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Mapping the Creative Economy Potential of Central Java

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ABSTRACT
In increasing the contribution of the national creative industry, strengthening the creative industry in each region is essential. Therefore, identifying the creative industry subsectors in each region is necessary to determine the condition of the creative industry in that area. This research aims to map the potential of Central Java's creative economy with a focus on classifying its potential sectors. The research method applies Location Quotient (LQ), Dynamic Location Quotient (DLQ) analysis, and Shift-Share analysis, with the results then presented in a map. The findings of the mapping of the creative economy in Central Java indicate that the potential of the ecraf subsector is unevenly distributed, with a concentration of business actors more dominant in certain areas that possess a more mature cultural ecosystem, infrastructure, and market. Some subsectors, such as culinary, crafts, publishing, and applications, have emerged as both basic and prospective sectors, making them priorities for development. However, there are still basic subsectors that are not prospective due to limited competitiveness, innovation, and adaptation to industry trends. The policy implication for the Central Java government is the need to develop a creative economy roadmap based on regional potential, integrated with a green innovation strategy, so that each subsector can optimize local resources while maintaining environmental sustainability.

Keywords: Competitiveness; Creative Economy; Mapping; Potential; Prospective

INTRODUCTION

The rapid development of the world economy has created new economic potential. While the global economy was once strongly rooted in the agricultural economy, advances in technology have transformed its structure. A new economic wave is emerging, succeeding the industrial economy and the agricultural economy (Khan et al., 2020; Kumala, 2022; McDaniel, 2018; Ushakov et al., 2019). According to Howkins (Banerjee et al., 2019), the creative economy is defined as economic activity that arises from ideas, representing the core terminology of the creative industries. The creative economy has significantly influenced national economies. The UK, for instance, is one of the countries where this new economy has had a substantial impact. Data from The UK Creative Industries (2016) show that the value of the creative industries in the UK grew by 34% from 2010–2015, compared to an average growth of 17.4% across all industries during the same period. Indonesia has likewise experienced the influence of this new economy.

The creative economy has become a strategic sector in supporting sustainable economic growth in various regions, including Central Java. Central Java's leading subsectors include fashion (40.40%), culinary (30.01%), and crafts (15.00%). In addition, the film and video animation subsectors also demonstrate high growth rates of 15% and 14%, respectively. Some of Central Java's internationally recognized creative industries include batik cloth, wayang kulit, carving art, and Troso weaving. The creative economy is vital to Central Java's development, with strong potential to create jobs. As one of Indonesia's provinces with substantial cultural, artistic, and innovative assets, Central Java has the opportunity to develop a creative economy that not only drives economic growth but also fosters environmental preservation (Baker and Kim, 2019).

To increase the contribution of the national creative industry, strengthening the creative industries in each region is essential, as highlighted in the European Creative Industries Summit 2015 (Boccella et al., 2016). This requires identifying creative industry subsectors at the regional level to assess local economic conditions. Such identification enables governments to implement targeted development initiatives. Classification of regional creative industries can follow frameworks like Indonesia's Creative Economy Development 2025 plan (Arumugam & Vijai, 2018; Jeganathan et al., 2019; Razali, 2020; Xie et al., 2023).

Previous research has underscored the potential of the creative economy to bolster regional development but has left gaps in context-specific mapping and sectoral classification for Indonesia. For instance, Baker and Kim (2019) examined the growth of creative industries in Central Java and stressed the economic importance of leading subsectors such as fashion, culinary, and crafts. However, their study primarily used descriptive statistics and did not present a systematic classification or strategic framework for guiding regional development policies. Similarly, Aboramadan (2020) analyzed Indonesia's Creative Economy Development Plan 2025, which focused on national strategies for strengthening the creative economy without offering localized empirical analysis to determine which Central Java subsectors hold the greatest potential for sustainable growth and innovation integration. These limitations reveal a gap in detailed mapping and prioritization of regional creative industry subsectors to inform policy and strategy.

This research aims to produce a comprehensive Mapping the Creative Economy Potential of Central Java, focusing on the classification of potential sectors (Carnevale et al., 2017). Using a multidisciplinary approach and rigorous data analysis, this study seeks to generate strategic recommendations for the advancement of the creative economy in Central Java (Clark, 2017). The goal is for Central Java to emerge not only as a hub of culture-based creative economy but also as a model of integrating creativity, innovation, and sustainability to support the national development agenda. The anticipated benefits include delivering evidence-based recommendations for regional growth, enhancing the synergy of creativity and innovation, and promoting sustainable economic expansion aligned with Indonesia's national development objectives.

RESEARCH METHOD

In analyzing the potential creative economy sectors in Central Java, this study uses Location Quotient (LQ) and Dynamic Location Quotient (DLQ) analysis and Shift-Share analysis. The data used is GDRP data for the creative economy of Central Java province and Indonesia sourced from the Ministry of Tourism and Creative Economy (*Kemenparekraf*) from 2020 to 2024.

Location Quotient (LQ)

LQ analysis is used to analyze the base and non-base sectors in a region, and also to find out how much the level of specialization of the base sector is:

$$LQ = (Vi/Vt)\ /\ (Yi/Yt) \quad \text{.......} \quad (1)$$

Description:
Vi : GRDP value of creative economy sector i at the Central Java Province level
Vt : Total GRDP of all creative economy sectors at the Indonesian level
Yi: GRDP value of creative economy sector i at the Central Java Province level
Yt : Total GRDP of all creative economy sectors at the Indonesian level

The possibilities that can occur, namely:

1) LQ > 1, meaning that the sector is classified as a basic sector and has the advantage of producing more commodities than regional consumption needs, which can be sold to other regions.
2) LQ = 1, meaning that the value of the sector is equally superior both at the Central Java Province and Indonesia levels.
3) LQ < 1, then the sector is categorized as a non-base sector. The commodity production has not met the consumption needs of Central Java Province (Tarigan, 2014).

Dynamic Location Quotient (DLQ)

DLQ analysis is used to determine whether the creative economy sector that has been classified as basic or non-basic has the prospect of being developed or not in Central Java Province.

DLQ = [(1+$g$ik)/(1+gk)] / [(1+gtp)/(1+gp)]^t ……………………………………..…. (2)

Notes:
gik: Growth rate of creative economy sector i at Central Java Province level
gk: Average growth of all sectors at Central Java Province level
gtp: Economic growth rate of sector i in Indonesia
gp: Average growth of all sectors in Indonesia
t: Difference between final year and initial year

If DLQ > 1, then the sector in Central Java is considered to have the potential to grow (Prospective). It also shows a dynamic competitive advantage and deserves to be a priority for investment or policy strengthening.

