

Conference Paper

Governing Cimahi Techno Park Develop Creative Industry Ecosystem through Collaboration and Regulatory Framing

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Abstract.

Kawasan Sains dan Teknologi (Sains and Technology Park) berdasarkan Peraturan Presiden Nomor 106 Tahun 2017 tentang Kawasan Sains dan Teknologi merupakan wahana yang dikelola secara profesional untuk mengembangkan dan mendorong pertumbuhan ekonomi secara berkelanjutan melalui pengembangan, penerapan ilmu pengetahuan dan teknologi dan penumbuhan perusahaan pemula berbasis teknologi. Cimahi Techno Park (CTP), sebagai salah satu KST di Indonesia, mempunyai kegiatan utama mengadakan inkubasi bisnis dan akselerasi bisnis dalam pelaksanaan pembinaan dan pengembangan Usaha Kecil Menengah (UKM), Industri Kecil Menengah (IKM) dan wirausaha baru (WUB) berbasis teknologi. Pengelolaan KST di CTP telah menghasilkan ekosistem industri kreatif khususnya telematika dan animasi. Jumlah valuasi penyelenggaraan kegiatan kolaboratif di CTP meningkat dari tahun ke tahun, pada tahun 2019 mencapai Rp 15.835.031.000,00 dengan total 375 kegiatan, sedangkan omzet yang dihasilkan dari pelaku bisnis di gedung Baros Information Technology and Creative Centre (BITC) setiap tahunnya mencapai Rp 55 milyar. Meskipun demikian, dalam pengelolaan KST terdapat beberapa kendala dan tantangan, yaitu keterbatasan anggaran, sumber daya manusia fungsional, kewenangan kelembagaan, regulasi dan sinergi antar sektor. Penelitian ini bertujuan untuk mengetahui tata kelola techno park di level pemerintah kabupaten/kota dalam membangun ekosistem industri kreatif dengan pendekatan kolaborasi dan regulasi serta mengetahui faktor pendukung dan kendala yang terjadi. Dengan menggunakan metode penelitian kualitatif, penelitian ini akan mendeskripsikan tata kelola di CTP dari sudut pandang pendekatan kolaborasi dan regulasi kebijakan. Diharapkan dari penelitian ini dapat memberikan kontribusi pada pengembangan dan pengelolaan KST sehingga dapat mengakselerasi pertumbuhan ekonomi masyarakat.

Keywords: collaborative governance, Sains and Technology Park, creative industry ecosystem, regulatory framing

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1. Introduction

The Science and Technology Park (STP) was built to facilitate the growth and development of industry, especially innovation-based small and medium industries, providing services for industries in a particular area and a vehicle to facilitate the flow of inventions into innovations to increase productivity and competitiveness. Apart from that, having a special area facilitates interaction and communication between actors involved in creating innovation, such as technology developers, technology users, and facilitators or intermediaries.

STP development in districts/cities is a priority of the government, as stated in the sixth Nawacita (2014-2019) and the 2015-2019 RPJMN. The development of STP at the district/city level is adjusted to the context of multilevel governance of central and regional government development policies and strategies. At the central government level, STP functions as (1) a center for the development of advanced science and technology, (2) a center for growing new entrepreneurs in the field of advanced technology, and (3) a center for advanced technology services to the community. At the provincial level, STP has the function of (1) providing up-to-date knowledge by local university lecturers, researchers from government R&D institutions, and technology experts ready to be applied to economic activities, (2) providing unresolved technological solutions in techno parks, and (3) as a center for developing advanced technology applications for the local economy. At the district or city level, STP has the function of being (1) a center for the application of technology in the creative economy and other services that have been proposed by research institutions, the private sector, and universities to be implemented on an economic scale, and (2) a place for training, apprenticeship, center technology dissemination, and business advocacy center to the wider community.

STP was built in the context of creative economic development. According to Howkins [1], the creative economy is “the creation of value as a result of an idea.” A creative economy is an economy in society that produces a value that comes from ideas. Another definition, as stated by the Ministry of Tourism and Creative Economy of the Republic of Indonesia (2014), is the creation of added value based on ideas derived from the creativity of human resources and knowledge, including cultural and technological heritage.

Cimahi City was selected as one of the 21 creative cities in Indonesia in the Animation Film and Video (AFV) sub-sector. The CTP is an STP as a vehicle for the development and utilization of science and technology to encourage economic growth based on the creative economy in Cimahi City. The creative economy consists of 16 subsectors:

application and game developers, architecture, interior design, design visual communication, product design, fashion, film, animation and video, photography, crafts, culinary, music, publishing, advertising, performing arts, fine arts, television, and radio.

