Comparative Analysis Of The Central Business District (CBD) in Pangkalan Bun: Market Affected Areas Versus Governmental – Affected Areas Based on Gross Income Multiplier (GIM) and Government Assessed Property Value (NJOP) in The Surrounding Area

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Abstrak

Pangkalan Bun, ibu kota Kabupaten Kotawaringin Barat, dibentuk oleh dua pusat perkotaan utama yang secara signifikan memengaruhi dinamika ekonomi dan sosialnya: kawasan pemerintahan di sepanjang Jalan HM Rafii dan pusat komersial di sekitar Pasar Indrasari dan Jalan Pangeran Antasari. Studi ini bertujuan untuk mengkaji dominasi relatif masing-masing pusat dalam memengaruhi wilayah sekitarnya. Pendekatan penelitian kuantitatif diterapkan, menggabungkan tinjauan pustaka dan analisis komparatif untuk mengevaluasi kedua kawasan pusat bisnis (CBD) menggunakan Pengganda Pendapatan Bruto (PPB) dan Nilai Properti Taksiran Pemerintah (NJOP) sebagai indikator utama. Temuan menunjukkan bahwa kawasan Pasar Indrasari saat ini memiliki pengaruh ekonomi yang lebih kuat. Namun, kawasan HM Rafii menunjukkan potensi pertumbuhan yang menjanjikan karena lokasinya yang strategis dekat dengan Bandara Iskandar dan Pelabuhan Kumai. Dengan pembangunan kota yang berkelanjutan, kedua pusat tersebut diharapkan dapat memainkan peran yang semakin saling melengkapi, berkontribusi pada pengaruh yang seimbang terhadap lanskap perkotaan dan sosial ekonomi Pangkalan Bun di masa depan.

Kata Kunci: Kawasan pusat bisnis, Kawasan inti perkotaan, Pusat aktivitas kota, Pengganda pendapatan bruto.

Abstract

Pangkalan Bun, the capital of West Kotawaringin Regency, is shaped by two primary urban centers that significantly influence its economic and social dynamics: the governmental area along HM Rafii Street and the commercial hub around Indrasari Market and Pangeran Antasari Street. This study aims to assess the relative dominance of each center in influencing their surrounding areas. A quantitative research approach was applied, combining literature review and comparative analysis to evaluate both central business districts (CBDs) using Gross Income Multiplier (GIM) and government-assessed property value (NJOP) as key indicators. The findings indicate that the Indrasari Market area currently holds a stronger economic influence. However, the HM Rafii area shows promising growth potential due to its strategic proximity to Iskandar Airport and Kumai Port. With the city's continuing development, both centers are expected to play increasingly complementary roles, contributing to a balanced influence on Pangkalan Bun's future urban and socio-economic landscape.

Keywords: *Central business district, City activity center, Gross income multiplier, Urban core area.*

INTRODUCTION

Land parcels represent a form of property ownership that holds economic value and utility. These plots, often measured in hectares or square meters, serve essential human needs and symbolize wealth. They offer vertical utility: underground for resources and aboveground for construction and economic activities. This characteristic makes land both a practical and symbolic asset across cultures. In human society, while land remains a finite resource, the demand for it increases in parallel with population growth. This imbalance between availability and demand aligns with the law of supply and demand, where scarcity leads to an increase in land value. As

such, land becomes not only a necessity but also a high-value commodity, particularly in areas with growing populations or limited space.

The value of land in any given region is strongly influenced by its location, especially in relation to economic activity centers or central business districts (CBDs), and its accessibility to public services and infrastructure. Von Thünen (1826, as cited in Safitri, 2016) argued that a land's value is affected by its geographic distance from the city center. While Von Thünen originally associated the city center with traditional markets, the modern interpretation of a CBD encompasses broader administrative and commercial hubs. Land located closer to a city's central business district tends to have higher value than land situated farther away. This reflects a negative correlation between distance from the CBD and land value. Proximity to economic activities and administrative services increases land desirability and drives up its market value.

Pangkalan Bun, formerly capital city of the Kotawaringin Sultanate, developed primarily around river-based culture due to its dependence on water transportation along the Arut River. In the past, overland routes were limited by swampy terrain and only became more accessible in the 1990s with the development of roads from old logging trails. The city's original economic and administrative centers emerged along the southern banks of the river, near the Istana Kuning in Kelurahan Raja.

However, with the improvement of road networks and the development of air transportation through Iskandar Airport, new centers of activity have emerged in other parts of Pangkalan Bun. This urban transformation has given rise to multiple potential CBDs, each with distinct influences one shaped by governmental presence and another by commercial activity. Research on Central Business Districts (CBDs) has been widely conducted in major cities across Indonesia and around the world, with a primary focus on the influence of CBDs on land value and urban spatial planning. Several studies, such as those by Pratama (2016) and Safitri (2016), emphasize that the proximity of a parcel of land to a CBD significantly affects its market value. In addition, Wijdania et al. (2023) highlighted the readiness of the Solo Baru area as a new CBD in Sukoharjo, while Suria et al. (2016) proposed a reorganization of the CBD in Langsa City from a functional and spatial perspective. Overall, these studies tend to concentrate on a single main CBD and are mostly conducted in metropolitan areas or rapidly developing regions.