If DLQ < 1, the competitiveness of the sector is declining or unable to keep up with the growth rate in Indonesia. This sector is less prospective to be developed in the medium-long term so that policy intervention, efficiency, or transformation is needed so that it does not continue to lag behind.

Shift-Share

Shift Share analysis is used to examine the structure or performance of a local economy compared to the same sector but at a higher regional level over a period of time:

$$PR_{ij} = Q_{ij}^{0}\left\{\frac{Y_i}{Y_0} - 1\right\} \quad (3)$$

Interpretation:

1) If PR<Q: then the growth of the sector in Central Java Province can encourage growth in the same sector at the Indonesia level.
2) If PR>Q: then the growth of the sector in Central Java Province does not encourage growth in the same sector at the Indonesia level.
3) $PS_{ij} = Q_{ij}^{0}\left\{\frac{Q_i^t}{Q_i^0} - \frac{Y_t}{Y_0}\right\}$ ……………………………………..…. (4)

Interpretation:

1) If PS>0: then the sector at the Central Java level grows faster than the same sector at the Indonesia level.
2) If PS<0: then the sector at the Central Java level is growing slower than the same sector at the Indonesia level.

$$DS_{ij} = Q_{ij}^{0}\left\{\frac{Q_{ij}^t}{Q_{ij}^0} - \frac{Q_i^t}{Q_i^0}\right\} \quad (5)$$

Interpretation:

1) If DS>0: then the sector has faster growth than other sectors in the same region.
2) If DS<0: then the sector has slower growth than other sectors in the same region.

Notes:
Y_0 = Indonesia's GDP in base year
Y_t = Indonesia's GDP in the period of year *t*
Q_i^t = Indonesian GDP of sector *i* in year *t*
Q_i^0 = Indonesian GDP of sector *i* in the base year
Q_{ij}^t = GRDP of Central Java sector *i* in year *t*
Q_{ij}^0 = GRDP of Central Java sector *i* in the base year

After determining the potential creative economy sub-sectors in Central Java, the next step is to display the results on a map, this is intended to facilitate policy making related to improving the creative economy in Central Java and can expand the creative industry cluster area in Central Java. The data used is sourced from the 4-digit KBLI.

RESULT AND DISCUSSION

LQ Analysis

The results of the LQ analysis based on Table 1. This means that the contribution of these sectors in Central Java is greater (proportionally) ubsector than their contribution at the national level. The implication is that these sectors are not only able to fulfill local needs, but also produce surpluses that can be marketed outside the region, thus becoming the main driver of the regional economy. These creative economy sectors have the potential to become regional export motors and significant contributors to GRDP. These sectors include Music (3.19); Fine Arts (1.79); Product Design (1.48); Fashion (1.03); Culinary (2.17); Film, Animation and Video (1.73); Photography (1.35); Visual Communication Design (1.74); Television and Radio (1.80); Crafts (4.15); Performing Arts (1.70); Publishing (3.21); and Applications (1.34). Meanwhile, creative economy sectors that have not been able to meet local needs include Game Developer (0.14); Architecture (0.25); Interior Design (0.44); and Advertising (0.91).

Table 1. Results of LQ Analysis of the Creative Economy Sector in Central Java

No	Sector	2020	2021	2022	2023	2024	Average
1	Game Developer	0,14	0,14	0,14	0,14	0,13	0,14
2	Architecture	0,26	0,26	0,25	0,23	0,24	0,25
3	Interior Design	0,44	0,45	0,44	0,44	0,44	0,44
4	Music	3,15	3,27	3,26	3,17	3,11	3,19
5	Fine Arts	1,93	1,83	1,78	1,73	1,68	1,79
6	Product Design	1,57	1,51	1,49	1,45	1,39	1,48
7	Fashion	1,05	1,05	1,03	1,02	1,02	1,03
8	Culinary	2,41	2,40	2,07	1,99	1,98	2,17
9	Film, Animation and Video	1,76	1,74	1,72	1,72	1,71	1,73
10	Photography	1,40	1,35	1,34	1,33	1,31	1,35
11	Visual Communication Design	1,75	1,74	1,73	1,74	1,74	1,74
12	Television and Radio	1,83	1,83	1,80	1,78	1,77	1,80
13	Advertising	0,95	0,94	0,92	0,89	0,86	0,91
14	Craft	4,10	4,20	4,16	4,20	4,11	4,15
15	Performing Arts	1,70	1,74	1,73	1,68	1,64	1,70
16	Publishing	3,17	3,20	3,15	3,25	3,26	3,21
17	Application	1,32	1,33	1,37	1,35	1,32	1,34

Source: Data Processed, 2025

DLQ Analysis

In the DLQ analysis in Table 2, the creative economy sector emphasizes more on its potential to grow, and shows a dynamic competitive advantage and deserves to be a priority for investment or strengthening policies. If DLQ has a value of more than one, it means that the sector is prospective. Creative economic sectors that have the potential to develop in Central Java include Interior Design (4.01); Culinary (1.00); Crafts (1.40); Publishing (1.87); and Applications (1.58).

Table 2. Results of DLQ Analysis of Creative Economy Sectors in Central Java

No	Sector	1+gik	1+gk	(1+gik) / (1+gk)	1+gtp	1+gp	(1+gtp) / (1+gp)	DLQ=(E25 / H25)^4
1	Game Developer	1,57	4,51	0,35	2,59	4,18	0,618	0,10
2	Architecture	1,00	4,51	0,22	1,32	4,51	0,293	0,33
3	Interior Design	4,32	4,51	0,96	3,05	4,51	0,677	4,01
4	Music	6,05	4,51	1,34	6,06	4,51	1,345	0,99
5	Fine Arts	0,96	4,51	0,21	4,09	4,51	0,907	0,00
6	Product Design	2,96	4,51	0,66	4,90	4,51	1,087	0,13

No	Sector	1+gik	1+gk	(1+gik) / (1+gk)	1+gtp	1+gp	(1+gtp) / (1+gp)	DLQ=(E25 / H25)^4
7	Fashion	3,73	4,51	0,83	4,08	4,51	0,906	0,70
8	Culinary	2,72	4,51	0,60	2,73	4,51	0,605	1,00
9	Film, Animation and Video	7,53	4,51	1,67	8,24	4,51	1,829	0,70
10	Photography	9,05	4,51	2,01	9,88	4,51	2,194	0,70
11	Visual Communication Design	8,11	4,51	1,80	12,52	4,51	2,778	0,18
12	Television and Radio	4,58	4,51	1,02	4,95	4,51	1,099	0,73
13	Advertising	2,97	4,51	0,66	4,68	4,51	1,040	0,16
14	Craft	3,50	4,51	0,78	3,21	4,51	0,713	1,40
15	Performing Arts	3,67	4,51	0,81	4,18	4,51	0,928	0,59
16	Publishing	6,77	4,51	1,50	5,80	4,51	1,286	1,87
17	Application	5,28	4,51	1,17	4,71	4,51	1,045	1,58