CTP is a hub for increasing business activity and creative industry technology in Cimahi City, which carries the concept of collaboration between pillars A, B, C, G, and M (Academic, Business, Community, Government and Media). The main activities in the CTP area were as follows.

1. Business Incubation Programme Through this program, it is hoped that new technology-based entrepreneurs will be born with high competitiveness through innovative products, accompanied by professional and competent assistants in their fields.

2. Business acceleration program. This program is intended for Micro, Small and Medium Enterprises (MSMEs) that want to accelerate their businesses. The CTP also provides consultation and assistance rooms to focus on the problems faced by MSMEs/start-ups.

Previous studies on CTP have examined agile governance [2], the triple-helix model [3], penta-helix [4], media reinforcement [5], space flexibility [6], and bureaucracy innovation [4]. This research focuses on the aspects of collaboration and the policy framework that underlies CTP governance.

2. Literature Review

2.1. Creative Industry

The creative industry is defined as “those activities which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property” [7]. According to the Ministry of Trade of the Republic of Indonesia (2007), the creative industry originates from the utilization of individual creativity, skills, and talent to create prosperity and employment by producing and exploiting an individual's creative power.

The foundation of the creative economy is a creative industry driven by human resources, which are an element in the creation of creative products and services that have economic value. The creative economy is a significant sector in Indonesia's political economy because it has the following positive impacts:

1. Economic contribution; that is, DP, creates jobs and exports

2. Business climate, namely the creation of business fields, impact on other sectors and marketing
3. The image and identity of the nation, namely tourism, national icons, building culture, cultural heritage, and local values.
4. Renewable resources, which are based on knowledge and creativity as well as green community
5. Innovation and creativity, namely ideas dan ideas as well as value creation
6. Social impact, namely improving the quality of life and improving social quality

The creative industry value chain determines the development strategy in the following linear sequence:

1. Creation. This chain is strengthened by education, innovation, expression, confidence, experience, projects, protection, and talent agents.
2. Production. Important factors in the production process are technology, service outsourcing networks, and financing schemes.
3. Distribution. It represents all activities in the storage and distribution of output, namely the negotiation of distribution rights, internationalization, and infrastructure.
4. Commercialization. This includes the commercialization of marketing, sales, promotions, and services.

2.2. Regulatory Framework

In Winholdz's view there are 4 (four) understandings of regulations:

1. The regulation was carried out by the government. This conception of understanding focuses on state-centric, in the case that the government is the main actor in implementing regulations.
2. Regulation is purposive. Regulation is the result of a deliberate decision by the government to direct society in a certain direction and way to solve problems and achieve certain results. In this context, regulation is seen as an opportunity and evolving environment for innovation and appropriate risk-taking.
3. Regulations seek to achieve these goals. These regulations can modify people's behavior according to set standards. This regulation is a form of intervention

designed to modify influence behavior in the form of coercion, assistance, incentives, persuasion, or encouragement.

4. The regulations are sustainable and focused on. Monitoring of regulatory implementation activities, assessment and reassessment of regulatory values and trade-offs that occur, and adjustments to changing needs and circumstances are required.

In this study, the regulatory framework is focused on an analysis of regulatory purposes, where policies and rules made by the government become the context to provide space and an environment for creative industries to innovate and develop.

2.3. Collaborative Action

O'Flynn and Wanna [8] and Thomson, Perry and Miller [9] explain 4 (four) characteristics of collaboration, namely:

1. Multiple or many purposes. It can be seen as a means of pooling existing resources or leveraging new ones, a strategy to reduce risk or to enter new markets, an attempt to reduce transaction costs, a reaction to complexity or turbulent environments, and finally as a way for (re) integration in a fragmented domain. This collaboration is seen as a tool and strategy for achieving goals.
2. Multiple dimensions of success or many dimensions of success. This refers to achieving results, carrying out processes, achieving milestones, achieving external recognition, and being proud to have been able to build a successful project.
3. Trade-offs between efforts and rewards. Identifying the specific capabilities and strategic assets of different organizations is essential for effective collaboration.
4. Dynamic process. Implications of the dynamic process. The implication of this dynamic process is that there are changes in power that occur between players over time, so organizational maps and incentives related to cooperative activities will also change.

