



Environmental and socio-economic impact dynamics in the development of urban areas

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ABSTRACT

Background: The development of the Bekasi Central Business District (BCBD) has not only changed the face of the city, but also reshaped the social, economic, and environmental relations of the surrounding community. The development of this area is positioned as an engine of economic growth, but in practice it can give rise to uneven impacts among social groups and pressure on the quality of the urban environment. This study aims to explore the environmental, social, and economic impacts of BCBD development based on the perceptions of people who live and work in the surrounding area. **Methods:** This study employed a qualitative approach using in-depth interviews with nine participants selected through purposive sampling from socio-economic groups living around the BCBD. The data were analyzed using thematic analysis to identify the patterns, dominant issues, and the relationship between the impacts felt by the community. **Findings:** This study examines how different socio-economic groups perceive and experience the impacts of BCBD development, thereby providing a comprehensive understanding of the social and environmental implications of urban business district growth. The results show that the development of the BCBD is perceived to bring economic benefits, such as increased employment opportunities and business activities, especially for groups. However, the community also expressed a reduction in access to open spaces, increased environmental pressure, and the emergence of spatial exclusivity that limits the involvement of the lower-middle economic groups. **Conclusion:** The conclusion of this study confirms the tension between the orientation of economic growth and the principles of socio-environmental sustainability in BCBD development. **Novelty/Originality of this article:** This study is among the first to examine the environmental, social, and economic impacts of a central business district in Bekasi, a growing satellite city of Jakarta. It extends the existing literature, which has largely focused on CBDs in primary metropolitan cities, by providing evidence from a secondary urban context.

KEYWORDS: Bekasi Central Business District; development impact; urban sustainability; public perception.

1. Introduction

Bekasi City, as part of the Jakarta Metropolitan Region, has experienced rapid urban growth that has generated various urban development challenges, particularly related to land use management and spatial expansion (Handayanto et al., 2017). In response to the increasing demand for commercial and business infrastructure, the Bekasi Central Business District (BCBD) was developed with a strategic concept aimed at connecting Jakarta's business activities with major industrial estates in eastern Jakarta, including Bekasi,

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Cikarang, and Karawang (Rahmawati & Samadi, 2025). This development reflects the broader role of the Central Business District (CBD) as the heart of the city, comprising commercial, service, and cultural areas (Dewi et al., 2016). In many of the world's metropolitan cities, the CBD has developed into an area with high space utilization intensity, supported by office infrastructure, vertical housing, and integrated urban services (Yaguang, 2011). Global CBD examples such as New York and London demonstrate significant contributions to city and regional economic growth (Redding et al., 2023). However, intensified development in CBD areas also poses various challenges, particularly related to the conversion of green open spaces, pressure on infrastructure, increased emissions, and social inequality in access to public spaces and facilities (Greater London Authority, 2008).

Several international studies show that the economic success of CBDs is not always in line with environmental and social sustainability. In London, the expansion of business districts and the increase in the number of workers require adaptive spatial and transportation policies to maintain environmental quality and social cohesion (Yang et al., 2023). A similar phenomenon also occurs in Asian cities such as Hong Kong, Shanghai, Bangkok, and Kuala Lumpur, where CBD development drives economic growth while accelerating land use change and urban ecological pressures (Chen et al., 2020; Khongouan, 2018). For example, CBD development in Bangkok has shifted from conventional business centers toward new business districts integrated with mass transit infrastructure, increasing investment attractiveness and property development while simultaneously intensifying urban spatial transformation (Khumpaisal, 2025). These experiences suggest that although CBD development can strengthen urban competitiveness and economic performance, it may also generate challenges related to environmental sustainability, spatial inequality, and equitable access to development benefits.

The complexity of CBD development is closely related to the interaction of multiple stakeholders with different interests in urban land use. Urban development policies are often characterized by tensions between economic growth objectives, social equity concerns, environmental protection, and competing land-use priorities (Johnbosco et al., 2024). Consequently, the impacts of CBD development cannot be understood solely through economic indicators, but must also be examined through their environmental, social, and governance implications.

Previous studies further emphasize that the relationship between urban form, land use patterns, and socio-economic and environmental conditions provides an important foundation for understanding sustainable urban development (Sapena et al., 2020). Changes in land use associated with large-scale commercial development may create economic opportunities while simultaneously affecting environmental quality, public space accessibility, and the distribution of development benefits among different social groups. Therefore, assessing CBD development requires an integrated perspective that considers the interdependence between environmental, social, and economic dimensions.

In Indonesia, the Sudirman Central Business District (SCBD) in Jakarta is an important example of the impact of business district development on urban spatial structure and the environment. Several studies show that economic growth and urbanization in the SCBD have contributed to increased environmental pressure, although on the other hand, this area has been relatively successful in integrating green open spaces as part of its design (Azizah & Darmayanti, 2023; Gunawan & Permana, 2018).

The sustainability of business district development is also strongly influenced by governance quality. Environmental governance studies highlight that the effectiveness of development policies depends on the ability of institutions to respond to environmental pressures, manage resources, and coordinate stakeholders toward long-term sustainability objectives (Evans & Thomas, 2023). In addition, sustainability strategies are more likely to succeed when they are supported by strong institutional capacity, effective coordination among actors, and alignment between development goals and sustainability commitments (Hengst, 2020). These perspectives suggest that governance plays a crucial role in

determining whether CBD development contributes to inclusive and sustainable urban outcomes or reinforces existing environmental and social inequalities.

The sustainability of business district development, as reflected in the SCBD experience, is inseparable from well-designed and implemented governance. Good governance in the context of sustainable development is understood as a synergistic process that integrates environmental, social, and economic dimensions in a balanced manner in planning and decision-making (Salsabila et al., 2020). The phenomenon of CBD development also occurs in Jakarta's satellite cities, one of which is through the development of BCBD. As an urban area with rapid economic growth, Bekasi experiences high pressure on land use along with the development of trade and service activities (Abrar et al., 2023). The development of the BCBD on an area of ± 18 hectares reflect the process of intensifying land use from open spaces and vacant lots to high-intensity commercial areas, as is common in developing cities (Wang et al., 2024).

The impact of development itself refers to the consequences that arise due to changes in the physical, economic, social, and environmental structures of a region as a result of development activities, which can be both positive and negative depending on the quality of planning, implementation and involvement of local actors (Kabisch et al., 2017). These impacts can be measured through indicators of land use change, environmental quality, socio-economic mobility, as well as shifting space function, both through quantitative indicators and through perception of affected communities (Sharifi, 2021). However, not all socio-economic dynamics that arise from the development of business districts have an even impact on all groups of communities. Social inequality, such as differences in access to education, land ownership, and involvement in the process of making spatial decisions, can potentially deepen social inequality in urban areas if not managed inclusively (Kajiita & Kang'ethe, 2024).

The development of BCBD also indicates weak application of sustainable governance principles. The lack of transparency, the limitations of community participation, and the proprietary development orientation reflects the development approach that emphasizes economic growth more than ecological sustainability and social justice (Gobel, 2022; Purniawati et al., 2020). In this context, environmental management is often positioned as an aesthetic element of economic activity, not as the main foundation of regional sustainability (Burhanuddin, 2016).