Source: Data Processed, 2025

Based on the results of the *Location Quotient* (LQ) and *Dynamic Location Quotient* (DLQ) analysis in Table 3, ubsecto large creative economy sectors in Central Java are classified as basic sectors, which means that they have a contribution ubsecto greater than the national average. However, not all basic sectors have high growth prospects in the future. Sectors that are classified as basic and prospective, that is, they are currently superior and have the potential for greater development, include culinary, craft, publishing, and applications. These four sectors deserve to be prioritized for development because in addition to being the current drivers of the regional economy, their growth trends are also positive. On the other hand, there are a number of basic but not prospective sectors such as ubse, fine arts, product design, fashion, film/animation/video, photography, visual communication design, television and radio, and performing arts. These sectors currently contribute significantly, but show slowing growth potential, requiring innovation and diversification strategies to remain competitive. The non-base but prospective sectors, such as interior design, although their current contribution is small ubsecto, have a great opportunity to grow if they receive the right policy support and investment. Meanwhile, the non-base and not prospective sectors, namely game developers, architecture, and advertising, are still weak in terms of contribution and growth potential, so they require a more intensive and targeted development approach if they are to increase their role in the creative economy of Central Java.

Table 3. Results of LQ and DLQ Analysis of Creative Economy Sectors in Central Java

No	Business Field	LQ Value	DLQ Value	LQ Interpretation	DLQ Interpretation	Final Conclusion
1	Game Developer	0,14	0,10	Not a Base	Not Prospective	Not a Non-Prospective Base
2	Architecture	0,00	0,33	Not a Base	Not Prospective	Not a Base Not Prospective
3	Interior Design	0,44	4,01	Not a Base	Prospective	Not a Prospective Base
4	Music	3,19	0,99	Base	Not Prospective	Non-Prospective Base
5	Fine Arts	1,79	0,00	Base	Not Prospective	Non-Prospective Base
6	Product Design	1,48	0,13	Base	Not Prospective	Non-Prospective Base
7	Fashion	1,03	0,70	Base	Not Prospective	Non-Prospective Base
8	Culinary	2,17	1,00	Base	Prospective	Prospective Base

No	Business Field	LQ Value	DLQ Value	LQ Interpretation	DLQ Interpretation	Final Conclusion
9	Film, Animation and Video	1,73	0,70	Base	Not Prospective	Non-Prospective Base
10	Photography	1,35	0,70	Base	Not Prospective	Non-Prospective Base
11	Visual Communication Design	1,74	0,18	Base	Not Prospective	Non-Prospective Base
12	Television and Radio	1,80	0,73	Base	Not Prospective	Non-Prospective Base
13	Advertising	0,91	0,16	Not Basis	Not Prospective	Not a Non-Prospective Base
14	Craft	4,15	1,40	Base	Prospective	Prospective Base
15	Performing Arts	1,70	0,59	Base	Not Prospective	Non-Prospective Base
16	Publishing	3,21	1,87	Base	Prospective	Prospective Base
17	Application	1,34	1,58	Base	Prospective	Prospective Base

Source: Data Processed, 2025

Shift-Share Analysis

Based on the results of the analysis using the KPP (Product Growth Advantage), KPPW (Regional Growth Advantage), and PB (Net Growth) subsectors in Table 4, it can be seen that all creative economy subsectors in Central Java fall into the non-progressive category. This means that although some subsectors have specialized in fast-growing sectors nationally, such as game developers, interior design, product design, culinary, film/animation/video, advertising, and performing arts, overall they do not have regional competitiveness (subsector KPPW value). In other words, these subsectors are growing nationally, but in Central Java their contribution has not been able to exceed the average growth of other regions in Indonesia.

Meanwhile, other subsectors such as architecture, music, fine arts, fashion, photography, visual communication design, television & radio, crafts, publishing, and applications are in slow-growing sectors nationally and also lack regional competitive advantages, so their position in the market is increasingly depressed. This condition shows that although Central Java has a diversity of creative economy subsectors, large subsectors have not been able to capitalize on national growth momentum or global trends to lift regional performance.

Contextually, this indicates that the development of the creative economy in Central Java has not been optimal in building regional competitiveness and market penetration. This limitation can be caused by several subsectors, such as low technological innovation and adaptation, limited distribution and promotion networks outside the region, and lack of integrated creative ecosystem support between business actors, government, and creative communities. Under these conditions, future development strategies need to focus on strengthening local capacity and competitiveness, building regional branding, and encouraging cross-subsector collaboration so that the existing creative potential can become a driver of sustainable economic growth in Central Java.

Table 4. Results of Shift-Share Analysis of Creative Economy Sectors in Central Java

No	Sector	KPP	Description	KPPW	Description	PB	Description
1	Game Developer	0	fast-growing sector specialization	-0,86	no competitiveness	-0,86	Not progressive
2	Architecture	-0,05	slow growing sector specialization	-	no competitiveness	-	Not progressive
3	Interior Design	0,01	fast-growing sector specialization	-0,71	no competitiveness	-0,7	Not progressive
4	Music	-0,37	slow-growing sector specialization	-0,26	no competitiveness	-0,63	Not progressive
5	Fine Arts	-0,37	slow-growing sector specialization	-0,51	no competitiveness	-0,88	Not progressive

No	Sector	KPP	Description	KPPW	Description	PB	Description
6	Product Design	0,2	fast-growing sector specialization	-0,96	no competitiveness	-0,76	Not progressive
7	Fashion	-0,12	slow-growing sector specialization	-0,58	no competitiveness	-0,7	Not progressive
8	Culinary	1,28	fast-growing sector specialization	-1,46	no competitiveness	-0,18	Not progressive
9	Film, Animation and Video	0,22	Fast-growing sector specialization	-0,61	no competitiveness	-0,39	Not progressive
10	Photography	-0,58	slow growing sector specialization	-0,05	no competitiveness	-0,64	Not progressive
11	Visual Communication Design	-0,02	slow-growing sector specialization	-0,79	no competitiveness	-0,81	Not progressive
12	Television and Radio	-0,33	slow-growth sector specialization	-0,36	no competitiveness	-0,69	Not progressive
13	Advertising	0,22	fast-growing sector specialization	-0,93	no competitiveness	-0,71	Not progressive
14	Craft	-0,1	slow growing sector specialization	-0,63	no competitiveness	-0,74	Not progressive
15	Performing Arts	0,12	fast-growing sector specialization	-0,86	no competitiveness	-0,74	Not progressive
16	Publishing	-0,09	slow-growth sector specialization	-0,58	no competitiveness	-0,67	Not progressive
17	Application	-0,03	slow-growing sector specialization	-0,54	no competitiveness	-0,57	Not progressive