Based on the concept of collaboration, an understanding of collaborative governance explains partnerships that occur between stakeholders in an effort to achieve common goals through collective actions. Such partnerships can benefit from the contribution of various stakeholders. In addition to facilitating interactions between the parties involved, it can also make it possible to obtain a more comprehensive view of related issues or problems.

3. Methods

This study uses a qualitative research method, which is a research method to explore and understand the meaning attached by a number of individuals or groups of people to social or humanitarian issues. The process of qualitative research involves important efforts, such as asking questions about procedures, collecting specific data from participants, analyzing data inductively from specific to general themes, and interpreting the meaning of the data [10].

The research questions addressed two main aspects.

1. How is the governance of the Techno Park in Cimahi City using a collaborative approach and a regulatory framework?
2. What are the challenges and obstacles in techno-park governance in Cimahi City?

Data collection techniques were used to answer the research questions through interviews and document studies.

4. Results and Discussion

4.1. CTP Track Plan

Techno Park Science (STP) development in Cimahi is under the authority of the Cimahi local government under the auspices of (Agency for the Assessment and Application of Technology (BPPT), which has now been merged into the (National Research and Innovation Agency). Cimahi Techno Park is an STP with mature status, because it has produced new business continuously and served the industry. An STP is a synergistic integration between the elements of academia, business, and government. Each element's role describes its contribution to the development and expansion of an STP. Academic elements contribute to the role of research and technology development, strengthen human resource capacity, and support the use of laboratories. Business elements can play a role in utilizing innovative ideas, improving services for tenants, opening up product markets, and strengthening the position of investors. Government elements play a role in strengthening regulations, providing land for infrastructure, strengthening local carrying capacity, program and budget support, access to and expansion of networks, and access to the information needed.

CTP is a UPT at the SMEs' Cooperative Trade and Industry Office, which has the main task of carrying out some of the technical tasks of the service in managing CTP

and the policies set by the head of the service. Based on the mayor of the Cimahi regulation number 34 of 2016 concerning the establishment of service and regional agency technical implementation units within the Cimahi City local government. The functions of CTP are as follows:

1. Preparation of work programs and planning for the management of CTP
2. Implementation of operational activities, provision and maintenance of CTP area facilities and infrastructure
3. Implementation of CTP area facilities and infrastructure leasing activities
4. Implementation of coordination and cooperation with related agencies in the development of the CTP
5. Implementation of coaching and development of human resources within the scope of duties and responsibilities
6. Implementation of administrative, financial, staffing and equipment matters
7. Implementation of evaluation and reporting on the implementation of tasks
8. Implementation of tasks given by superiors in accordance with their duties.

One of the leading programs and activities carried out at the CTP is the Business and Technology Incubator Program. The output of this program is start-up companies in an effort to accelerate a city’s economic growth. From Table 1, it can be seen that there has been a development in the number of start-ups joining the business incubator program at CTP from 2017-2021 to.

TABLE 1: Data on the Development of the Number of Start Ups in the Business Incubator Program Year 2017-2021.

| No | Year | Amount of Start Up |
|----|------|---|
| 1. | 2017 | 14 start-up groups and 10 graduate animators 2 |
| 2. | 2018 | 5 start-up groups and 12 animators assisting IP animation development |
| 3. | 2019 | 5 start-up groups dan 12 animators assisting IP animation development |
| 4. | 2020 | 22 start-up groups |
| 5. | 2021 | 11 start-up groups and 13 creative digital makerspace teams |

Source: Mayor Regulation of Cimahi City No.12 of 2022

4.2. Regulatory Framework

In an effort to encourage the creation of a conducive technopark climate, the Cimahi City government has rolled out policies related to the development of creative industrial ecosystems through institutional arrangements, governance, and direction of performance achievements. The following is a recapitulation of the CTP regulatory framework at both the central and regional government levels.

