

Mapping Indonesia's Creative Economy Research Landscape: A Bibliometric Study of 21 Years of Open Scholarly Metadata

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Abstract

Research on Indonesia's creative economy is spread over economics, design, tourism, community service and information systems, so it is hard to see which parts of the sector are studied and which are not. This study maps that literature from open scholarly metadata. Five queries in Indonesian and English were run against the Crossref REST API for each year from 2005 to 2025, giving 85,334 records, of which 3,208 unique works had a creative economy term in the title and a link to Indonesia. A manual check of 40 random titles found 38 relevant and a check of 25 excluded records found at most three missed. Output grew from 29 works in 2015 to 652 in 2025, and 76% of works had no recorded citation, partly because most are recent. Dictionaries for the seventeen official creative economy subsectors, applied to titles and abstracts, placed culinary (669 works), crafts (528) and fashion (411) at the top, while interior design (13), television and radio (29), photography (32), product design (41) and fine arts (42) each held under 1.5% of the corpus, and 38% of works matched no subsector. One work in five was a community-service report, and the share of works that mention digital tools rose from 15% in 2020 to 53% in 2025. A co-word network of 79 title terms split into five communities, but its modularity of 0.31 was close to that of rewired networks (0.26), so the thematic structure is weak. Author affiliations were present in only 3% of records, so an institution network could not be built. The contribution is a reproducible subsector gap map with released queries and dictionaries.

Keywords: creative economy; bibliometrics; Crossref; co-word analysis; Indonesia; creative industries; research mapping; open metadata

1. Introduction

Indonesia treats its creative economy as a national development priority and formed a ministry for it in 2024, and groups it into seventeen subsectors, from culinary and crafts to games, film and applications [1, 2]. Studies of these activities appear in many fields at once. Economists study export and growth, design scholars study branding and packaging, tourism researchers study creative villages, and a large community-service literature reports training for small producers [3, 4]. Because the work is so scattered, neither researchers nor programme managers can easily see which subsectors are well studied and which are almost absent.

Bibliometric mapping offers a way to see the whole field from its metadata, and it has been used widely for business and technology topics [5, 6]. Most such maps rely on commercial indexes, which cover few Indonesian-language periodicals, so a large part of Indonesian creative economy research is invisible in them [7, 8]. Open metadata from Crossref, where many Indonesian periodicals register their articles, gives a different view [9, 10].

This study asks three questions. First, how has the volume and character of Indonesian creative economy research changed from 2005 to 2025? Second, which of the seventeen subsectors receive little attention? Third, does the vocabulary of the field form distinct thematic communities? The contribution, stated plainly, is a reproducible map of this literature built only from open metadata: a subsector gap list from bilingual dictionaries, a topic-by-year view and a tested co-word network, with all queries and dictionaries released so that the map can be rebuilt each year [11, 12]. Unlike earlier maps built from commercial indexes, it covers Indonesian-language periodicals and tests its communities against a null model.

2. Literature Review

The idea of creative industries has been debated for two decades. Definitions range from the concentric circles model, which places core arts at the centre, to the view that creative industries are markets organised by social networks [13, 14]. Policy has moved faster than definitions, and critics note that the term has been stretched to cover very different activities [15]. Indonesia's seventeen subsectors are one such policy list, and studies of local practice show how widely the label is used, from culinary home businesses and water hyacinth crafts to creative tourism villages [16, 17, 18].

Much of this work links creativity with digital tools and small firms. Studies of millennial digital entrepreneurs and of branding and visual design training show a turn towards platforms and online markets [19, 20]. Knowledge management in digital creative firms and e-commerce training for creative enterprises form a large applied stream [21, 22]. Design thinking has been proposed as a business model for creative entrepreneurs, and digital transformation as a growth path for creative industry firms [23, 24]. Research on platform business places these efforts in a national frame [25], while studies of local culture and of digital marketing show how heritage and online tools combine [26, 27].

Bibliometric studies supply the methods. Co-word analysis, introduced to trace problem networks in science, links terms that appear together [28, 29]. Software such as VOSviewer and bibliometrix made such maps routine [30, 31]. Community detection by modularity optimisation, often with the Louvain method, is used to find themes [32, 33]. Recent bibliometric studies of entrepreneurship, leadership and sustainable development follow the same pattern [34, 35, 36]. However, few maps test whether the communities they report are stronger than chance, and few use Indonesian-language sources [37, 38]. Studies of the digital economy in Indonesia also rely mostly on local periodicals [39]. This study addresses both points.