Source: Data Processed, 2025

The combined results show an ambivalent constellation: many subsectors in Central Java are already basic (LQ > 1) thus providing large subsector contributions to regional GRDP, but the majority of subsectors have weak regional competitiveness (KPPW) and non-progressive net growth (PB). This means that the strength of the subsector (base) has not been converted into a sustainable competitive advantage. This finding is consistent with the literature that emphasizes that subsector advantages need to be supported by organizational capabilities, market networks, and managerial practices in order to impact long-term growth (Chahal et al., 2020; Dingler & Enkel, 2016).

More specifically, the culinary, craft, publishing, and application subsectors emerged as priority candidates as the LQ-DLQ combination signaled a base and prospective position. However, KPP-KPPW-PB analysis indicates that even these subsectors are still vulnerable due to negative regional competitiveness, indicating problems with market penetration, branding, and suboptimal business scale (Clark, 2017; Chahal et al., 2020). For basic but not prospective subsectors (music, fine arts, product design, fashion, film/animation), this suggests potential stagnation that requires product reformulation, technology adoption, and improved creative capacity to avoid market share erosion (Carnevale et al., 2017; Litchfield et al., 2015).

Furthermore, some non-base but prospective subsectors such as interior design show opportunities for new bases to emerge if supported by strategic interventions, synergies between stakeholders and knowledge transfer play an important role in this process (de Camargo et al., 2019; Dingler & Enkel, 2016). In contrast, non-base & non-speculative subsectors (e.g. game developers, architecture, advertising) need product differentiation strategies, improved digital service quality, and online reputation management as consumer reviews and trust can make or break market value (Baker & Kim, 2019; Nunes & Park, 2017).

Distribution of Creative Economy in Central Java

Interior Design

KBLI relevant to interior design is KBLI code 74141: Interior Design Activities. Includes indoor spatial planning and design services for various types of buildings, including the selection of colors, materials, lighting, furniture layout, and other decorative elements. The mapping of interior design in regencies and cities in Central Java can be seen from Figure 1. below.

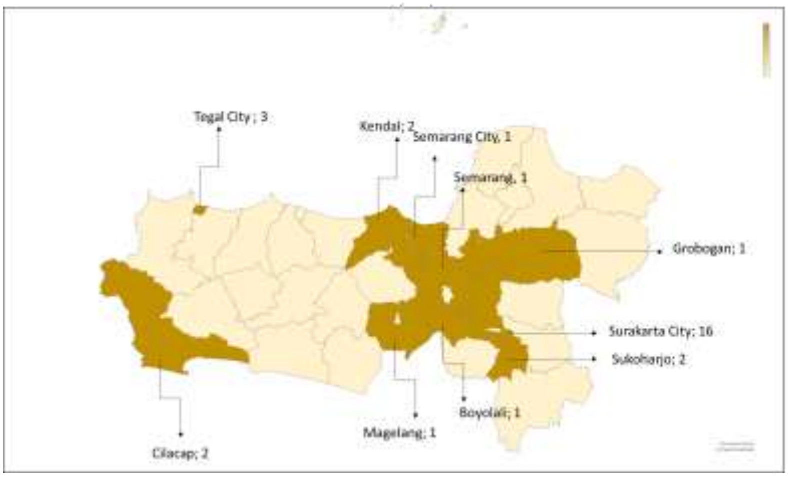
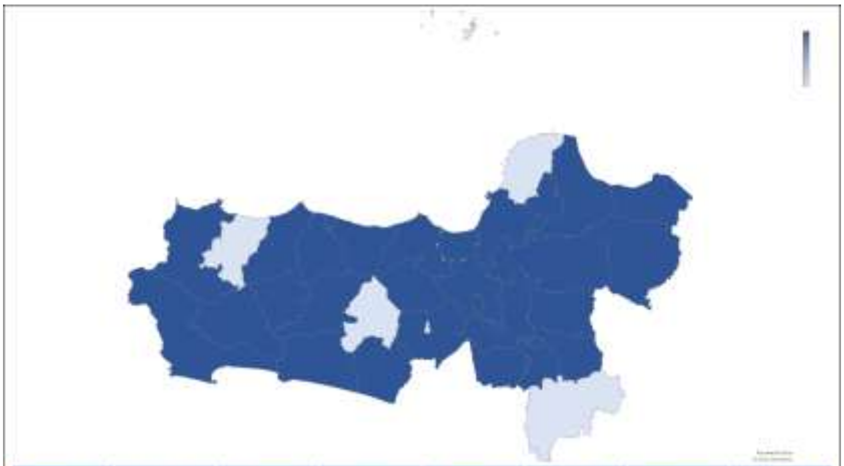


Figure 1. Mapping of Creative Economy Actors in Interior Design in Central Java
Source: Data Processed, 2025

The data shows that interior design businesses in Central Java are unevenly distributed, with a strong dominance in Surakarta City which has 16 businesses, while other regions such as Boyolali, Grobogan, Magelang, and Semarang Regency only have one business, and some areas such as Cilacap, Kendal, Sukoharjo, Tegal City have two to three businesses only. Overall, the interior design sector in Central Java is currently not a leading sector, but has the opportunity to grow if there is a strategy to increase competitiveness, equalize actors outside Surakarta City, and strengthen branding and service quality to capture national growth trends.

Culinary

The culinary creative economy sector includes various types of businesses, ranging from food and beverage processing industries, catering services, to restaurants and cafes. In the KBLI classification, this subsector can be represented by several relevant codes. In the processing industry, for example, there is KBLI 10750 for the food and other processed cooking industry, KBLI 10799 for the other food industry not elsewhere classified, KBLI 11041 for the non-alcoholic soft drinks industry, and KBLI 11050 for the traditional drinks industry such as jamu or wedang packaging. In the field of food services, KBLI 56210 covers food services for individuals such as event or household catering, while KBLI 56290 covers other food services for companies, schools or hospitals. Meanwhile, for the business of providing food on-site, there is KBLI 56101 for restaurants, KBLI 56102 for restaurants, and KBLI 56301 for cafes. In addition, ready-to-eat food sales businesses are also included, such as KBLI 47221 for retail trade in ready-to-eat food at kiosks or outlets, and KBLI 47814 for retail trade in mobile food and beverages such as food trucks.



