:** Lebak Regency Creative Economy Business Scale Classification 2020; Source: Authors

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Palm farmers are people who plant palm trees around their homes in order to produce palm sugar. They extract the nira and turn it into palm sugar in their factory. They go to the garden early in the morning to wiretap. Some farmers sell the nira to collectors who work for large industries. The price of traditional palm sugar produced by Nira Farmers ranges from IDR 15,000 to IDR 25,000 per kilo (2 shells), depending on the coconut shell size.

Meanwhile, collectors pay Rp. 5,000 - Rp. 10,000 per litre for cooked Nira (boiled until the water is reddish). Palm sugar producers in Lebak Regency include nira farmers who make traditional palm sugar and large businesses that produce enormous amounts of palm sugar and granulated sugar. Traders are divided into small traders, such as kiosks, stalls and groceries traders, and large traders, such as minimarkets and supermarkets. Traders sell palm sugar with an IDR 2,000 – IDR 3,000 profit per item. Palm sugar consumers include food traders, restaurants, and the public.

**Case Study of Culinary Sub Sector Creative Economy: Aren Kula Nusantara**

Aren Kula Nusantara is a manufacturer of processed sugar palms in Lebak Regency, Banten. They process and manufacture a variety of Aren-based products. Aren Kula has strengths and potential in the culinary business due to simple access to nira as its main ingredient and a location close to Jakarta. Aren Kula, founded in 2017 by CEO Andy Yuliandi, began as a provider of raw materials to palm sugar companies. However, they later innovated in palm processing to produce creative products such as Aren Syrup, which is more organic than traditional palm sugar. Figure 8 shows an example of an Aren Kula product. Andy Yuliandi runs his business by forming partnerships with 25 farmers in the Malingping, Cijaku, and Baduy districts to produce organic palms. Aren Kula Nusantara met the SNI 6729: 2016 Organic Agriculture System standard. It was awarded the 2019 Indonesian Enchantment Award in the area of popular traditional drinks by the Ministry of Tourism and Creative Economy.

Aren Kula purchases the best quality palm nira from farmers in the Lebak Regency for IDR 25,000 per liter. The nira is processed into Aren Syrup, a better choice than conventional palm sugar. Aren Kula innovates by introducing Lemon and Ginger as product variants and creating a palm coffee and chocolate drink. Aren Kula offers 18 varieties of processed palm products, such as Aren Lemon Syrup, Aren Ginger Syrup, Palm Coffee, Palm Chocolate, and ready-to-drink beverages. They are the only producer of Aren Syrup in the Lebak Regency, and this innovation has increased their added value and production efficiency compared to palm sugar.

The current palm sugar production capacity spans one to two tons of nira per month. Three hundred kilograms of palm syrup can be produced from one ton of half-boiled nira. Depending on the flavor, the retail price of 300 grams of packaged palm syrup ranges from Rp 50,000 to Rp 60,000. Aren Kula utilizes both direct and indirect sales to promote their products. They have a store where they sell their products directly. Additionally, Aren Kula participates in exhibitions organized by the government, the private sector,
and communities. At the exhibition, the Es Lemon Aren drink, which contains Aren Syrup as its main ingredient, is the most popular product, selling for IDR 10,000 per glass. Furthermore, Aren Kula engages in indirect online sales via marketplaces and resellers. The average monthly revenue from direct and indirect sales is 80,000,000 IDR.

**Added Value of Palm Sugar Processing Industry**

After determining that the culinary subsector contributes to the GRDP of Lebak Regency, the added value calculation for the palm sugar processing industry is analyzed. Palm farmers in Lebak Regency process palm sugar twice per day in an average month of production, so an average production of 56 times per month. Figure 9 depicts the phases of sugar palm processing performed by palm farmers and palm sugar producers.

![Palm Processing Procedures](image)

**Figure 9: Palm Processing Procedures; Source: Authors**

The following are the methods for calculating the added value of the palm-based food processing industry:

**Production Cost**

Variable costs (VC) and fixed costs (FC) are the two components of the cost analysis for refining nira into palm sugar. Variable costs include costs for the raw material, additional materials, and labor. Fixed costs include equipment depreciation and property taxes.

The average raw material required to produce palm sugar is seven tons or seven thousand liters of palm nira. The monthly average cost of raw materials for palm sugar production from palm nira is IDR 105,000,000. The nira is traditionally processed in a wood-burning furnace. The refining of 7,000 liters of nira requires 7,000 kilograms of firewood. Therefore, firewood is the most costly supporting material in palm sugar production. The total cost of supporting materials in a month is IDR 3,899,000.

Meanwhile, labor is divided into four processes: boiling, printing, packaging, and shipping. Two people perform each day boiling at a total labor cost of IDR 6,000,000. The delivery process to retailers or wholesalers incurs a minimum labor cost of IDR 500,000 per delivery, which happens once per month. The average total cost of labor is 13,500,000 IDR.