3. Method

3.1 Data collection

The Crossref REST API was queried in October 2026 with five bibliographic queries: two in Indonesian (*ekonomi kreatif*, *industri kreatif*) and three in English (*creative economy Indonesia*, *creative industry Indonesia*, *creative industries*). Each query was run for each publication year from 2005 to 2025 with up to 1,000 results per year, together with an earlier unrestricted run, and the union gave 85,334 records [9, 40]. The cap of 1,000 results per query and year was reached in most years after 2015, so lower ranked matches may be missed [41]. Crossref metadata are openly available for reuse, and requests carried a contact address. The records were used only as metadata, without full texts. The study protocol also planned OpenAlex, but its keyless daily budget was exhausted on the collection day, so Crossref was used alone. Crossref covers works with a registered DOI, so Indonesian outputs without one, such as many repository theses, are outside the map.

3.2 Corpus definition

A record was kept if its title contained a creative economy term in either language and the title or container title contained a link to Indonesia, such as a province, city or village term, or the title was written in Indonesian. A title counted as Indonesian when it contained common function words such as *dan*, *yang* or *untuk*. Duplicates were removed by normalised title. This removed 88 records that shared a title with another record. This left 3,208 works, 2,200 with Indonesian titles and 2,789 with an abstract [42, 43]. The corpus holds 3,016 periodical articles, 98 meeting papers, 47 book chapters and 39 preprints. Forty random titles were checked by one coder, and 38 were relevant, one was a regional parliament study and one concerned another country's cultural industries (Fig. 1). Of 5,262 records outside the corpus that had a creative economy term in the title, 25 random ones were also read, and at most three possibly concerned Indonesia.

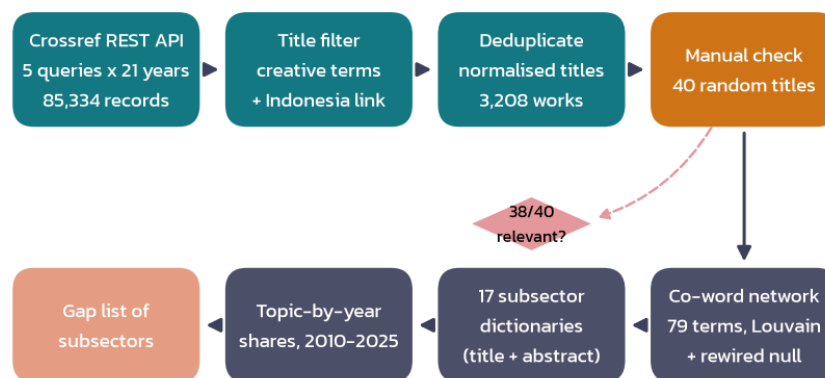


Figure 1. Collection and analysis pipeline; the dashed path is the manual relevance check that feeds back into the corpus definition.

3.3 Subsectors, themes and network

For each of the seventeen subsectors a dictionary of Indonesian and English terms was written, for example *kriya*, *kerajinan* and *craft* for crafts, and it was matched against titles and abstracts [1, 44]. The full dictionaries are given in the released code. A work could fall into several subsectors. When only titles were searched, interior design kept 2 works, photography and television 4 each and product design 5, so the gap list does not depend on abstracts. Two further flags marked community-service reports (training, empowerment or outreach words in the title) and mentions of digital tools [4, 45]. Digital words included digital, online, internet, e-commerce, social media and marketplace. For the co-word network, the 80 most frequent title words outside a stop list became nodes, after a stop list removed generic words in both languages, such as strategy, development and village, and the query terms themselves, and two words were linked when they appeared together in at least five titles. Communities were found with the Louvain method under 20 random seeds, at the default resolution, and modularity was compared with 20 degree-preserving rewired copies of the network [33, 46]. Citation counts are Crossref's recorded counts.

4. Results

4.1 Growth and character

Output was very small before 2014, with 31 works from 2005 to 2013, and then rose steadily from 29 works in 2015 to 226 in 2020 and 652 in 2025, an average growth of about 36% a year (Fig. 2). This is the compound rate from 2015 to 2025, and years before 2010 are omitted from the

figures because they hold three works. The years 2021 to 2025 hold 76% of the corpus [6, 47]. The literature is dispersed: the 3,208 works appeared in 2,183 different periodicals and series, 1,650 of them with a single work, while 46 records named none, and the ten largest held only 5% of the corpus. The Gini coefficient of works per periodical was only 0.26 because most periodicals carried one work (Fig. 6). The median work had three authors and 20% had one. Crossref recorded no citation for 76% of works, and the mean was 0.64 citations per work [10, 48]. The share of works cited at least once fell from 48% for 2015 to 11% for 2025, which partly reflects citation time (Fig. 8). Such counts differ between databases, so they are a lower bound [49, 50]. The Indonesian share of titles rose from 41% in 2015 to 73% in 2025.