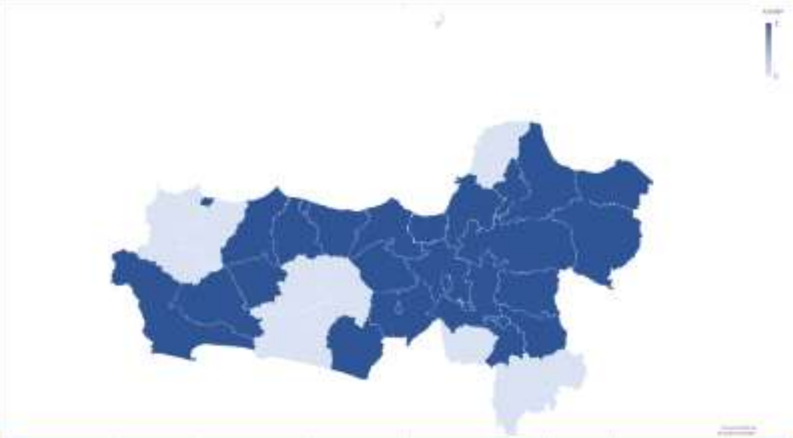
District/City	Total	District/City	Total	District/City	Total	District/City	Total
Banjarnegara	10	Karanganyar	10	Pekalongan	6	Sukoharjo	11
Batang	9	Kebumen	4	Pemalang	3	Temanggung	5
Boyolali	63	Kendal	171	Purbalingga	6	Pekalongan City	10
Brebes	2	Klaten	2	Purworejo	12	Salatiga City	3
Cilacap	11	Kudus	35	Rembang	2	Semarang City	4
Demak	2	Magelang	8	Semarang	2	Surakarta City	107
Grobogan	12	Pati	3	Sragen	30	Tegal City	82

Mapping of Culinary Creative Economy Actors in Central Java
Source: Data Processed, 2025

Based on Figure 2, data on creative economy actors in the culinary sector in Central Java show a fairly varied distribution between districts/cities. Some areas recorded a very high number of actors, such as Kendal Regency with 171 actors, Surakarta City with 107 actors, Tegal City with 82 actors, and Boyolali Regency with 63 actors. This number indicates that these areas have a relatively developed culinary ecosystem and may be the center of local culinary activities. On the other hand, there are regions with a relatively small number of actors, such as Brebes Regency, Klaten Regency, Rembang Regency and Semarang Regency, each of which has only 2 actors, as well as several other regions with under five, such as Kebumen Regency (4) and Salatiga City (3). Most regions are in the middle range, between 5-35 actors, such as Kudus District (35), Sragen District (30), and Magelang District (8). In general, this data indicates an unequal distribution of culinary ecraf actors in Central Java, where the highest concentration is in certain cities and districts, while other regions still have great potential for the development of this subsector.

Craft

The craft creative economy sector includes various production activities that rely on hand skills and creativity in processing materials into products with artistic or functional value. In the KBLI classification, this subsector can include textile-based industries such as KBLI 13133 for the non-machine weaving industry that produces traditional fabrics such as songket, lurik, or ikat; KBLI 13921 for the embroidery and embroidery industry; and KBLI 13929 for the other textile finished goods industry such as tablecloths, pillowcases, and wall hangings. For wood, rattan and bamboo-based crafts, there is KBLI 16292 for the rattan and bamboo weaving industry, and KBLI 16299 for the other wood, rattan and cork goods industry, which includes wood carvings or sculptures. For metal and stone crafts, there is KBLI 23931 for the stone goods industry, KBLI 32111 for precious metal jewelry, and KBLI 32112 for non-precious metal jewelry. Crafts made from glass, ceramics and porcelain can be referred to KBLI 23931 for household and display ceramic goods and KBLI 23109 for glass goods. In addition, leather crafts also fall into this category through KBLI 15122 which includes leather bags, wallets and accessories, and KBLI 32119 for mixed jewelry goods.



District/City	Total	District/City	Total	District/City	Total	District/City	Total
Banjarnegara	6	Grobogan	16	Pemalang	3	Temanggung	5
Banyumas	2	Karanganyar	3	Purbalingga	18	Magelang City	24
Batang	15	Kendal	83	Purworejo	19	Pekalongan City	22
Blora	58	Kudus	46	Rembang	3	Salatiga City	2
Boyolali	3	Magelang	16	Semarang	2	Semarang City	4
Cilacap	14	Pati	5	Sragen	35	Surakarta City	40
Demak	5	Pekalongan	5	Sukoharjo	60	Tegal City	46

Figure 3: Mapping of Creative Economy Actors of Central Java Crafts
Source: Data Processed, 2025

Contextually, based on Figure 3, the data on creative economy actors in the craft sector in Central Java illustrates two main phenomena: centralization of activities in certain regions and inequality of development between regions. Regions with a high number of craft entrepreneurs such as Kendal District (83), Sukoharjo District (60), Blora District (58), Surakarta City (40), Tegal City (46), and Kudus District (46) likely have a combination of strong supporting factors. These include the availability of local raw materials (e.g., rattan, wood, or textiles), the existence of an established craft industry center or cluster, and the support of an extensive marketing network, both traditional and digital. Some regions such as Surakarta City and Tegal City are also known to have strong artistic and cultural traditions, so craft is not only an economic activity, but also part of the regional identity.

On the other hand, areas with a low number of actors such as Banyumas Regency, Salatiga City, Semarang Regency (2 actors each) or Pemalang Regency and Rembang Regency (3 actors each) indicate that the craft subsector has not developed optimally. This could be due to the lack of support for the production ecosystem, the low skills of the craft workforce, or limited market access. This imbalance shows the need for a local potential-based craft development strategy, such as reviving traditional craft numbers, utilizing local cultural wealth for design innovation, and integrating craft actors into the larger creative economy ecosystem through training, promotion, and marketing digitalization. If these steps are implemented, even regions with a low number of actors can become new growth pockets for the craft sector in Central Java.