The research to be conducted offers a different perspective by focusing the analysis on two main locations in Pangkalan Bun: the governmental center on HM Rafii Street and the commercial hub in the Pasar Indrasari/Pangeran Antasari Street area. This approach raises the issue of functional dominance between the two areas, both of which play significant roles in the city's social and economic dynamics. By utilizing quantitative indicators such as the Gross Income Multiplier (GIM) and the Government-assessed Property Value (NJOP), this study not only illustrates the urban spatial structure but also presents a data-driven comparative overview of the appeal and influence of each CBD area. In doing so, it complements previous studies that tend to focus on a single CBD point or rely solely on qualitative approaches.This research is particularly important because it focuses on the context of a small-to-medium-sized city like Pangkalan Bun, which has not been widely addressed in CBD-related studies. With its unique characteristics of urbanization and development, the findings from this study can serve as a reference for urban development policies in similar cities across Indonesia. Furthermore, this study integrates spatial and economic approaches in understanding the development of strategic urban areas, thereby contributing to the enrichment of literature on spatial planning, urban economics, and regional planning that is more attuned to local contexts.

METHOD

This research is a quantitative study with a comparative approach, aiming to analyze the differences between two Central Business District (CBD) areas based on the Gross Income

Multiplier (GIM) and the Government-assessed Property Value (NJOP), with the objective of determining the relative dominance of each area.Quantitative research is a method that emphasizes objective measurement and statistical analysis of numerical data. This method typically involves the use of standardized instruments to collect data, which is then analyzed using statistical techniques to test hypotheses or answer research questions (Sugiyono, 2019). In this context, numerical data in the form of GIM and NJOP values are analyzed to identify value differences and trends between the two CBD areas.

The comparative approach is a quantitative method used to compare two or more groups or areas, with the goal of identifying differences or similarities based on specific variables (Arikunto, 2010). In this study, the comparative approach is applied to examine the economic and spatial characteristics of the two CBD areas: one dominated by commercial activities and the other influenced by governmental functions.This study is grounded in Location Theory (von Thünen, 1826; Alonso, 1964), which emphasizes that land utility and economic value are significantly influenced by geographic position and accessibility to centers of activity. In the context of the Central Business District (CBD) in Pangkalan Bun, this approach is supported by classical spatial theories such as concentric zone model (Burgess, 1925), Hoyt's sector model (Hoyt, 1939), and Christaller's central place theory (Christaller, 1933). These theories explain that areas with the highest land values and activity intensity are typically located near city centers and follow spatial distribution patterns influenced by transportation infrastructure and economic service functions. Therefore, commercial zones showing higher GIM and NJOP values are assumed to have greater functional dominance and market value.