The cauldron had the highest equipment depreciation costs, totaling IDR 310,901.94. When variable and fixed costs are added, the total cost of producing nira into palm shell sugar is IDR 122,711,198.24. Table 3 provides information regarding the cost of refining palm nira into palm shell sugar.
Table 3: Production Cost of Processing Palm Nira into Palm Shells

<table>
<thead>
<tr>
<th>Details</th>
<th>Amount</th>
<th>Unit</th>
<th>Cost (IDR)</th>
<th>Total (IDR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable Cost (VC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Raw material</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palm nira</td>
<td>7,000</td>
<td>liter</td>
<td>105,000,000</td>
<td>105,000,000</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>105,000,000</td>
</tr>
<tr>
<td>b. Additional material</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jackfruit stem</td>
<td>1</td>
<td>meters</td>
<td>30,000</td>
<td></td>
</tr>
<tr>
<td>Lime betel</td>
<td>37</td>
<td>wrap</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td>Mangosteen skin</td>
<td>30</td>
<td>kilogram</td>
<td>250,000</td>
<td></td>
</tr>
<tr>
<td>Firewood</td>
<td>7,000</td>
<td>kilogram</td>
<td>2,800,000</td>
<td></td>
</tr>
<tr>
<td>Solar</td>
<td>1.56</td>
<td>liter</td>
<td>14,000</td>
<td></td>
</tr>
<tr>
<td>Gas</td>
<td>30</td>
<td>liter</td>
<td>300,000</td>
<td></td>
</tr>
<tr>
<td>Plastic</td>
<td>4</td>
<td>pax</td>
<td>125,000</td>
<td></td>
</tr>
<tr>
<td>Cardboard box</td>
<td>200</td>
<td>fruit</td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td>Plastic strap</td>
<td>4</td>
<td>roll</td>
<td>40,000</td>
<td></td>
</tr>
<tr>
<td>Duct tape</td>
<td>4</td>
<td>roll</td>
<td>40,000</td>
<td></td>
</tr>
<tr>
<td>Electricity</td>
<td></td>
<td></td>
<td>100,000</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>3,899,000</td>
<td></td>
</tr>
<tr>
<td>c. Labor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling</td>
<td></td>
<td>person</td>
<td>6,000,000</td>
<td></td>
</tr>
<tr>
<td>Moulding</td>
<td></td>
<td>person</td>
<td>4,000,000</td>
<td></td>
</tr>
<tr>
<td>Packaging</td>
<td></td>
<td>person</td>
<td>3,000,000</td>
<td></td>
</tr>
<tr>
<td>Delivery</td>
<td></td>
<td>person</td>
<td>500,000</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>13,500,000</td>
<td></td>
</tr>
<tr>
<td>Total Variable Cost</td>
<td></td>
<td></td>
<td>122,399,000</td>
<td></td>
</tr>
<tr>
<td>Fixed Cost (FC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Equipment depreciation</td>
<td></td>
<td></td>
<td>310,901.94</td>
<td></td>
</tr>
<tr>
<td>b. Property tax</td>
<td></td>
<td></td>
<td>1,296.30</td>
<td></td>
</tr>
<tr>
<td>Total Fixed Cost</td>
<td></td>
<td></td>
<td>312,198.24</td>
<td></td>
</tr>
<tr>
<td>Total Production Cost (VC+FC)</td>
<td></td>
<td></td>
<td>122,711,198.24</td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors

Income of Palm Sugar Producers

The average monthly production of palm sugar from 7 tons of palm nira is approximately 1,500 kilograms, which, when multiplied by the price of Rp 90,000 per kilogram for pure organic palm sugar, yields a monthly revenue of Rp 135,000,000. The average production ratio for palm sugar is approximately 200 kilograms of coconut shell sugar per ton of palm sugar. In addition, the monthly net income of organic coconut palm sugar is IDR 12,288,801.76, determined by deducting the total of production costs from the total revenue.

Net Income = Total revenue – Total production cost

= IDR 135,000,000 – IDR 122,711,198.24

= IDR 12,288,801.76 per month

Added Value of Processing Palm Nira into Palm Sugar

In palm sugar production, the product value is calculated by multiplying the amount produced by the production price. Meanwhile, added value in palm sugar processing is obtained by reducing the value of product receipts of IDR 135,000,000 by IDR 105,000,000 in raw material costs, IDR 3,899,000 in supporting material costs, and IDR 310,901.94 in equipment depreciation costs.

Added Value = IDR 135,000,000 – (IDR 105,000,000 + 3,899,000 + IDR 310,901.94)

= IDR 25,790,098.06 per month.

In addition to determining the added value from palm sugar processing, the added value ratio must also be calculated. The added value ratio is calculated by dividing the added value by the product value and expressing the result as a percentage. The obtained added value ratio is 19.10 percent. Based on these findings, it is clear that the added value ratio of refining palm nira into palm shell sugar is low, as it is less than 50 percent.
Potential to Increase Culinary Subsector Creative Economy Value Contribution in Lebak Regency

In Table 4, the results of a comparison between the added value of Aren Kula products as creative economic actors and the added value of products from traditional palm sugar producers indicate that Aren Kula products provide higher added value than palm sugar producers (non-creative economy).