Publishing

In the creative economy sector, the publishing sector includes a variety of activities that are regulated in several KBLI codes. KBLI 58110 covers the publishing of printed and digital books, including fiction, nonfiction, scientific and educational books. KBLI 58120 covers the publishing of directories and mailing lists, such as lists of addresses, telephone numbers, or databases in printed and digital form. KBLI 58130 covers the publication of newspapers, journals, and newsletters on a daily, weekly, or monthly basis, including online versions. Meanwhile, KBLI 58190 covers other publishing activities such as catalogs, brochures, comics, and other printed visual works outside the main category. In addition, there are supporting codes such as KBLI 63910 for news agency activities that provide content for various media, and KBLI 63990 for other information services related to digital content distribution. All of these KBLIs form a publishing ecosystem that is one of the important pillars in the development of the creative economy in Indonesia.

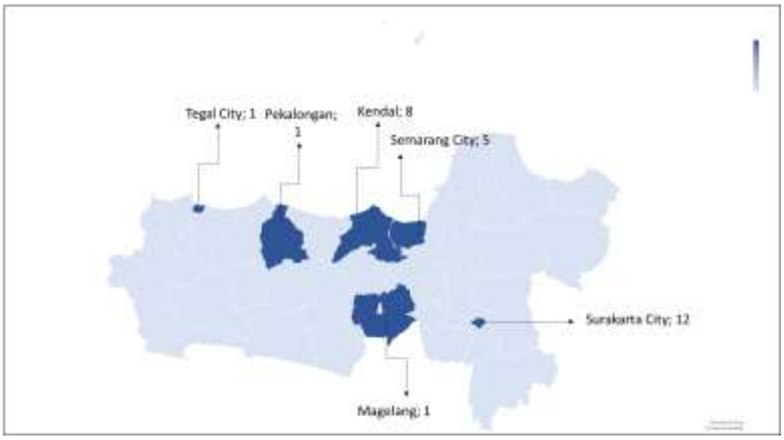


Figure 4. Mapping of Creative Economy Actors in Central Java Publishing
Source: Data Processed, 2025

Based on Figure 4, the distribution of creative economy actors in the publishing sector in Central Java reflects the different levels of creative ecosystem development between regions. The city of Surakarta, which occupies the top position with 12 actors, has a strong cultural, artistic, and educational base that can encourage the growth of publishing businesses, whether engaged in books, magazines, or other creative content. Kendal Regency, with 8 players, may not be as well-known as Surakarta in this field, but its strategic position on the transportation route and proximity to Semarang City can be a supporting factor. Semarang City itself, despite being the center of government and trade, only records 5 publishing players, indicating that its creative ecosystem is more dominant in other sectors such as design, culinary, or advertising. Meanwhile, regions such as Magelang Regency, Pekalongan Regency, and Tegal City, which have only 1 player each, show that the publishing industry has not been the focus of creative economy development in these areas. This shows that there is great potential for capacity building, market access, and cross-sector collaboration to make the distribution of the publishing industry more equitable throughout Central Java.

Applications

In the context of the creative economy, the Apps subsector is covered by several 2020 Indonesian Standard Industrial Classification (KBLI) categories related to programming activities and information technology services.

KBLI code 62011: Computer Programming activities include writing, modifying, testing, and maintaining software, including the creation of desktop, mobile, and web-based applications according to user needs.

KBLI 62012: Computer Consulting and Computer Facility Management Activities include technology consulting services that support application development, system planning, and software and hardware integration.

KBLI 62090: Information Technology Activities and Other Computer Services includes supporting services such as hosting, database management, and specialized application development that are not included in the previous categories.

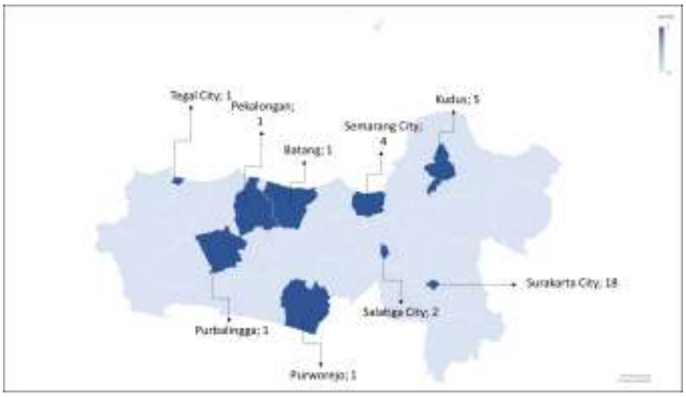


Figure 5. Mapping of Central Java Application Creative Economy Actors
Source: Data Processed, 2025

The results of the mapping of creative economy actors in the Application subsector in Central Java based on Figure 5. show an uneven distribution and indicate a concentration of activities in certain areas. Surakarta City occupies the dominant position with 18 players, far surpassing other regions, reflecting the high dynamism of the digital ecosystem in the city, both in terms of infrastructure, creative communities, and support from higher education institutions. Semarang City is in second place with 4 players, followed by Kudus Regency (5 players), which is interesting because it is relatively small geographically but has the potential for a growing technology-based creative industry. In contrast, most other regions, such as Batang Regency, Pekalongan Regency, Purbalingga Regency, Purworejo Regency, Tegal City, and Salatiga City, still record a very limited number of actors (1-2 actors), signaling the limited penetration of the application subsector in these regions. Critically, this pattern suggests that the development of the app subsector in Central Java is still concentrated in centers of economic growth and education, while peripheral areas do not yet have an adequate supporting ecosystem, both in terms of skilled human resources, access to financing, and reliable digital infrastructure.

Game Developer

In the game development sector, the KBLI included consists of KBLI:

62011: Video Game Development Activities

Includes concept design, software development, graphics creation, animation, sound, testing and support related to video game development.

74142: Game Content Design Activities

Includes the design of game logic, story, character visuals, interface, levels, and other supporting activities.

32401: Gaming Equipment Industry

Relates to the manufacture of game tools and equipment, such as board games, educational toys, casino equipment, and the like.