A number of studies have shown that massive physical development in urban areas could potentially lead to ecological fragmentation and aggravate social and economic segregation if not accompanied by inclusive policies (Lestari et al., 2024). Urban classics such as traffic congestion, air pollution and uncoordinated spatial changes are still key challenges in the development of urban business areas (Princess & Noer, 2020). Suboptimal arrangement of facilities and social integration also has the potential to reduce the quality of life of residents around the business area, so that the grouping and arrangement of facilities must be more adaptive and community-oriented (Korur, 2020). Environmental quality, which includes physical, functional, biological and space meaning aspects, becomes an important factor that directly affects the comfort and well-being of the community around the building area (Khanmohammadi, 2024). Interaction between human and urban environments is increasingly problematic when population growth and development intensity are not offset by the availability and quality of space (Mane et al., 2018; Wargadinata, 2021). Development of industrial and business areas not only impacts economic improvement, but also brings significant pressure on the environment if not managed sustainably (Nirwan, 2018). Therefore, effective regional space management, both at national and urban level, becomes an important instrument in realizing sustainable development and ensuring the use of efficient and equitable space in the future (Sirait et al., 2020).

Although studies have discussed the impact of developing CBD from an economic, spatial, and environmental perspective, most of the research still focuses on CBD in the metropolitan core city as well as focusing on macro indicators and top-down approaches. The study, which specifically examines the impact of CBD development in satellite cities by

placing the perception of local communities as the main source of analysis is still relatively limited. This condition shows the research gap in understanding how the development of business areas in the peri-urban city affects social, economic, and community life directly.

The condition indicates the dominance of the weak sustainability approach, in which environmental degradation is assumed to be compensated by artificial economic growth and capital (Barua & Khataniar, 2015). Therefore, shifts to strong sustainability are required to place ecological boundaries and social justice as the main principle in the development of urban business areas (Davies, 2013; Zhang et al., 2024). Thus, the research has scientific value in providing a community-based alternative perspective on the development of CBD in satellite cities, while enriching urban sustainability discourse through an approach that integrates the environmental, social and economic dimensions in a balanced way.

In response to this complexity, a sustainability strategy is needed that can be understood as a process of planning and implementing policies and management practices that integrate social, environmental, and economic dimensions in an integrated manner to maintain long-term sustainability of development (Rodrigues & Franco, 2019). Community participation is a key element in this strategy, as public engagement has shown to contribute positively to the quality of the environment and the sustainability of the Area (Widodo, 2022). Based on this context, the study aims to analyze the environmental, social, and economic impacts of the BCBD development on its surrounding areas and affected communities. By focusing on community perceptions within the BCBD sphere of influence, the study seeks to address the research gap related to CBD development in satellite cities and provide an empirical basis for formulating a more inclusive sustainability strategy based on strong sustainability principles.

2. Methods

2.1 Research design

The study comprehensively examines the environmental, social and economic impacts that arise due to the development of BCBD, emphasizing the changes felt by the community and the users of the surrounding region. The research location is focused on the BCBD area and surrounding areas directly affected by the business area development activities. The selection of this location is based on the role of BCBD as a strategic business area with high intensity development, thus triggering significant changes to physical environmental conditions, social dynamics and local economic activity.

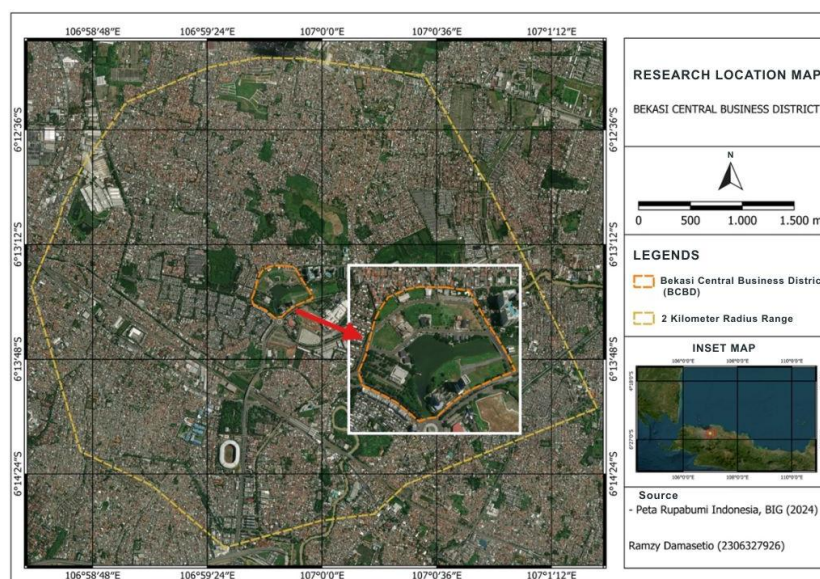


Fig. 1. The Map of research location (BIG, 2024)

The boundaries of the research area and the spread of the observation area are shown on the map of the research site. The map of this research site provides a spatial overview of the BCBD area and the surrounding area that is the observation area in the study. The development of the region not only triggers physical changes and space utilization, but also encourages changes in the social structure and economic dynamics of the surrounding community. Therefore, this research seeks to capture actual conditions in the field while understanding the experience and perception of community groups that directly interact with the BCBD region.

2.2 Data collection

Data collection is conducted through field observation to identify changes in environmental conditions before and after the construction of BCBD. This observation includes visual documentation of landscape changes, land use changes, and physical environmental conditions that undergo transformation due to the development of business areas. Spatial analysis is used as a tool to understand the pattern of changing space and its implications for the surrounding environment of the research area.

In addition to environmental aspects, the research also examines the social and economic dynamics that develop around the BCBD region. The observed social aspects include changes in the pattern of community activity, mobility level, access to public spaces, and forms of social interaction that formed as the region evolved. The economic aspects are focused on changing local business patterns, employment opportunities, livelihood shifts, and community perceptions of the economic benefits generated by the development of BCBD.

The data depth is conducted through in-depth interviews to residents living around the BCBD region that comes from various socio-economic class backgrounds, ranging from low-to middle- and upper-income groups. In addition, interviews are also conducted to visitors who often act in the BCBD area and domicile around the research site. The research population includes communities around the BCBD area who are involved in or affected by the development of the region. Informants consist of local residents and visitors around BCBD, including individuals who are not directly involved in the development process or its long-term impacts. Their perceptions are still used as supporting data to understand the perspective of general area users. The selection of informants is conducted using purposive sampling techniques, with consideration that informants are deliberately selected because they are assessed to have experience, knowledge, and direct involvement in the development dynamics of BCBD. The selection process also considers the level of influence and exposure of informants toward the sustainability dynamics of the area. Interviews are conducted interactively and continuously until reaching data saturation (Nurrissa Nurrissa & Hermina, 2025). This approach aims to capture the diversity of perspectives on the impact of BCBD development, both directly affected and regional users in daily life. Interviews are conducted semi-structured to enable a deeper exploration of the experiences, perceptions and assessments of informants regarding the environmental, social and economic changes they feel.

2.3 Data analysis

The interview results data are analyzed using thematic analysis, which is commonly used to analyze qualitative data obtained from in-depth interviews or semi-structured interviews (Heriyanto, 2018). The initial stage of analysis is done through transcription of all interview results, then continued with repeated reading to gain a thorough understanding. Coding is used to transform raw data into verbatim forms, while recoding is conducted to clarify the initial coding results so that the resulting categories become more refined and analytically focused (Najmah et al., 2023). Information is then grouped into categories of environmental, social, and economic impacts.

At this stage, the researcher identifies recurring patterns, broader generalizations, and thematic relationships across the established categories to support the interpretation of qualitative findings (Haryoko et al., 2020). From this process, the main themes are identified to describe the impact patterns of BCBD development perceived by various community groups and visitors. As an effort to strengthen the interpretation of the results of the study, the analysis is supported by literature studies on previous research that discusses the impact of business regions development, land use changes, and urban socio-economic dynamics. Comparison with similar cases in other regions is used to provide theoretical and empirical context to field findings.

Data validity is strengthened through source triangulation, i.e. by comparing the findings of field observation, interviews with citizens and visitors, as well as the results of literature studies. This approach aims to ensure that the results of the research reflect actual conditions in the field and have a high level of reliability. Thus, this research method is expected to provide a comprehensive overview of the impact of BCBD development and become a solid foundation for the formulation of future regional sustainability policy recommendations and strategies.