Table 4: Comparison of Value-Added Products of Creative and non-Creative Economy

<table>
<thead>
<tr>
<th>Raw material volume (liters)</th>
<th>Traditional Palm sugar producer (Non-Creative Economy)</th>
<th>Aren Kula (Creative Economy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7,000.00</td>
<td>2,000.00</td>
<td></td>
</tr>
<tr>
<td>Raw material cost / liter (IDR)</td>
<td>15,000.00</td>
<td>25,000.00</td>
</tr>
<tr>
<td>Total Production Cost (IDR)</td>
<td>122,711,198.24</td>
<td>66,220,296.30</td>
</tr>
<tr>
<td>Production yield (kilogram)</td>
<td>1,500.00</td>
<td>600.00</td>
</tr>
<tr>
<td>Selling Price per kilogram (IDR)</td>
<td>90,000.00</td>
<td>200,000.00</td>
</tr>
<tr>
<td>Total Revenue (IDR)</td>
<td>135,000,000.00</td>
<td>120,000,000.00</td>
</tr>
<tr>
<td>Income (IDR)</td>
<td>12,288,801.76</td>
<td>53,779,703.70</td>
</tr>
<tr>
<td>Value Added IDR)</td>
<td>25,790,098.06</td>
<td>68,781,000.00</td>
</tr>
<tr>
<td>Value Added Ratio ( percent)</td>
<td>19.10</td>
<td>57.32</td>
</tr>
</tbody>
</table>

Source: Authors

According to the findings research, innovative products have a higher selling price. It enables them to pay more for raw materials of excellent quality. Consequently, the income of sugar palm producers in the Lebak Regency can increase. This increase positively affects the regional economy, indicating the creative economy's multiplier effect. Additionally, the creative industry is important due to its interdependence with numerous other industries, which increases GDP and employment.

Aren Kula can produce 600 kg of Aren Syrup with a volume of 2 tons of nira and a revenue of IDR 120,000,000. In contrast, palm sugar producers require seven tons of nira to generate 1,500 kilograms of palm sugar with a revenue of IDR 135,000,000. It demonstrates that Aren Kula's production of Aren Syrup has a higher ratio of added value than palm shell sugar producers. Additionally, the creative industry does not rely on the large-scale exploitation of natural resources because it employs ideas and creativity as input, making it more sustainable and environmentally friendly.

Innovation and creativity can enhance the added value ratio of palm processing from 19.10 percent to 57.32 percent. One ton of nira processed into palm sugar has an added value of IDR 3,684,299.72, whereas 1 ton of nira processed into palm lemon syrup as an innovative product has an added value of IDR 34,390,500. This product's increased value increases by as much as tenfold.

According to Indonesia Central Bureau of Statistics data for 2022, the total palm syrup production in Lebak Regency is 3,688 tons. Thus, the added value of the Creative Economy culinary subsector from palm sugar refining reaches IDR 13.5 billion, or 8.19 percent of the subsector's total GRDP in the Lebak Regency. Aren Kula is the only palm refining company that manufactures Aren Syrup. The added value of refined palm sugar in Lebak Regency could increase by up to IDR 126,832,164,000 per year if palm sugar producers switched to palm syrup production. Increased producer income directly affects the growth of local tax revenues.

Conclusions

The culinary sub-sector is the leading sector, with a GRDP contribution of 164.85 billion, followed by the fashion and craft sub-sectors. Improving the creative economy of Lebak Regency is more focused on the culinary sub-sector based on the program being carried out by the government. During 2016-2020, the average contribution of the creative economy to the economy of Lebak Regency was 9.48 percent. In a comparison between Aren Kula as a creative economy actor in the culinary subsector and palm sugar producers (non-creative economy), if nira production is processed into creative products, the potential value-added contribution to the creative economy in 2022 reaches IDR 126 billion. Therefore, the authors recommend that the government of the Lebak Regency develop a program that focuses on increasing the added value of nira-processed products by transforming them into other creative products. Lebak Regency has the potential to become the most productive palm-growing region in Banten Province and is close to the expansive Jakarta market. The authors also provide some recommendations. First, the calculation of GRDP for the creative economy using a production approach necessitates more concrete data; therefore, reliable data and information from the city and district levels are required. Second, the government of Lebak Regency could establish a program that focuses on increasing the added value of nira-processed products by transforming them into other creative products, not limited to shell palm sugar. It can take advantage of Lebak Regency's potential as the greatest palm-growing region in Banten Province and its proximity to the Jakarta market.

Acknowledgements

All authors have read and agreed to the published version of the manuscript.
Central Thesis: a worked example from a y Banten Province.

References


Dewi and Santoso, International Journal of Research in Business & Social Science 12(6) (2023), 176-188


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