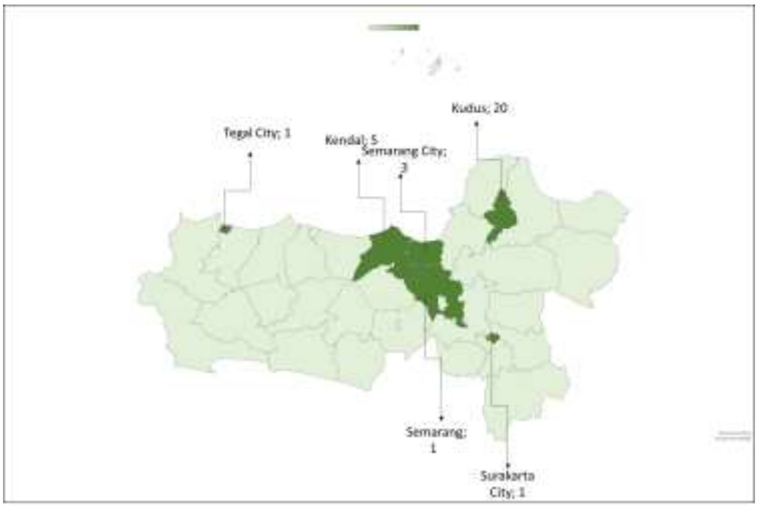


Figure 6. Mapping of Creative Economy Actors in Central Java Game Development
Source: Data Processed, 2025

Based on Figure 6. shows the distribution of creative economy (ecraf) actors in the game development sector in Central Java Province. The dark green color indicates areas that have actors in this sector, while light green indicates areas where no actors are recorded. The highest concentration is in Kudus Regency with 20 actors, followed by Kendal Regency (5 actors), Semarang City (3 actors), while Tegal City, Semarang Regency, and Surakarta City each have only 1 actor. The distribution of ecraf actors is concentrated in the northern and central regions of Central Java, with the dominant point in Kudus, which is likely to be the center of development or the main supporting ecosystem for the game sector in the province. This uneven distribution indicates that there is potential for development in other areas that still lack actors.

Product Design

The relevant KBLI for the Product Design creative economy subsector includes code 74142 - Industrial Design Activities. This code covers the activities of designing and developing industrial product designs that prioritize aspects of aesthetics, function, and innovation, ranging from household appliances, furniture, transportation equipment, to other consumer products. This activity not only includes the creation of drawings or models, but also the design research process, material selection, shape testing, and development of prototypes ready for mass production. In the context of the creative economy, product design plays an important role in creating added value through differentiation and visual appeal that can increase the competitiveness of local products in domestic and international markets.

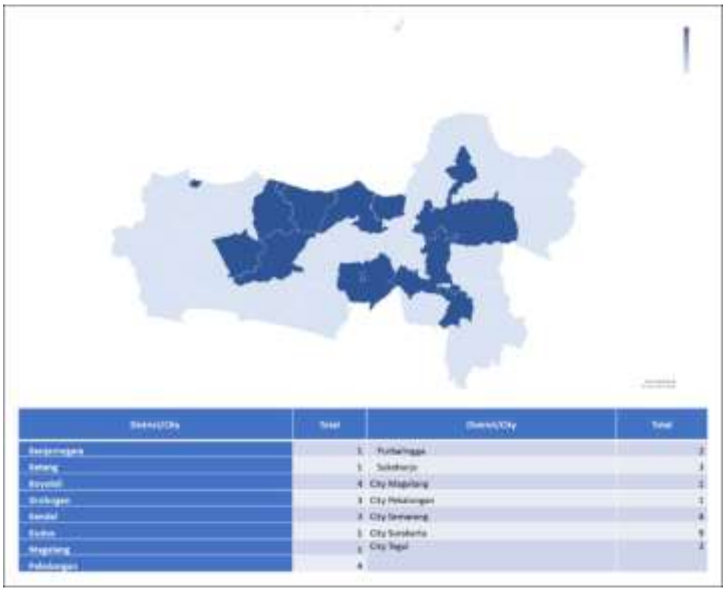


Figure 7: Mapping of Product Design Creative Economy Actors Central Java
Source: Data Processed, 2025

Advertisement

The KBLI for the Advertising creative economy subsector includes several important codes, including 73100: Advertising, which includes services for planning, creating, and placing advertisements in various media such as print, electronic, outdoor, and digital. In addition, there is also 73200: Market Research and Polling Activities, which support advertising activities with audience research and data-based marketing strategies. In the context of the creative economy, this KBLI accommodates the entire chain of advertising industry activities, from creative concepts, production of advertising materials (graphics, audio, video), campaign management, to evaluation of its effectiveness. This sector plays a strategic role in building brand image, driving product sales, and promoting regional potential, both at the local, national and international levels.

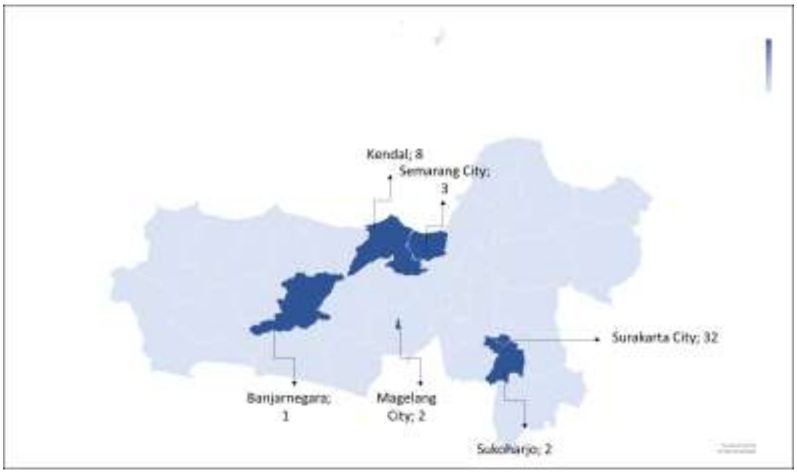


Figure 8: Mapping of Creative Economy Actors in Central Java Advertising
Source: Data Processed, 2025

This mapping illustrates the distribution of creative economy (ecraf) actors in the advertising sector in Central Java Province based on district/city areas. The map shows that the distribution of ecraf actors is uneven and concentrated in several regions. The highest concentration is in Surakarta City with 32 units, followed by Kendal Regency with 8 units. Semarang City has 3 units, while Sukoharjo Regency and Magelang City each recorded 2 units. Banjarnegara Regency is the lowest with only 1 actor unit. This distribution shows that advertising sector ecraf centers tend to be concentrated in urban areas or areas with more developed economic activities and market access, while there are relatively few in other areas. This may indicate that there are opportunities for the development of the advertising sector in areas that are currently not optimally utilized.

Performing Arts

The Performing Arts creative economy sector in the Indonesian Standard Industrial Classification (KBLI) covers various activities related to the staging and production of art for entertainment and commercial purposes. Some relevant KBLIs include KBLI 90011 (Performing Arts Activities by Groups), which includes performances of theater, dance, music, and other forms of stage art performed in groups; KBLI 90012 (Performing Arts Activities by Individuals), which includes performances by solo artists such as singers, dancers, musicians, or comedians; KBLI 90019 (Other Performing Arts Activities), which includes types of performing arts not specifically classified in other groups, including street performances or traditional performances. In addition, there is KBLI 90020 (Performing Arts Supporting Activities) which includes supporting services such as event management, provision of technical crew, stage set-up, lighting, and rental of performance equipment. With this coverage, the performing arts sector does not only focus on the artists on stage, but also includes the entire value chain that supports a professional performance.