3. Results and Discussion

3.1 Environmental impact of BCBD development

Development of BCBD has implications for environmental conditions in the surrounding area, particularly in relation to land use change, increasing development intensity, and the role of green open space as an ecological balancing element within the business district. These changes influence not only the physical characteristics of the area but also community perceptions regarding environmental quality and urban livability. To provide an objective overview of environmental changes occurring within the BCBD area, land use changes between 2011 and 2025 were analyzed using historical satellite imagery and are presented in Table 1.

Table 1. Changes in the area and percentage of land use in the BCBD from 2011 to 2025

Year	Green Open Spaces	Lakes	Vacant Land	Offices	Trade and Services	Culinary Centers	Roads	Hospital	Percentage Build
2011	10 Ha	4 Ha	3.5 Ha	-	-	-	0.5 Ha	-	2.8%
2013	6 Ha	3 Ha	8 Ha	-	0	-	1 Ha	-	5.6%
2017	5 Ha	2.5 Ha	9 Ha	-	0	-	1.5 Ha	-	8.3%
2019	7 Ha	3 Ha	2 Ha	-	0	-	6 Ha	-	33.3%
2022	6 Ha	3 Ha	1.5 Ha	-	1.5 Ha	1.5 Ha	7.5 Ha	-	41.7%
2025	4.5 Ha	3 Ha	1 Ha	2 Ha	1.5 Ha	1.5 Ha	10.5 Ha	0.5 Ha	58.3%

Based on the land use analysis and satellite imagery interpretation from 2011 to 2025, BCBD experienced substantial spatial transformation from an area dominated by green open spaces into an increasingly intensive business district. Green open spaces consistently declined throughout the study period, while office, commercial, service, and road infrastructure areas expanded significantly. In contrast, the artificial lake remained relatively stable, indicating efforts to maintain the area's primary ecological feature. The observed land conversion pattern was concentrated along major road corridors and around strategic activity centers, reflecting the influence of accessibility on development intensity. Following 2017, commercial and office development accelerated, accompanied by the expansion of supporting infrastructure and internal road networks. By 2025, BCBD had evolved into a relatively mature business district characterized by the dominance of built-up areas surrounding the lake as the main activity center. This transformation reflects a shift from an open-space-based landscape toward an investment-driven urban economic landscape. At the same time, the reduction of green areas and increasing development

intensity indicate growing pressure on the ecological carrying capacity of the area. To describe how these environmental changes are perceived by local communities, a summary of key findings from the in-depth interviews is presented in the following table.

Table 2. Explanation of in-depth interviews on environmental impact themes

Transcript	Coding	Recoding
“As for environmental quality, they do pay attention to greenery, building layout, and the circulation patterns, both for pedestrians and vehicles like motorcycles and cars, including parking. I think their planning is well thought out, so overall it’s just so-so; there aren’t really any problems.”	Regional environmental quality	The environment is considered orderly and stable
“Overall, it’s very good because the spatial layout is designed well for the surrounding community. There are green spaces for residents, and the management is very good. Water resources are also managed properly. So, the impact on the community is positive, they’re happy, because the environment has become greener.”	Spatial planning and environmental management	Managed spatial and environmental planning
“Their objective is to ensure that there is sufficient green space, with plants and trees that can function as green areas or, indirectly, as air fresheners. As for specific plants such as ornamental flowers and the like, having them would certainly further enhance the attractiveness of the area. However, even without them, the main objective of providing green space has already been achieved.”	Ecological functions of green spaces	Sufficient green space
“Regarding land availability, especially green space, it is sufficient, as many areas here are planted with trees and are also managed for water regulation.”	Availability of green space	Green space is still sufficient
“Yes, in terms of air pollution, since this area is mainly intended as an environment for culinary activities or dining areas, it is very, very good. As for air pollution, it has decreased, because there are many trees planted here and the spatial arrangement is also adequate.”	Reduction in air pollution	Air pollution has decreased relatively
“As for the challenges, the public’s access to this area is indeed restricted, but in terms of green space planning, the community still has access to it through public sports facilities.”	Limited utilization of space	Public access to green spaces is limited

Results of in-depth interviews with people living and activities around the region show that in general, the physical environmental conditions of BCBD are still perceived in relatively good and stable conditions. The majority of respondents assessed that the construction of BCBD has not caused significant environmental disruption. The availability of green space, the existence of trees, and the management of perceived waterfront is still able to maintain the comfort of the environment and serve as a balancer of the wake up area. This perception is relatively consistent among various community groups, including respondents from the middle class, who assess that regional planning has noticed aspects of greenish, building layout, and patterns of vehicle and pedestrian circulation.

Nevertheless, the perceived environmental impact tends to be neutral. The development of BCBD is considered to focus more on keeping the quality of the environment from decreasing, not significantly improving ecological quality. In other words, the development of the region successfully controls environmental pressure, but has not shown a strong impetus to improve environmental conditions progressively. Green open space is perceived as the main element that sustains the quality of BCBD environment. The existence of vegetation is assessed to maintain air quality and create microclimate comfort amid the intensity of urban activity. However, the use of green space is still relatively limited. Green space serves more as aesthetic elements and light activity areas, such as short sports or recreation, and has not yet been fully developed as an inclusive and multifunctional public space. Based on the results of qualitative data processing obtained from in-depth interviews with the community, patterns and trends of environmental impacts of BCBD development

can be traced through the relationships between emerging themes. The synthesis of the relationship between environmental themes resulting from the coding process and thematic analysis is visualized in the thematic analysis chart below, which shows that the character of the impact of BCBD development tends to be controlled.