Two shifts stand out in Fig. 2. Community-service reports, whose titles speak of training, empowerment or outreach, made up 665 works (21%), and their share rose from 17% in 2020 to 28% in 2025. Mentions of digital tools rose faster, from 15% of works in 2020 to 53% in 2025, so the field has turned towards digital marketing and platforms for small creative firms [19, 51]. Part of this rise may come from authors adding the word digital to titles, so it measures framing as much as practice.

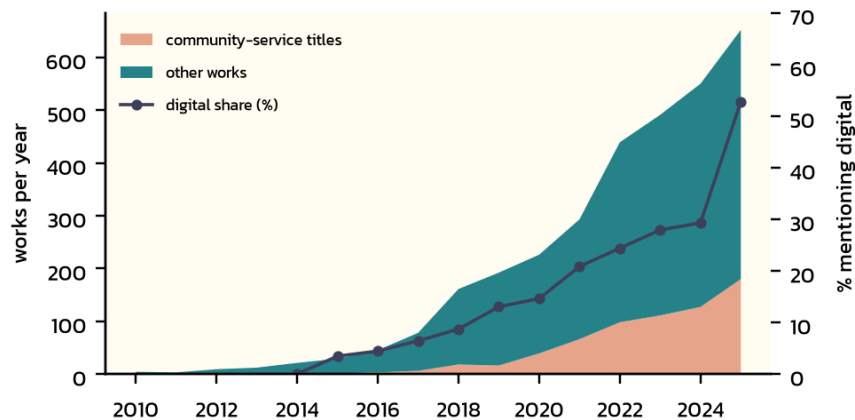


Figure 2. Works per year, split into community-service reports and other works, with the share of works mentioning digital tools (years with at least 20 works).

4.2 Subsector coverage

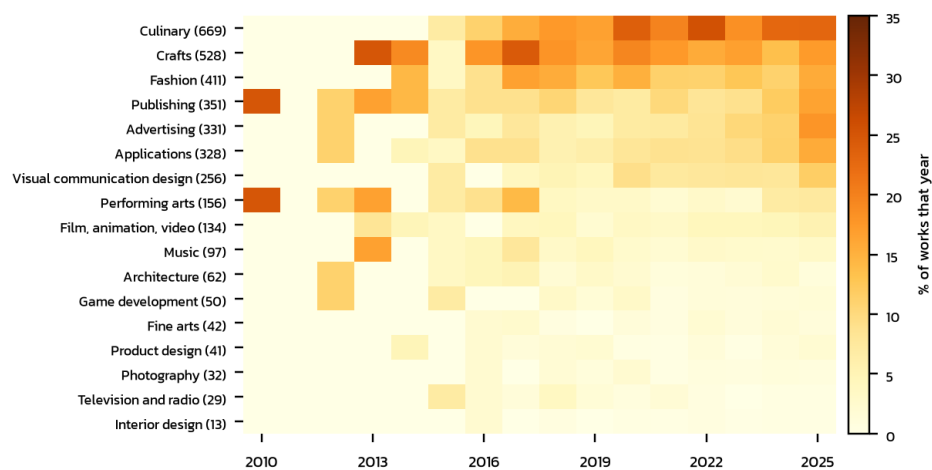
Table I and Fig. 3 show how unevenly the subsectors are studied. Culinary (669 works), crafts (528) and fashion (411) lead, followed by publishing, advertising and applications. At the other end, interior design (13 works), television and radio (29), photography (32), product design (41) and fine arts (42) each appear in under 1.5% of the corpus, and game development (50) is close behind [17, 52]. These are the subsectors that the national list names but research barely covers. Two dictionaries were too broad. Words for literature and promotion matched literature reviews and marketing studies, and with stricter terms publishing fell from 351 to 128 works and advertising from 331 to 45 (Fig. 5) [53, 54]. A further 1,230 works (38%) matched no subsector at all; most of them discuss the creative economy in general, its policy or its villages [3, 55].