TABLE 2: Science and Technology Region Regulation.

| No | Policy Regulation | Concerning |
|----|--|---|
| 1. | Presidential Regulation No 106 of 2017 | Science and Technology Area |
| 2. | Minister of Research and Technology Regulation No 25 of 2019 | Management of Science and Industrial Areas |
| 3. | Cimahi Mayor Regulation No 14 of 2018 | Cimahi Techno Park as a Science and Technology Area |
| 4. | Cimahi Mayor Regulation No 35 of 2018 | Cimahi Techno Park Regional Technical Implementation Unit |
| 5. | Cimahi Mayor Regulation No 12 of 2022 | Cimahi City Regional Development Plan 2023-2026 |
| 6. | Mayor of Cimahi Decree No 530/Kep/615/Disdagkoperin/2018 | Baros Innovation Center Management Team |

Source: author compilation (2023)

At the national level, presidential regulation provides a basic reference for the objectives, implementation of STP, recipients of STP services, quality assurance, reporting, monitoring, and evaluation. Meanwhile, regulations from the Minister of Research and Technology mandate the requirements for establishing STO, procedures for establishing STP, procedures for ranking STP, fostering STP, procedures for reporting STP, and monitoring and evaluating the implementation of STP.

At the city level, Cimahi City has been proactive in issuing the STP regulatory framework with mayoral regulation and decree. Starting from mayor regulation No. 14 of 2018, which regulates CTP as STP, to the formation of the Baros innovation team with a mayoral decree. The regulatory framework as the basis for the development policy of the creative industry ecosystem in Cimahi City is quite good, covering the formation of the CTP, the position and classification of the CTP, the organizational structure and work procedures of the CTP, and the functions and services of the CTP as STP and CTP funding. The substantial foundation of institutions, management, and funding is the basis for the development of the creative industry ecosystem in Cimahi City. However, there are no arrangements regarding collaboration between parties involved in creative industry elements, including suppliers, core industries, government, and society. The mechanisms and forms of collaboration as well as the role and involvement of funding

sources, including benefits, have not been specifically regulated to provide space for each actor to maximize their role and involvement in the development of creative industries in Cimahi City.

4.3. Collaborative Actions

In a CTP, cooperation and collaboration are needed to create a creative industrial ecosystem. The success of implementing a techno park is strongly influenced by the implementation, sustainability, continuity, and consistency of its programs at the techno park. To implement it properly, synergy is needed between institutions involved in implementing the program, namely, the central government, regional governments, research and development institutions, universities, the business world, and industry. All institutions related to CTP programs are actors who support the implementation of the CTP and interact and synergize in utilizing the resources provided to produce highly competitive products.

The following are some of the collaborative products that have been produced from collaborations with industrial partners.

TABLE 3: Collaboration Product Innovation.

| No | Product Name | Launching Year | Industrial Partner | Description |
|----|---|----------------|---------------------------------------|--|
| 1. | Virtual Kaaba Umrah Haji Tour | 2018 | Oculus Google | Used by umrah and haji travel organizer |
| 2. | Kooseker Helpy | 2018 | CDC Sarawak | Collaboration between CDC, Sarawak government, Cimahi government and PT Helpy |
| 3. | Monetization Microstock Tepi Garis Design | 2018 | Marketplace such as Envanto and Viper | Collaboration between Tepi Garis, Toon Boom, community of design and animation |
| 4. | Education digitalization sekolahan/id | 2019 | Intel Linksys Indosat | Collaboration between government, sekolahan.id, Intel, Linksys and Indosat |
| 5. | Animation movie Superneli | 2020 | Net TV | Collaboration between Ayena and UNIKOM |
| 6. | Talent Pool Show Up | 2020 | Demi Gisela Citra Sinema | |
| 7. | Chat BooT based AI MessUp Solution | 2020 | Ritel | |

Source: UPT Cimahi Techno Park, 2022

To produce a creative industrial ecosystem in Cimahi City, collaborative action between institutions is needed with their respective roles. The elements of the creative industry ecosystem include: (1) suppliers, (2) core industries, (3) buyers, (4)

supporting institutions (government, university, community), (5) supporting industries, and (6) related industries. Referring to Muhammad (2017), these elements requires comprehensive integration of the area (space) including buildings and sharing of equipment, workshops and other facilities, professional managers, sources of knowledge, ideas and inventions, especially from universities and research and development (R&D) institutions, a technology and innovation-based start-up company, a business incubator to manage innovative products from start-up companies so that they are commercialized to industrial and industrial scale as tenant, both R&D beneficiaries and as ‘angel investors.’ The CTP has fulfilled the above elements with the CTP buildings with all their activities and facilities, but it still needs improvement, such as more professional management and a clear policy framework for mapping, roles, and continuing collaboration between parties at the CTP.

In addition to activities at the CTP, the Baros Information Technology Creative Center (BITC) building, as part of the CTP area, is currently one of the development areas for the creative digital industry sector and is a co-working space managed by the UPT CTP. The business activities of start-ups in the creative digital industry at BITC are as follows.