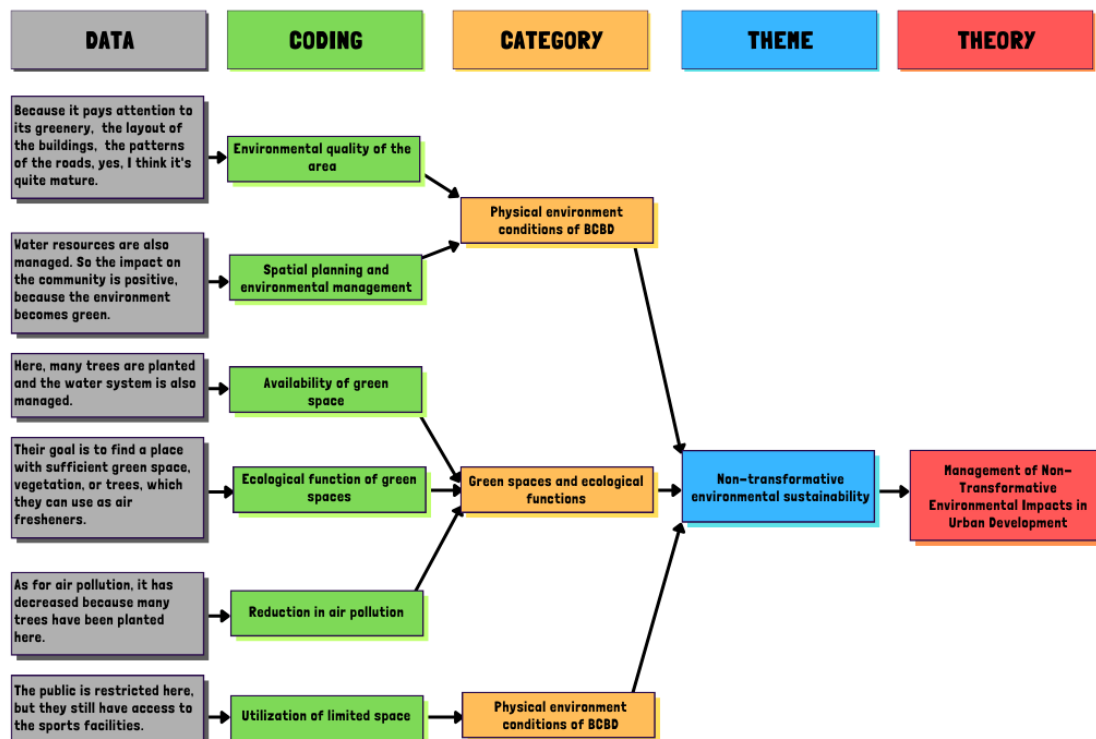


Fig. 2. Thematic analysis chart on the environmental impact of BCBD

Thematic analysis results show that the environmental impact of BCBD development is controlled and stable, but not yet transformative. Regional environmental management tends to maintain existing conditions rather than encourage structural changes in urban environmental management. This finding is particularly relevant when viewed in the broader context of urbanization processes. James et al. (2023) argue that urban development commonly generates environmental pressures, including habitat loss, increased resource consumption, and growing ecological burdens, which require responses through sustainable development policies, resource efficiency measures, and conservation strategies. In the case of BCBD, although severe environmental degradation was not perceived by most informants, concerns regarding land use change, reduced green open space, and increasing development intensity indicate the emergence of ecological pressures similar to those identified in the urbanization literature.

The findings indicate that although the environmental dimension is not neglected in the development of BCBD, the strengthening of environmental management policies and strategies is still needed so that the region is not only comfortable and physically organized, but also able to improve ecological quality sustainably over the long term. This suggests that current environmental management within BCBD remains oriented toward maintaining environmental quality and urban aesthetics rather than promoting transformative ecological improvements that enhance long-term environmental resilience and sustainability.

3.2 Social impact of BCBD development

In addition to the environmental aspects, the development of BCBD also brings significant implications to the social dynamics of the surrounding area. The social impact is

reflected in changing patterns of social interaction, access to space and facilities, as well as the way communities perceive the presence of a new business district. The interview findings suggest that the social impacts emerging from BCBD development are diverse and influenced by the socio-economic backgrounds of respondents. To provide a broader social context for understanding these perceptions, selected social indicators of Bekasi City are presented in Table 2. These indicators illustrate demographic conditions and human development trends during the period in which BCBD continued to expand and intensify its functions as a business district.

Table 3. Social indicators of Bekasi city (2023–2025)

Description	Unit	2023	2024	2025
Population	thousand	2,6271.1	2,644	2,648
Population Growth Rate	%	8	1.04	0.85
Life Expectancy	years	75.86	76.14	76.61
Human Development Index	-	83.06	83.55	84.43

The data indicate that Bekasi City experienced a steady increase in population from 2.627 million people in 2023 to 2.648 million people in 2025. During the same period, life expectancy increased from 75.86 years to 76.61 years, while the Human Development Index (HDI) improved from 83.06 to 84.43. Although the population growth rate declined from 1.18% to 0.85%, the overall trends suggest continuing improvements in human development and social welfare. These conditions provide an important context for understanding the social impacts of BCBD development, as increasing urban population and socio-economic development may influence community expectations regarding access to public spaces, social facilities, and opportunities generated by the business district. For more details, important quotes from the in-depth interviews are presented in the following table.

Table 4. Explanation of in-depth interviews on social impact themes

Transcript	Coding	Recoding
“Now with the existence of BCBD, in my view, myself included, it has become a new form of entertainment, a new recreational place. Previously, Summarecon mainly offered malls, and dining activities were mostly limited to inside the mall. With BCBD, we can enjoy a different atmosphere, rather than having to eat indoors all the time. I don’t think there is any significant social pressure; it feels quite normal.”	Increased entertainment activities	New entertainment space
“Overall, it’s very good because the spatial layout is designed well for the surrounding community. There are green spaces for residents, and the management is very good. Water resources are also managed properly. So, the impact on the community is positive, they’re happy, because the environment has become greener.”	Social exclusion of traders	Local traders are marginalized
“Here, there actually aren’t many children’s recreational facilities yet. Relaxing spaces like parks that could potentially be used for children to play are still lacking, because most of the area is allocated to culinary activities or commercial uses.”	Limited social space	Lack of space for social interaction
“Regarding participation, because this is a closed, limited area, the involvement of people from the surrounding community is not very significant. This is mainly due to its location and access being concentrated at a single point, which means residents cannot really be involved in the internal management of the area.”	Limited community participation	Lack of space for public involvement
“Even when flooding occurred in my neighborhood, it was basically because, as we all know, residents often neglect the drainage channels and similar things.”	Social apathy	Low environmental awareness

Some respondents, especially small traders and local residents, reveal negative social experiences. The arrangement of the region that is sterile and image-oriented in modern regions is considered to limit their access to economic and social spaces. This condition creates feelings of excludement and reduced traditional business opportunities, reflecting the tendency of social exclusion in the management of BCBD regions. The transformation of the space has not been fully followed by inclusive social integration for all groups of society. On the other hand, certain community groups view BCBD as a new social space that provides positive benefits. The presence of culinary centers, recreational areas and open spaces is assessed to increase comfort and expand the choice of daily social activities. For this group, BCBD contributes to the improvement of urban quality of life and does not cause significant social pressure. This perception difference shows that the social impact of BCBD development is heterogeneous and is heavily influenced by the socio-economic background of the community. As a further explanation, it is described in the thematic analysis chart below.

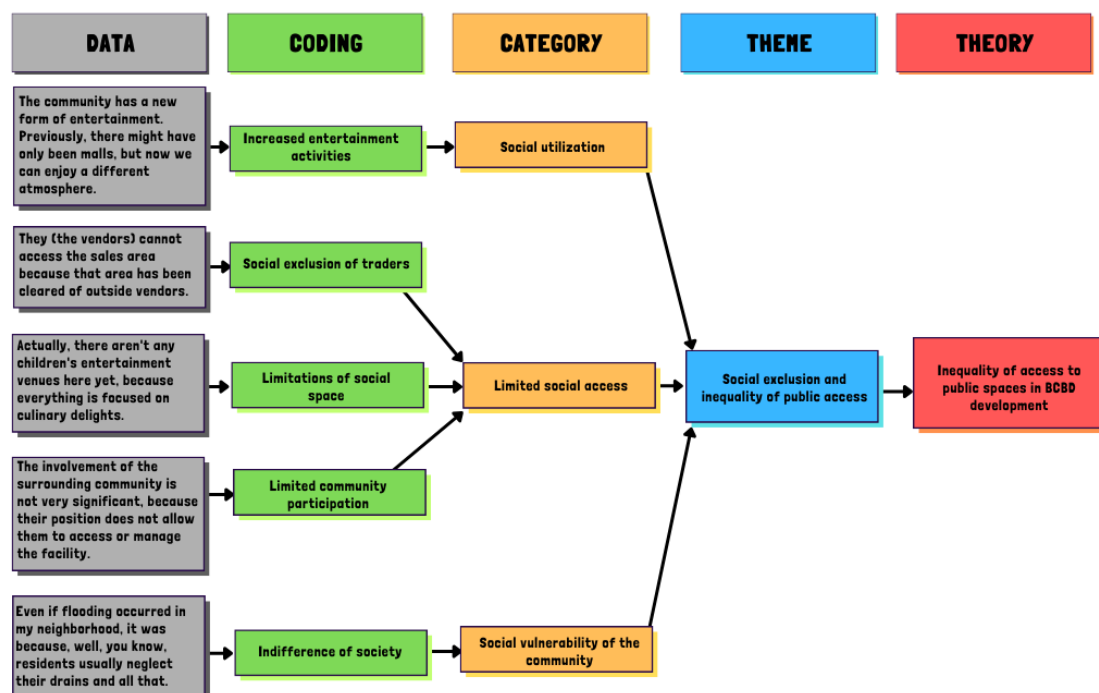


Fig. 3. Thematic analysis chart on the social impact of BCBD

The thematic analysis presented in Figure 3 shows that the social impacts of BCBD development are characterized by the coexistence of new social opportunities and emerging forms of social exclusion. On the one hand, the development of BCBD has created new spaces for recreation, entertainment, and social interaction, reflected in the category of social utilization. Informants perceived that the area provides alternative leisure spaces and a more diverse urban experience compared to previous conditions. These findings indicate that BCBD contributes to enhancing the social functions of urban space by creating new opportunities for community activities and interaction.