4.3 Thematic communities

The co-word network kept 79 terms and 501 links. Most terms are Indonesian, which reflects the language of the titles. Louvain found five communities with a modularity of 0.31 (range 0.30 to 0.31 over 20 seeds): community empowerment, crafts and batik (31 terms); small enterprises, digital business and marketing (21); local culture and tourism (13); English-language economic and innovation terms (9); and the pandemic and marketing (5) (Fig. 4). However, rewired networks with the same degrees reached a modularity of 0.26 on average (standard deviation 0.03), so the

Table 1. Works matched by subsector dictionaries (titles and abstracts; a work can match several subsectors).

Subsectors	Works	Share
Culinary; crafts; fashion	669; 528; 411	13-21%
Publishing; advertising; apps	351; 331; 328	10-11%
Visual design; performing arts	256; 156	5-8%
Film and video; music	134; 97	3-4%
Architecture; games	62; 50	1.6-1.9%
Fine arts; product design	42; 41	1.3%
Photography; TV and radio	32; 29	0.9-1.0%
Interior design	13	0.4%
None matched	1,230	38.3%

**Figure 3.** Topic-by-year heatmap: share of each year's works matched by each subsector dictionary, 2010-2025; totals in brackets.

observed structure is only modestly stronger than chance [32, 46]. This is a difference of only 1.4 standard deviations [56]. With link thresholds of three and eight titles, the observed modularity exceeded the rewired mean by 1.8 and 1.0 standard deviations (Fig. 7) [57]. The vocabulary is shared across themes rather than split into separate schools.

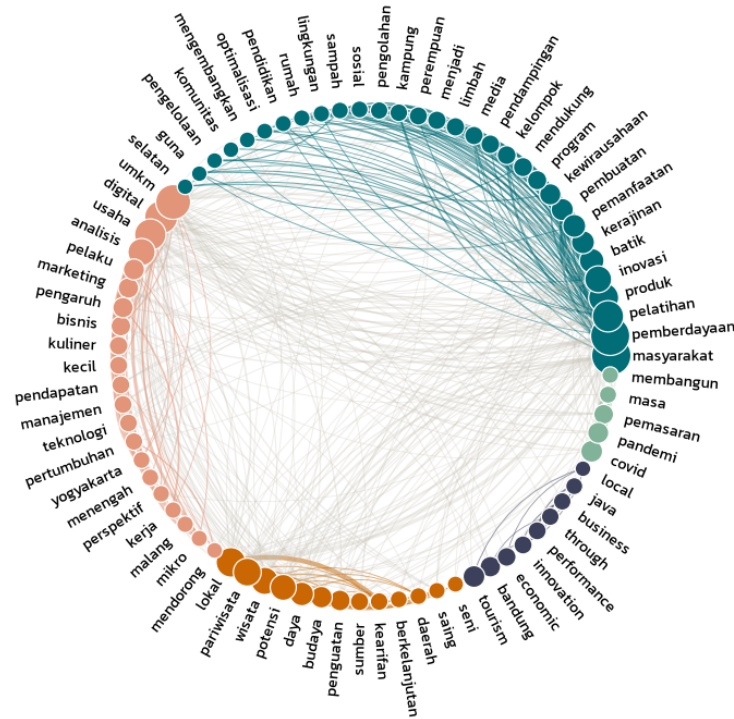


Figure 4. Co-word network of 79 title terms arranged on a ring by Louvain community; coloured arcs join terms within a community and grey arcs join communities.

Community-service reports were most common in visual communication design (33%), culinary (27%) and crafts (26%) and rare in music (4%) and architecture (2%) (Fig. 9), so outreach work concentrates on the product subsectors [58].