TABLE 4: Total Workforce and Realization of Local Tenant Retribution at BITC.

| Number of Tenant | Total Workforce | Realization of PAD Contribution (Local Retribution) (Rp) | | | |
|------------------|-----------------|--|-------------|-------------|-------------|
| | | Year 2018 | Year 2019 | Year 2020 | Year 2021 |
| 24 companies | 182 people | 278.897.500 | 529.683.500 | 488.063.150 | 640.289.725 |

Source: Cimahi Mayor Regulation No 12 of 2022

Reviewing the trend of PAD contributions from tenants at BITC from year to year shows an increase in average revenue per year of 37.75%. This shows that PAD revenue from local retribution in the creative industry sector has potential and can be relied upon to drive the local economy. The total turnover obtained by businesses in the BITC building annually reaches an IDR of 55 billion.

The total valuation of collaborative activities obtained from activities at CTP shows and increases from year to year, which is around 10.495.848.000 in 2017, with a total of 342 activities. In 2018, the valuation of organizing collaborative activities at CTP reached around IDR 8.103.417.000, with a total of 325 activities, and in 2019, the valuation of collaborative activities at CTP reached IDR 15.835.031.000, with a total of 375 activities (CTP website, 2023).

5. Conclusion

From the description of CTP management with a regulatory and collaborative approach, it can be seen that the process of implementing regulations and collaboration in the Cimahi Techno Park governance has been going well. The government, among other things, has provided infrastructure, budgeted policies for business incubation, rolled out the Baros Innovation Center policy, provided easy access to permits for creative digital start-ups, and collaborated with parties related to the animation and telematics industry. However, there are several factors that need intervention to increase the movement of creative industry innovation and increase community economic growth, namely, the operational budget for techno-park governance, placement of functional human resources to facilitate the development of creative industry innovation research results, optimal synergy between related agencies, namely the industry sector, the creative economy sector, and institutional authority arrangement to optimize the function of the techno park as KST.

The suggestions given are (1) talent scouting and HR development for creative digital business needs, (2) increasing collaboration with animation and telematics industry partners, (3) strengthening networks and collaboration with innovation centers in Bandung Raya, (4) coordination and collaboration with other agencies such as BEKRAF for the need for access to start-up permits, and (5) Branding Cimahi as a city of creative industries, for example, by holding events for creative industry activities at KST.

References

- [1] Howkins, John. *Creative economy. How people making money from ideas*, Penguins Books; 2001.
- [2] Nur MI, Alpin A, Febriansyah M, Rohimat, Lutpi SA. "Scrutinizing creative economic development at the Cimahi Technopark: An agile governance perspective. *KnE Social Sciences*," IAPA 2022 Annual Conference of the Indonesian Association of Public Administration, 2022.
- [3] Kusharsanto ZS. Modifying the triple helix model of innovation: A lesson learned from Cimahi Techno Park in Indonesia. *International Journal Of Innovative Research & Development*. 2020;9(2):158–175.
- [4] Rochmat DF, Paskarina C. "Analisis Inovasi Birokrasi di Unit Pelaksana Teknis (UPT) Cimahi Techno Park," *Jurnal Caraka Prabu*. 2021;5(2). <https://doi.org/10.36859/jcp.v5i2.559>

- [5] Cahyani W, et al. "Strategi Penguatan Media dalam Pengembangan Ekosistem Inovasi Daerah di Cimahi Techno Park.," Konferensi Nasional Ilmu Administrasi 6.0, 2022.
- [6] Rahmawati W, Busono RT, Cahyani D. "Space flexibility of the techno park facility for vocational education development in Cimahi City. Volume 520. *Advances in Social Sciences, Education and Humanities Research*; 2020.
- [7] Gross J. *Birth of creative industries revisiting the oral history of the 1998 DCMS mapping document*. London: King's College; 2020.
- [8] O'Flynn J, Wanna J. *Collaborative governance: A new era of public policy in Australia?* Anu Press; <https://doi.org/10.22459/CG.12.2008>.
- [9] Thomson A, Perry J, Miller T. Conceptualizing and measuring collaboration. *Journal of Public Administration Research and Theory*. 2007;19(1):23–56.
- [10] Creswell J. *Qualitative inquiry and research design: Choosing among the five approaches*. 3rd edition. Thousand Oaks (CA): Sage Publications Inc.; 2013.