On the other hand, the analysis also reveals a recurring pattern of limited social access. This pattern is reflected in several codes, including social exclusion of traders, limitations of social space, and limited community participation, which collectively form the category of limited social access. Informants reported that certain facilities and commercial spaces within the area are difficult to access for local traders and lower-income groups, while opportunities for community involvement in the management and use of the area remain limited. These findings suggest that although BCBD functions as a public destination, access to its social and economic opportunities is not experienced equally across different community groups.

The category of social vulnerability of the community further indicates that social exclusion is reinforced by limited collective engagement and uneven participation in maintaining and utilizing urban spaces. As a result, the theme of social exclusion and inequality of public access emerges as a dominant social issue within BCBD development. This finding is consistent with Jost (2019), who argues that inequalities in access to urban green and public spaces are not determined solely by physical proximity, but also by differences in facility quality, maintenance, and public investment across areas with different socio-economic characteristics. In the context of BCBD, the issue extends beyond whether public spaces are available, as the findings indicate disparities in the ability of different social groups to access, participate in, and benefit from the opportunities created within the area. Therefore, the observed social exclusion reflects not only spatial inequality but also unequal access to the social and economic benefits generated by urban development.

From an urban governance perspective, these findings suggest that the provision of public spaces alone is insufficient to achieve social inclusion if access and participation remain uneven among community groups. Consequently, the social sustainability of BCBD depends not only on the availability of recreational and public facilities but also on the extent to which these spaces are accessible, inclusive, and capable of accommodating diverse social and economic interests.

3.3 Economy impact of BCBD development

From an economic perspective, the development of BCBD is essentially directed to drive growth through increased investment, land value, and the intensification of trade and service activities. However, field findings suggest that the economic benefits experienced by communities within its sphere of influence have not been distributed evenly. To provide a broader economic context for understanding these perceptions, selected economic indicators of Bekasi City are presented in Table 5. These indicators illustrate the general economic conditions during the period in which BCBD continued to develop as an important business and commercial center within the city.

Table 5. Economy indicators of Bekasi City (2023–2025)

Description	Unit	2023	2024	2025
Labor Force Participation Rate	%	64,657.90	65.58	64.10
Unemployment Rate	%	129.40	7.82	7.33
Poor Population	thousand	4.10	128.84	129.53
Poverty Rate	%	118.96	4.01	139.07
Gross Regional Domestic Product	trillion rupiah	5.43	129.35	5.39
Economic Growth Rate	%	3.14	5.19	3.02
Inflation (y-o-y)	%		1.60	

The data indicate that Bekasi City experienced relatively stable economic growth during 2023–2025. Gross Regional Domestic Product (GRDP) increased from IDR 118.96 trillion in 2023 to IDR 139.07 trillion in 2025, while the economic growth rate remained above 5% throughout the period. Labor force participation also remained relatively high, exceeding 64%, accompanied by a gradual decline in the unemployment rate from 7.90% in 2023 to 7.33% in 2025. These trends suggest that the city's economy continued to expand and generate employment opportunities. However, despite these positive macroeconomic indicators, the poverty rate remained relatively stable at around 4%, indicating that economic growth does not automatically translate into proportional improvements in welfare for all segments of society.

These conditions provide an important context for understanding the economic impacts of BCBD development. While the expansion of business and commercial activities within BCBD contributes to the broader economic growth of Bekasi City, the distribution of these benefits may vary among different social and economic groups. Therefore, qualitative

findings from community interviews are essential for understanding how economic opportunities generated by BCBD are perceived and experienced at the local level. To identify in more detail the experiences and perceptions of communities regarding the economic impacts of BCBD development, a summary of in-depth interview findings is presented in the following table.

Table 6. Explanation of in-depth interviews on economic impact themes

Transcript	Coding	Recoding
“Local communities can only gain such benefits if there is government intervention to empower the surrounding area. Empowerment should involve coordination with residents, including determining appropriate solutions so that, in the future, communities around the area can not only enjoy the development but also use it to strengthen the local economy.”	Inequality of economic benefits	Economic benefits are not evenly distributed
“From an economic perspective, in my view the culinary businesses here are more oriented toward the middle to upper class segment. They are not street food stalls or informal vendors. This clearly indicates a different market segment. As a result, the economic impact on the surrounding neighborhoods or local settlements is, in my opinion, not very significant.”	Economic market segmentation	The market only targets the upper middle class
“For the surrounding community, there isn’t really much benefit; it still feels quite limited. This is because the facilities are specifically designed for middle- to upper-class development, so for residents, the benefits are still lacking.”	Exclusivity of the area	The area is exclusive
“For the local economy, people from the surrounding area can’t freely access or enter the main area here. Local actors are mostly limited to the outskirts or peripheral parts of the area.”	Limited business access	Local business access is limited

The results of the interview indicate that the surrounding community has not yet gained significant economic benefits from the existence of the BCBD region, especially low-income groups and local small business actors. Most respondents highlight the weak role of public policy in integrating local communities into the regional economic system. Without clear empowerment and regulatory schemes, economic growth in BCBD tends to be isolated in the core area and does not flow optimally into the surrounding environment. This condition reflects the inequality of economic benefits, where the development of the region is more beneficial to upper-scale businesses than local communities. In addition, the growing economic activity in BCBD, especially in the culinary and commercial sectors, is considered to be more oriented to middle-class consumers. The market segmentation causes limitations of opportunities for micro, small, and informal businesses of the surrounding community to participate directly in the regional economic activity. As a result, the economic impact on surrounding settlements is relatively limited and does not produce strong multiplier effects for the local economy. Based on the results of thematic analysis on interview data, the economic impact of BCBD development can be understood as selective and exclusive. The growth of commercial and investment activities is more concentrated in the core areas, while the communities in the influence region still face limited access to strategic economic opportunities. This pattern shows weak local economic integration in the economic structure of the BCBD region. The synthesis of the relationship between economic themes that emerged from the coding process and thematic analysis is then visualized in the thematic analysis chart of the economic impact of the BCBD development economy below.

Other findings reveal a trend of economic marginalization, where local business owners only have business space in the suburbs and are not connected to the region’s main economic network. The absence of affirmative policies that encourage local SMEs engagements strengthen the exclusivity of BCBD economic structure. Thus, although the region serves as a new economic growth hub, the resulting benefits have not fully supported the improvement of the welfare of the surrounding communities.