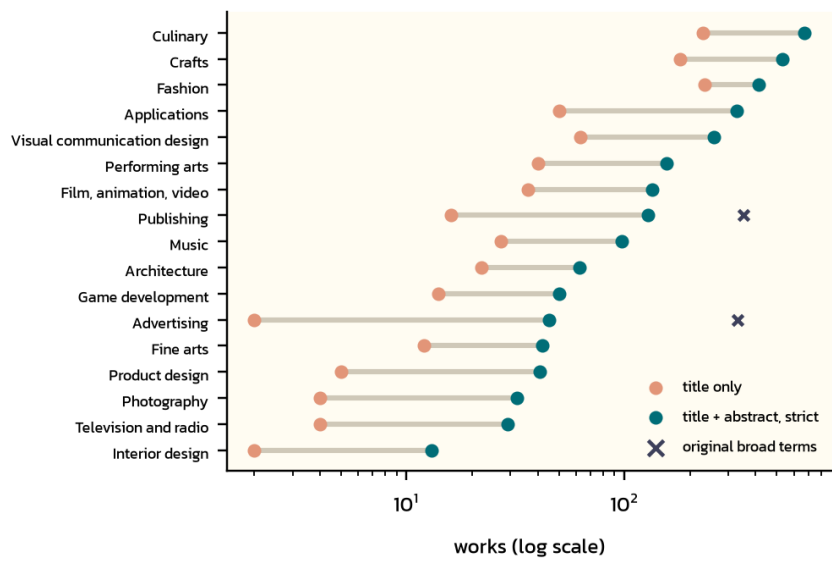


Figure 5. Works per subsector under title-only matching and under strict title and abstract matching; crosses show the original broad dictionaries where they differ.

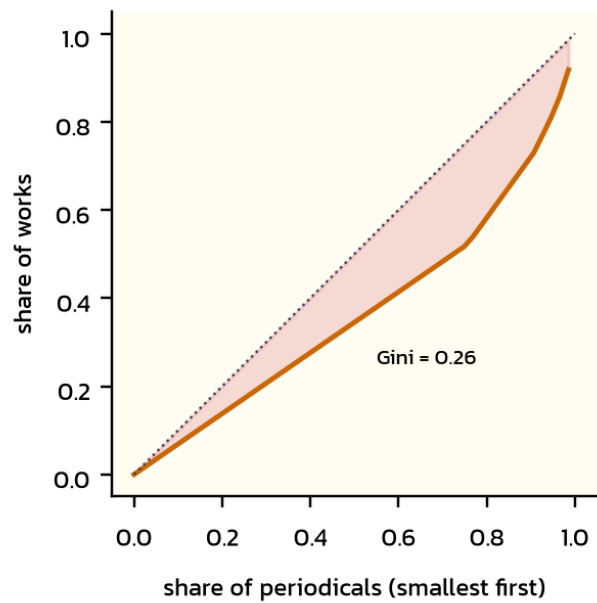


Figure 6. Lorenz curve of works per periodical.

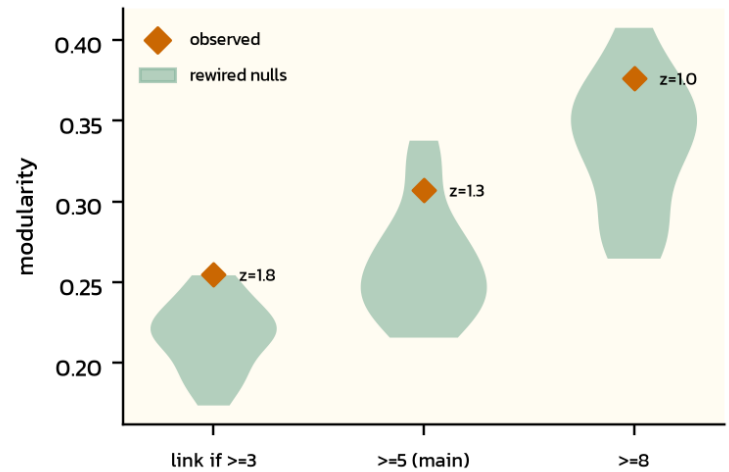


Figure 7. Observed modularity against 20 degree-preserving rewired networks at three link thresholds.

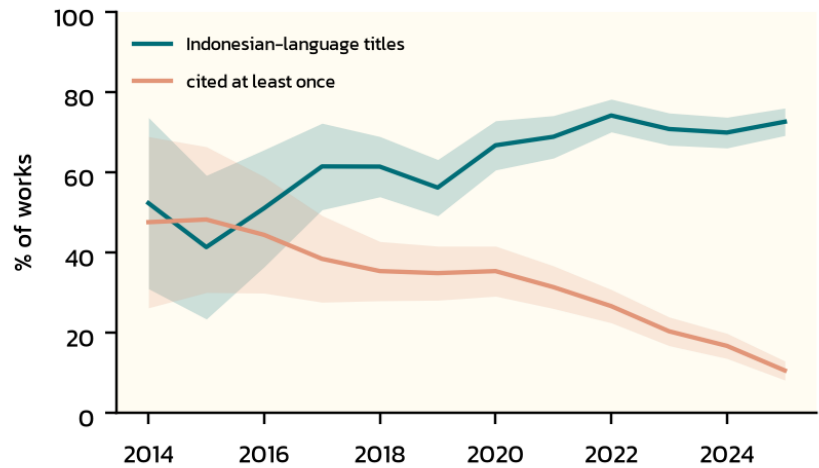


Figure 8. Share of works per year with Indonesian-language titles and with at least one recorded citation, with 95% intervals.