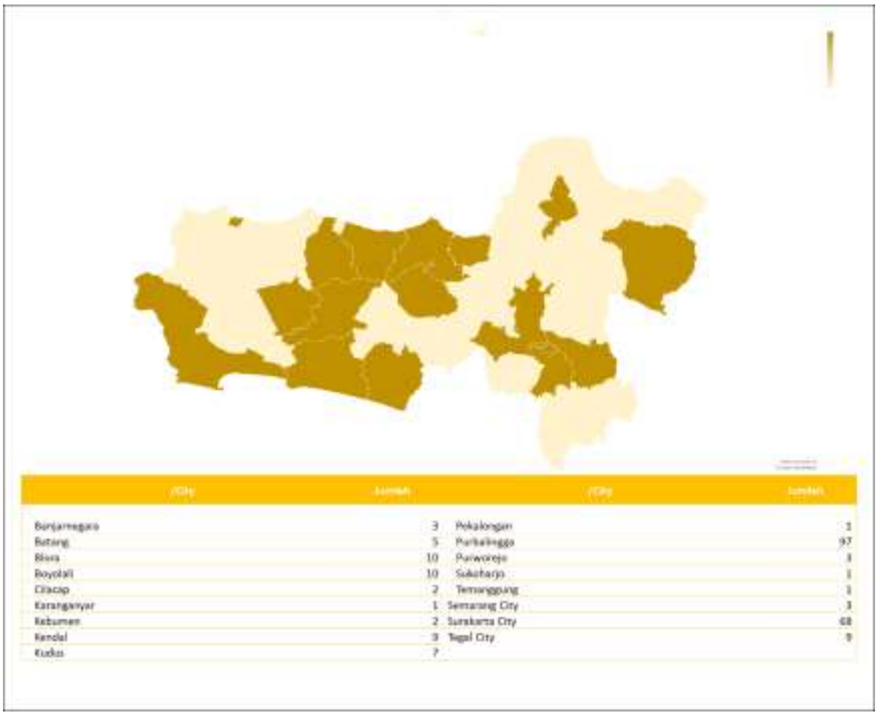


Figure 9: Mapping of Performing Arts Creative Economy Actors in Central Java
Source: Data Processed, 2025

The mapping of creative economy actors in the Performing Arts sector in Central Java shows a very varied distribution between districts/cities, reflecting the different concentration of arts activities and the potential of the creative ecosystem in each region. Purbalingga Regency occupies the highest position with 97 actors, followed by Surakarta City with 68 actors, indicating that these two regions have a strong performing arts tradition, a broad creative community base, and relatively mature supporting infrastructure. In contrast, some regions such as Pekalongan, Sukoharjo, and Temanggung only have 1 actor, indicating that the potential is still very open for the development of this sector. Batang (5 actors), Blora (10 actors), Boyolali (10 actors), and Kudus (7 actors) are in the medium category, while regions such as Cilacap (2 actors), Kebumen (2 actors), and Purworejo (3 actors) have a more limited number of actors. Semarang City (3 actors) and Tegal City (9 actors) also show the presence of this sector although it does not yet dominate the local creative economy landscape. In general, this map illustrates that the main performing arts centers in Central Java are concentrated in areas with a strong cultural history and the support of a developed arts ecosystem, while areas with a low number of actors have the potential to be developed through coaching, local festivals, and integration with the tourism sector.

Discussion

Based on the results of mapping and LQ-DLQ analysis, it can be seen that most of the creative economy subsectors in Central Java are classified as basic sectors, but the competitiveness of the region is still low so that it has not been able to convert these advantages into progressive growth. This condition shows a gap between potential and real performance in the field. Subsectors such as culinary, crafts, publishing, and applications should be prioritized because they are both basic and prospective, but weaknesses in KPPW indicators indicate the need for strategies to strengthen regional branding, expand distribution networks, and accelerate technology adoption to increase market penetration. Meanwhile, non-base but prospective subsectors, such as music, fine arts, product design, fashion, film/animation, photography, visual communication design, television and radio, and performing arts, require business model innovation, product diversification, and human resource quality improvement to maintain relevance and market share amid changing industry trends. Non-base but prospective subsectors such as interior design can be directed to become new bases through investment incentives, applied training, and cross-subsector collaboration. Non-base and non-prospective subsectors such as game developers, architecture, and advertising need to be approached with a strategy of intensive coaching, service differentiation, and strengthening the supporting ecosystem.

In addition to the strategic considerations for subsector development, previous research highlights the importance of cultural and social capital in enhancing the competitiveness of creative industries. Applying this perspective to Central Java, fostering collaboration between local artists, craftsmen, and educational institutions can enhance knowledge sharing, stimulate innovation, and strengthen the creative ecosystem. Moreover, integrating local cultural heritage such as Batik, Wayang kulit, and Troso weaving into product development not only preserves cultural identity but also adds unique value that can differentiate Central Java's creative products in national and international markets. Studies by Carnevale et al. (2017) also support that leveraging regional cultural assets in tandem with entrepreneurship training and technological adoption can increase market competitiveness and sustainability of creative subsectors. Therefore, beyond technical and business strategies, policy interventions should focus on building human capital, facilitating creative networks, and promoting cultural entrepreneurship to ensure long-term growth and resilience of Central Java's creative economy.

CONCLUSION

The mapping of Central Java's creative economy reveals an uneven distribution of ekraf subsector potential, with business activity concentrated in regions possessing more developed cultural ecosystems, infrastructure, and markets. Key subsectors such as culinary, crafts, publishing, and applications are identified as both foundational and promising, warranting prioritized development, while less competitive and innovative subsectors remain stagnant. Non-base yet prospective sectors could evolve into new growth bases if supported by targeted policies, whereas weaker sectors require ecosystem strengthening and capacity-building interventions. To ensure sustainable growth, an integrated strategy involving local potential optimization, human resource development, business model innovation, and technological adoption is essential—complemented by a green innovation-based roadmap. Local governments should focus on financing access, export facilitation, network strengthening, and digital promotion. Future research should explore the effectiveness of such policy interventions and innovation-driven models in accelerating inclusive and sustainable creative economy growth across Central Java's diverse subsectors.

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