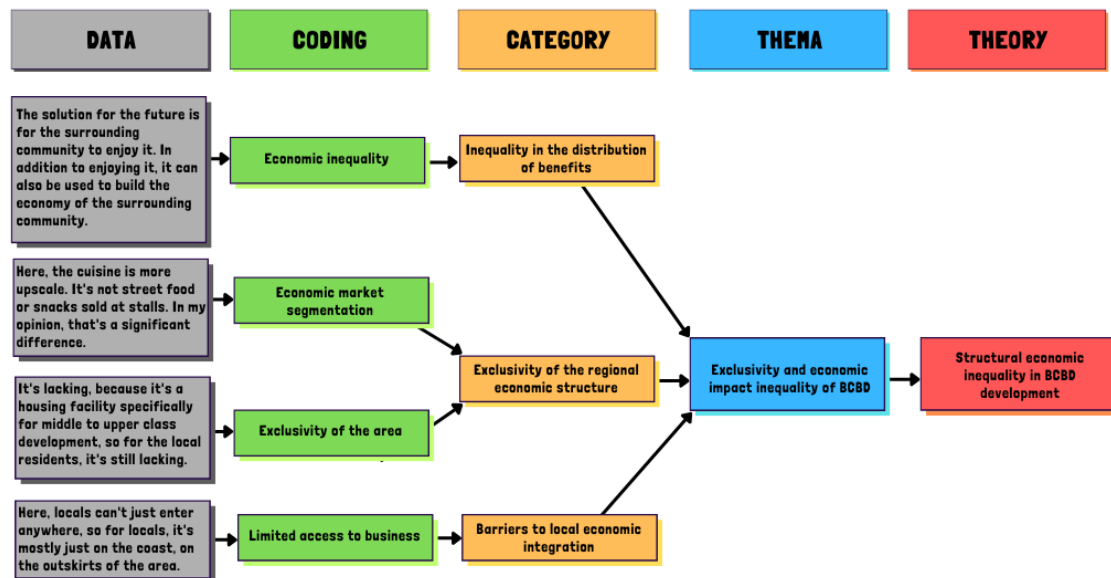


Fig. 4. Thematic analysis chart on the economy impact of BCB development

This finding can be interpreted through the perspective of economic inequality proposed by Maliarenko et al. (2024), who argue that economic inequality is a multidimensional phenomenon shaped by geographical, social, and environmental factors, often resulting in the unequal distribution of development benefits across places and social groups. In the context of BCB development, the concentration of economic activities within the core business district, combined with limited integration of local enterprises into emerging economic networks, indicates that the benefits generated by regional growth are distributed unevenly. As a result, economic opportunities tend to be captured by actors with greater capital, stronger market access, and closer connections to formal economic structures, while local small-scale businesses remain positioned at the periphery of the development process.

Overall, the economic impact of BCB development shows the inequality of the distribution of structural benefits. Regional economic growth is not automatically proportional to the strengthening of local economies in their territory. These findings suggest that the challenge of BCB development is not merely increasing economic activity, but ensuring that growth is translated into inclusive economic opportunities for surrounding communities. Without mechanisms that facilitate local participation, economic expansion may reinforce existing inequalities rather than generate broad-based local development. The findings emphasize the importance of strengthening the regional economic governance more inclusive, through policies that open business access, encourage local economic integration, and ensure a more equitable distribution of development benefits. Without such interventions, the BCB has the potential to continue to grow as an exclusive economic center separate from the economic dynamics of the surrounding communities.

3.4 BCB development governance

In addition to causing environmental, social and economic impact, BCB development is also strongly influenced by the quality of governance that directs development processes and determines the distribution of benefits of the region. Governance plays a strategic role in ensuring that the development of business areas can take place in a directional, fair, and sustainable manner. In this context, governance is not only understood as administrative or technical aspects of planning, but rather as a mechanism of interactor coordination, cross-sector policy integration, and institutional capacity in balancing economic, social and environmental interests. To more systematically describe the perception and experience of

the community towards the governance of BCBD development, a summary of in-depth interview findings related to the aspects of governance are presented in the following description of the Profound interview.

The results of interviews with the community showed that the perception of BCBD development governance is diverse and indicates the gap between regional planning and local community needs. A number of respondents assessed that the planning and management of the region have been done relatively systematic, especially in aspects of space arrangement, access arrangement, and basic infrastructure provision. The arrangement of the circulation of vehicles, pedestrian lines, and the management of the region is physically assessed enough to cause significant disturbance to the daily activities of the community. However, the findings also show that the governance of BCBD development is not entirely inclusive. Local communities and business people, especially SMEs, still face limited access to economic space and business opportunities within the region. The lack of involvement of citizens in the decision-making process and weak coordination between governments, developers and communities is the main issue that stirs. This condition suggests that the orientation of BCBD development still emphasizes the efficiency and appeal of the region's economy, while the aspects of social justice and local empowerment have not been optimally integrated. From the side of the region connectivity, access to the BCBD area is rated quite well through certain main corridors. However, the capacity of transport infrastructure and its integration with urban public transport systems has not developed adequately. Dependence on private vehicles still dominates the mobility of the region, potentially increasing transportation and environmental pressure in the future as the intensity of regional activities increases. In the aspects of space sustainability and environmental management, the BCBD is perceived to have accommodated elements of open space, water and greenish as part of the design of the region. The open space available is considered to contribute positively to the comfort of the environment and social activities of the community. However, the sustainability of regional management is still heavily dependent on developer commitments, while the role of supervision and consistency of public policy is not strong enough to guarantee long-term sustainability.

Thematic analysis of interview findings suggests that BCBD development governance faces structural limitations that affect the overall development achievements of the region. The process of planning and implementation of development tends to be elitist, with limited community participation space. This condition reflects the uninternalized principle of inclusivity and justice in regional governance. In addition, weak integration between environmental planning, transportation systems and socio-economic policies indicates that regional governance is still in a sectoral and holistically coordinated manner.

These governance challenges can also be understood through the framework of the Sustainable Development Goals (SDGs), which emphasize the integration of economic growth, social well-being, environmental protection, and institutional effectiveness as the foundation of sustainable development. CBD development should therefore not be assessed solely based on its ability to attract investment and stimulate economic growth, but also on its contribution to social inclusion, environmental sustainability, and good governance. The SDGs, adopted by the United Nations as a global agenda for sustainable development until 2030, consist of 17 goals that encompass social, economic, environmental, and institutional dimensions of development (Alfathy et al., 2024). In Indonesia, commitment to the SDGs has been formalized through Presidential Regulation No. 59 of 2017 and further strengthened through Presidential Regulation No. 111 of 2022, which require the integration of sustainable development principles into national and regional planning processes (Mujab & Nugraheni, 2024).

Viewed from this perspective, several governance issues identified in BCBD development are closely related to the achievement of SDG 11 (Sustainable Cities and Communities), particularly regarding inclusive urban development, equitable access to public spaces, sustainable transportation systems, and participatory governance. The limited involvement of local communities in decision-making processes, unequal access to economic opportunities, and weak coordination among stakeholders indicate that the

principles of inclusive urban governance have not yet been fully realized. Similarly, the continued dependence on private vehicles and the limited integration of public transportation systems suggest challenges in achieving more sustainable and low-carbon urban mobility.

Table 4. Explanation of in-depth interviews on the theme of governance

Transcript	Coding	Recoding
““Certainly, there are challenges, because the management has already prepared plans for the development of BCBD. From culinary development to access and various other aspects, these must have been carefully considered. However, what we would like is for access to be more open, because the more access there is, the better.”	Elitist planning	Inequality in the planning process
“As I mentioned earlier regarding UMKM, it would be better if future strategies could pay more attention to them and be more comprehensive in nature.”	Inclusiveness of governance	The need for strengthening governance
“For the potential access, especially from surrounding areas, there are quite a lot of entry points from the outskirts, including access from the northern and southern sides. Access is generally adequate, but in terms of development, the supporting infrastructure here, particularly the road network, still needs improvement, such as widening the roads to better accommodate movement.”	Regional connectivity and infrastructure	Limited capacity of supporting infrastructure
“Here, several plots of land are intentionally left open in the middle of the area, where there are parks and green lawns that are clearly maintained by the management. They are also very committed to developing features such as an artificial lake. So, even though buildings occupy most of the BCBD area, the developers still pay close attention to greenery and environmental landscaping.”	Open space management	Green space integrated into area design
“In my opinion, a win-win situation has been achieved, where all parties benefit. The area can develop independently, and infrastructure such as the Haji Nur Ali flyover indirectly supports the Bekasi City Government. Overall, the BCBD area and its surrounding development have made a meaningful contribution.”	Synergy between government and developers	Collaboration between government and developers
“Whenever a developer plans a project, the surrounding community is usually involved in discussions, whether about land, access, or other issues. At the very least, the local community here must have been consulted before the BCBD development, as such a project would not happen without prior communication.”	Community participation in planning	Consultative public participation space
“So, my hope is that, if possible, there will be public transportation integrated into this area, allowing vehicles to enter and exit the site. With public transport provided by the government, there could at least be new routes introduced, and with new routes, the number of vehicles in operation would automatically increase.”	Integration of public transportation	The need for regional public transportation integration