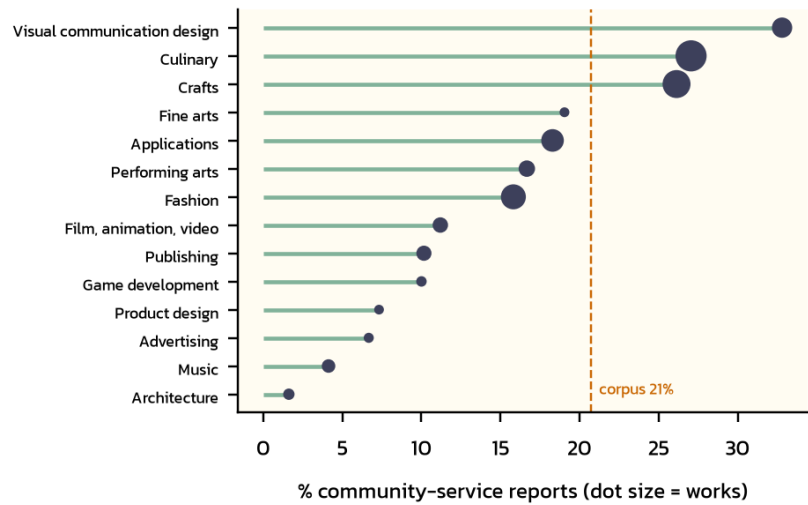


Figure 9. Share of community-service reports by subsector (subsectors with at least 40 works).

5. Discussion

The first question has a clear answer. Indonesian creative economy research grew more than twentyfold in ten years, but it grew as a dispersed literature of small periodicals, short community-service reports and works that are rarely cited [35,43]. This pattern fits a field driven by outreach obligations and local programmes more than by cumulative research lines, and Indonesian lecturers must combine teaching, research and community service, which helps explain the share of service reports [59], and it means that commercial indexes, which miss most of these periodicals, give a very partial picture [7,8].

The second answer is the gap list. Interior design, television and radio, photography, product design, fine arts and game development each hold under 2% of the corpus, although the national list treats them as equal subsectors. Games and applications are growing industries, so the small share of game studies is the most surprising gap [12,25]. A small count may also mean that such work is published under design or media labels rather than the subsector name. Craft studies, for example of rattan firms, often appear under finance or management labels [60]. The 38% of works without a subsector show how often the creative economy is discussed as a general label. Programme managers could use this list to direct research grants, and researchers could treat it as an agenda [1,22]. For example, a grant call could reserve a share of funds for game, photography and interior design studies. The dictionaries for the small subsectors are short, so a few missed synonyms could change their counts.

The third answer is a null. The co-word communities are readable, but they are only a little stronger than in rewired networks, so they should not be read as separate research schools [33,34]. The small English community, built around tourism, innovation and performance, suggests that work aimed at international readers uses a different vocabulary [61].

The study has limits. Only Crossref was used, because OpenAlex could not be queried on the collection day, and works registered elsewhere are missed. Crossref holds affiliations for only 3% of these records, so the planned institution collaboration network could not be built. When OpenAlex is available again, its institution records can be joined by DOI to build the planned network. The dictionaries are simple keyword lists checked on 40 titles by one coder, and citation counts in Crossref are incomplete [9,38]. A second coder should check a larger sample.

6. Conclusion

Open Crossref metadata reveal 3,208 works on Indonesia's creative economy from 2005 to 2025, growing fast, dominated by culinary, crafts and fashion and by community-service reports, and turning towards digital tools. Six subsectors remain nearly unstudied, namely interior design, television and radio, photography, product design, fine arts and games, and the thematic structure is weak. The released queries and dictionaries allow the map to be repeated each year [11,36].

Declarations

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AI Use Statement

The authors prepared this paper with the assistance of Grok, which was used to produce the text, analysis code and figures. The authors directed the work and are responsible for its content.

Peer Review Statement

The three reviewer reports and the response to reviewers that were prepared for this manuscript were simulated reviews, produced with AI assistance as a pre-submission check. They are not reports by independent human reviewers.

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