Furthermore, the limited integration between environmental management, transportation planning, and socio-economic policies demonstrates that governance arrangements remain fragmented across sectors. This condition reflects a broader challenge frequently encountered in implementing sustainable development agendas, where economic objectives are often prioritized over social inclusion and environmental resilience. As a result, the governance of BCBD has not yet fully aligned with the integrated and collaborative approach promoted by the SDGs framework.

The synthesis of the relationship between themes of governance that emerged from the coding process and thematic analysis was then visualized in the thematic analysis chart of

BCBD development governance. From an institutional perspective, the synergy between local governments and developers has indeed been formed, but still dominated by a top-down approach and has not been offset by meaningful public participation mechanisms. Limitations of community engagement have an impact on the low legitimacy of social development and potentially weaken the sustainability of the region in the long run.

Therefore, strengthening BCBD governance is not only important for improving the effectiveness of regional development but also for ensuring alignment with national and global sustainable development commitments. A more collaborative, participatory, and integrated governance approach is needed to balance economic growth with social equity and environmental sustainability, thereby supporting the realization of sustainable, inclusive, and resilient urban development in accordance with the SDGs framework.

Overall, these findings suggest that BCBD development governance is relatively effective in managing the technical aspects of the region, but it has not fully reflected collaborative and inclusive governance. These issues accumulate in the theme of the limitations of regional development governance, characterized by weak inclusivity, institutional coordination, environmental integration, and urban transportation systems. This finding is consistent with Lah (2025), who argues that sustainable development is frequently constrained by sectoral fragmentation, policy misalignment, weak stakeholder coordination, and persistent gaps between planning and implementation processes. The governance challenges identified in BCBD indicate that although development objectives have been successfully translated into physical and economic outcomes, the integration of social, environmental, and participatory dimensions remains limited. This suggests that governance effectiveness should not only be assessed through the successful delivery of infrastructure and investment outcomes, but also through the ability to coordinate diverse interests, integrate sustainability objectives, and ensure meaningful stakeholder participation in the development process.

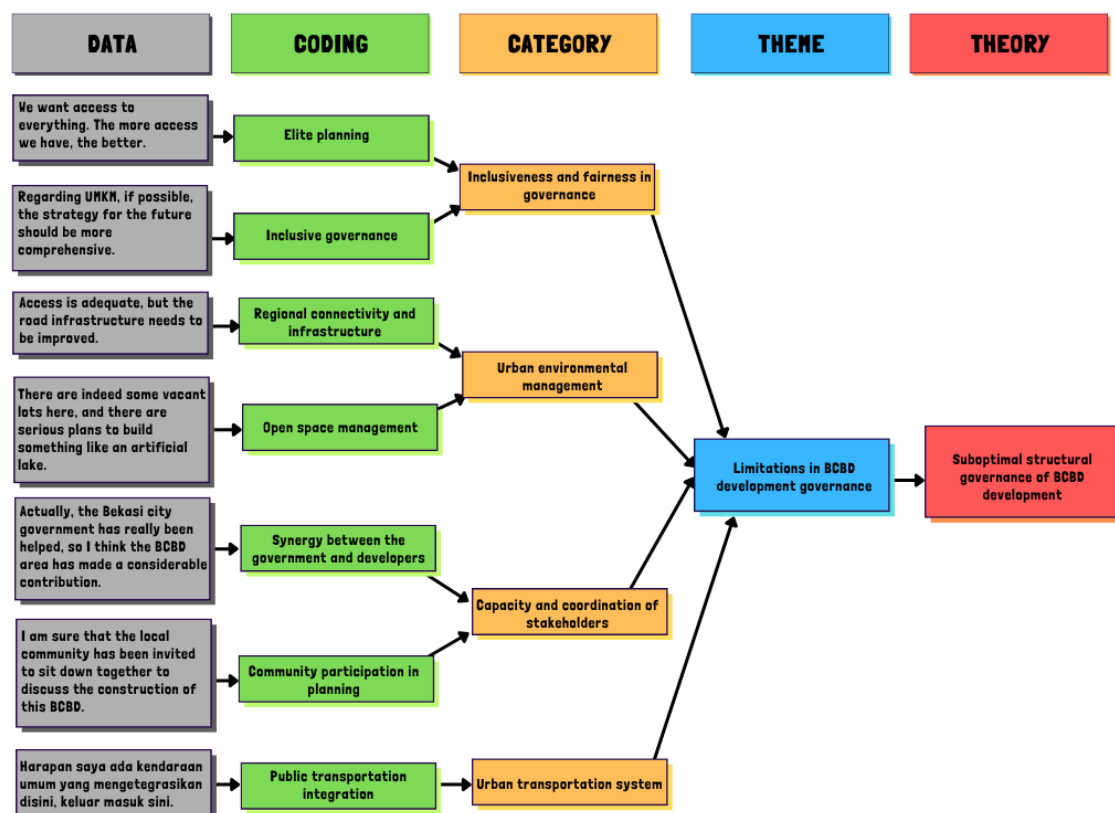


Fig. 5. Thematic analysis chart on the Governance of BCBD development

The findings affirm that the main challenges of BCBD development lie not only in physical and economic aspects, but especially in the quality of governance that has not yet been fully able to accommodate the principles of sustainability thoroughly. In this regard, the governance issues observed in BCBD can be interpreted as manifestations of broader institutional challenges commonly found in urban development, where economic growth agendas often advance more rapidly than mechanisms for cross-sector integration, community engagement, and environmental governance.

Viewed through the SDGs framework, the governance challenges identified in BCBD indicate that the integration of economic growth, social inclusion, environmental sustainability, and institutional effectiveness remains incomplete. Several issues identified in this study are particularly relevant to SDG 8 (Decent Work and Economic Growth), SDG 10 (Reduced Inequalities), SDG 11 (Sustainable Cities and Communities), and SDG 12 (Responsible Consumption and Production), which collectively emphasize that urban development should generate economic benefits while ensuring equitable access to opportunities, sustainable resource management, and inclusive governance.

The economic opportunities generated through BCBD development demonstrate its contribution to local economic growth and business expansion, supporting the objectives of SDG 8. However, the findings also reveal that access to these opportunities remains uneven, particularly for local communities and SMEs. This suggests that economic growth has not yet been fully translated into inclusive development outcomes. As noted by Säynäjoki et al. (2014), sustainable economic development requires not only the creation of jobs and investment opportunities but also the equitable distribution of the resulting benefits across society.

The findings are also closely associated with SDG 10, which seeks to reduce inequalities within and among communities. The limited access of local communities and small-scale businesses to strategic economic spaces within BCBD indicates that the benefits of development are not distributed equally among social groups. In line with Zubir & Brebbia (2014), business district development should ensure accessibility and opportunities for all segments of society to prevent spatial and economic exclusion from becoming embedded in urban development processes.

Furthermore, the governance limitations identified in BCBD directly relate to SDG 11, which promotes inclusive, safe, resilient, and sustainable cities. Although BCBD has succeeded in providing organized urban spaces, environmental amenities, and supporting infrastructure, weaknesses in stakeholder participation, transportation integration, and cross-sector coordination indicate that the principles of inclusive urban governance have not yet been fully achieved. The continued dependence on private vehicles and the limited integration of public transportation systems further highlight challenges in creating sustainable urban mobility, which is recognized as a key component of sustainable city development (Haque et al., 2020).

From an environmental governance perspective, the findings are also relevant to SDG 12. The transformation of land use into intensive commercial functions and the concentration of economic activities within BCBD require stronger integration of environmental considerations into planning and management processes. Tali et al. (2012) argues that increasing commercialization and changes in land use patterns necessitate more efficient and responsible resource management to reduce environmental pressures and support long-term urban sustainability. The findings of this study suggest that environmental considerations remain secondary to economic objectives, indicating that the principles of responsible production and resource management have not yet been fully integrated into the governance framework of BCBD.

Taken together, these findings indicate that the governance challenges observed in BCBD extend beyond technical planning and infrastructure provision. They reflect broader sustainability challenges related to inclusivity, equity, environmental integration, and institutional coordination. Consequently, strengthening collaborative, participatory, and integrative governance is essential not only to improve the effectiveness of BCBD development but also to align future development with the broader sustainability objectives

embodied in the SDGs framework. Therefore, strengthening collaborative, participatory, and integrative governance becomes essential to ensure that future development is not only economically successful but also socially inclusive and environmentally sustainable.

3.5 Integrated analysis of environmental, social, economic, and governance dimensions of BCBD development

The transformation of land use and shifts in socioeconomic dynamics that have occurred during the development of the BCBD demonstrate that the development of business districts not only results in physical changes to the built environment but also shapes new patterns of interaction between economic activities, communities, and the urban environment. These changes create consequences that go beyond purely spatial aspects, as changes in spatial structure triggered by investment, economic growth, and the development of built-up areas also influence the distribution of development benefits, community access to space and economic opportunities, and the environmental conditions of the area. In this context, the various environmental, social, and economic impacts identified within the BCBD's influence zone can be understood as manifestations of a gradual transformation process occurring as the business district develops.

Research findings also indicate that the study's assumptions regarding the emergence of environmental, social, and economic impacts resulting from BCBD development have been validated. From an economic perspective, the development of the area has successfully increased trade, services, and new economic opportunities, thereby reinforcing the BCBD's function as an urban growth center. From a social perspective, the development has brought about changes in access to space and economic opportunities, marked by the emergence of perceptions of inequity in the distribution of development benefits among community groups. Meanwhile, from an environmental perspective, changes in land use, the reduction of green open spaces, and the increased density of built-up areas indicate that the development of the area has placed pressure on the ecological functions of the region.

Rather than representing separate outcomes, these economic, social, and environmental impacts are interconnected and reveal a broader development trade-off. Economic gains generated through investment and commercial growth have not been distributed evenly across social groups and have occurred alongside increasing pressures on ecological functions. This finding suggests that BCBD development has produced differentiated outcomes, where economic growth is achieved, but social inclusion and environmental sustainability are not strengthened at the same pace.

BCBD development has also triggered significant spatial transformations in the urban spatial structure of Bekasi City. These transformations are reflected in the conversion of land use into integrated commercial areas, increased economic activity intensity, and the emergence of new activity centers oriented toward urban consumption and recreation. From a theoretical perspective, this phenomenon aligns with the concept of urban business district transformation, which explains that CBD development often serves as both an engine of economic growth and a driver of changes in the city's spatial structure.

However, as evident in the findings of this study, such spatial transformations do not always result in an equitable distribution of development benefits across all social groups. The research results show that while the BCBD is capable of boosting economic activity and providing new recreational spaces for the public, these benefits tend to be enjoyed primarily by the upper-middle socioeconomic groups. Meanwhile, local communities, particularly small vendors and the informal economy sector, face limited access to economic spaces within the district. This situation indicates a tendency toward social exclusion and inequities in access to public spaces within the development process of modern business districts.

Within the theoretical framework of urban development, this phenomenon can be understood as a form of structural inequality arising from the dominance of market logic in urban area development, where urban spaces tend to be produced for specific economic groups with higher purchasing power. This finding aligns with Putri et al. (2023), who

demonstrate that infrastructure development and area growth are not always accompanied by equitable distribution of employment opportunities and community well-being, meaning that the benefits of development are more often enjoyed by groups with greater economic capacity and better access.

Furthermore, findings regarding environmental impacts that are relatively controlled but not yet transformative indicate that BCBD development remains at the stage of maintaining existing environmental conditions rather than driving significant improvements in the area's ecological quality. This finding suggests that environmental considerations within BCBD development primarily function as supporting elements for urban attractiveness and investment value rather than as core objectives of ecological sustainability. Consequently, environmental management tends to focus on preserving environmental quality rather than enhancing ecological resilience, ecosystem functions, and long-term environmental capacity.

The findings also demonstrate that governance acts as the key mediating factor linking economic growth, social inclusion, and environmental sustainability within BCBD development. While existing governance arrangements have been relatively effective in facilitating investment, managing infrastructure provision, and maintaining the physical quality of the area, they have been less successful in ensuring equitable access to development benefits and integrating environmental objectives into long-term development planning. As a result, sustainability challenges in BCBD are not solely the consequence of rapid urban growth, but also reflect limitations in the inclusiveness, participation, and integrative capacity of the governance system.

From an urban sustainability perspective, this situation indicates that the development of modern business districts is often still dominated by a "weak sustainability" approach, where economic growth remains the top priority while social and environmental dimensions have not yet been fully and balancedly integrated. The evidence from BCBD suggests that economic performance is frequently used as the primary indicator of development success, whereas social equity and ecological integrity receive comparatively less attention in planning and management processes.

Thus, a theoretical reflection on the findings of this study indicates that the development of the BCBD reflects the general dynamics of urban business district development in developing cities, namely, rapid spatial transformation accompanied by risks of social inequality, spatial exclusivity, and suboptimal environmental sustainability. These conditions underscore the importance of a strong sustainability approach in area governance, where development is oriented not only toward economic growth and the aesthetics of the area but also toward social justice, inclusive access to public spaces, and the strengthening of the area's ecological functions within the overall urban system.

4. Conclusions

This study shows that the development of BCBD has generated multidimensional impacts on its surrounding areas, but the distribution of these impacts remains uneven. While BCBD has successfully stimulated economic growth, improved urban facilities, and maintained relatively stable environmental conditions, the benefits of development are concentrated among particular groups and locations. Limited access for local communities and small businesses indicates that economic growth has not been accompanied by equitable social and economic outcomes. The findings also demonstrate that governance plays a crucial role in shaping the sustainability of BCBD development. Although current governance arrangements have been effective in managing spatial and infrastructure development, they remain insufficiently inclusive, participatory, and integrated across sectors. As a result, challenges related to social exclusion, unequal benefit distribution, and long-term sustainability persist. Therefore, achieving sustainable development in BCBD requires a shift from a growth-oriented approach toward a more inclusive and sustainability-oriented model. Strengthening participatory governance, improving access

to economic opportunities for local communities, and integrating environmental, social, and economic considerations into development planning are essential to ensure that BCBD functions not only as a business center but also as a sustainable and equitable urban area.

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Author Contribution

R.D. contributed substantially to the conceptualization, methodology, data collection, analysis, and interpretation of the study, as well as drafting the original manuscript. H.H. and T.N. contributed through supervision, guidance in the research process, and critical review.

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The authors declare no conflict of interest.

Declaration of Generative AI Use

In preparing this work, Grammarly was used to support improvements in grammar. The authors subsequently reviewed and refined the text and assume full responsibility for the content.

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