Furthermore, the bid rent concept (von Thünen, 1826) and land value theories (Ricardo, 1817; Alonso, 1964) serve as key frameworks for understanding how economic actors are willing to pay more for strategically located land. The greater the potential profit from a location, the higher the rent value. In this context, indicators such as Gross Income Multiplier (GIM) and the government's Land and Building Tax Value (NJOP) are employed to quantitatively assess the value and dominance of a CBD area. By comparing the trade- and government-oriented CBDs, this research aims to identify the dominant spatial structure in Pangkalan Bun and provide a theoretical basis for future urban development driven by land value efficiency and economic potential.Before conducting the research on the Central Business District (CBD) in Pangkalan Bun, a review of the literature revealed that several studies on the CBD theme had already been carried out, both at the national and international levels.
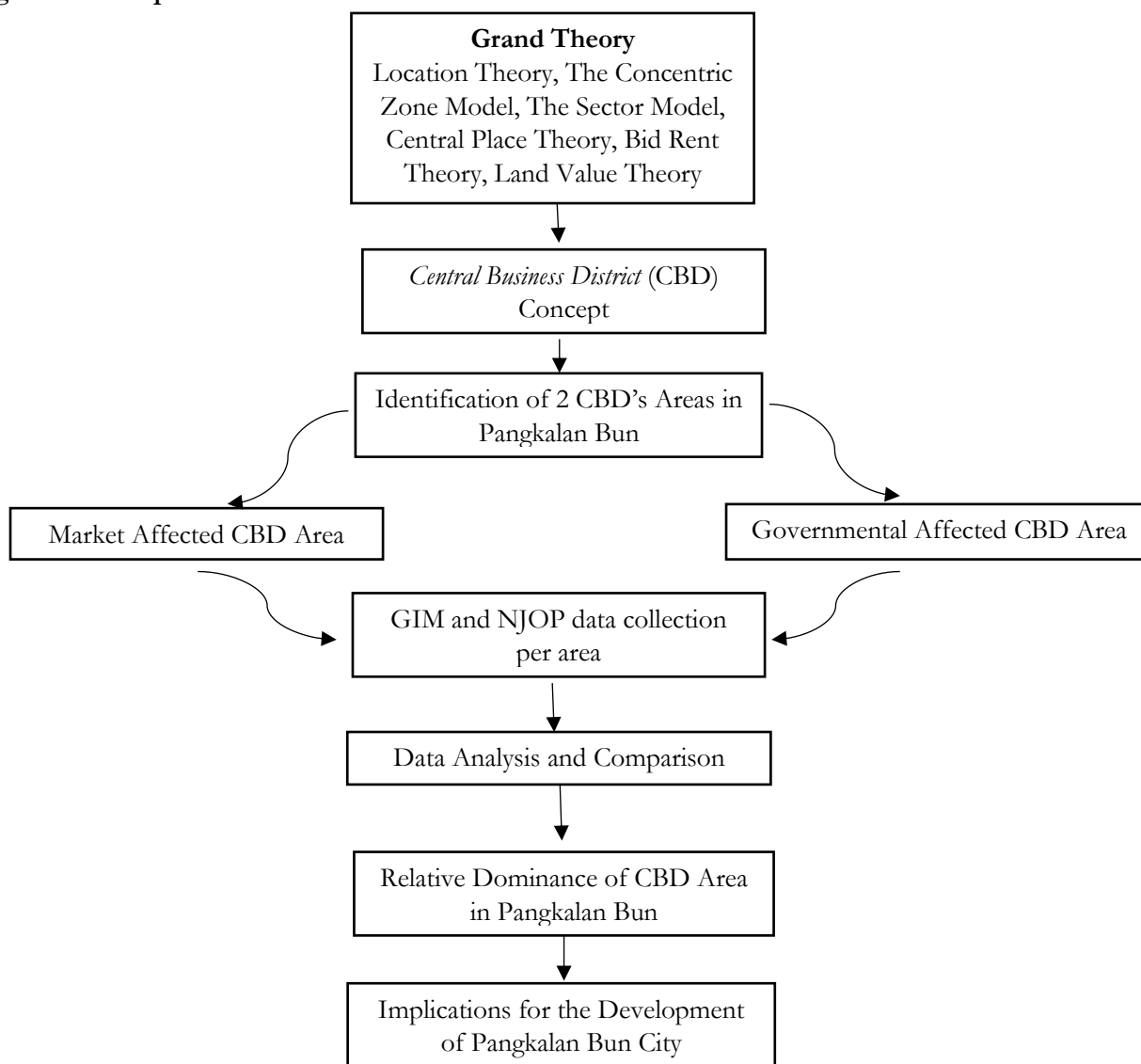
Table 1 Summary of Previous Research

No	Researcher & Year	Location	Research Objective	Methodology	Key Findings
1	Amarrohman et al. (2023)	Simpang Lima, Semarang	To analyze land value changes & influence of distance from CBD	GWR, NIR, spatial analysis (2012–2023)	Land value decreases with distance from CBD; shopping centers & road width are significant factors
2	Batubara et al. (2019)	Deli Serdang	To analyze the factors influencing land value	Multiple linear regression	Land area negatively affects value; distance to industry & CBD positively affect it; toll gates not significant
3	Hladkyi (2021)	Major cities (general)	To analyze CBD land rent impact on the social service sector	Literature study & empirical analysis	Land rent drives profitability & strategic location for

					the social service sector
4	Jia et al. (2020)	Nanchang, China	To analyze CBD's influence on housing prices	Univariate linear regression	Closer proximity to the CBD leads to higher housing prices
5	Nainggolan (2013)	Simalungun	To identify economic growth centers and their interactions	Scalogram, Centrality Index, Gravity Analysis	Growth centers accelerate development & economic distribution to the hinterland
6	Pratama (2016)	Solo Baru, Sukoharjo	To analyze the effect of distance from CBD on land value	Spatial & comparative analysis	Land value decreases as distance from CBD increases
7	Safitri (2016)	Surabaya	Influence of CBD on land value in industrial and shopping centers	Von Thünen Location Theory, NIR	Highest NIR within 3 km radius; road influence also significant
8	Sullivan (1984)	Theoretical (General Model)	Economic model of land use & zoning in CBD	Theoretical model of 4-zone city zoning	Zoning can reduce land rents and influence wages and employment
9	Tarigan et al. (2020)	Medan	To analyze influencing factors on CBD property development	Correlational study (90 respondents)	Location, accessibility, facilities, and land use significantly influence development
10	Wijdania et al. (2023)	Solo Baru, Sukoharjo	To assess the readiness of Solo Baru as a CBD	Descriptive statistics, scoring, satellite mapping	Solo Baru has CBD potential, needs better infrastructure and public space
11	Yu et al. (2015)	Shenzhen & Guangzhou, China	To accurately define CBD boundaries	Network KDE, network flow simulation	Network KDE is more accurate & efficient than planar KDE

Source: created for this research (2025

Conceptual framework of this study as follows:
Figure 1. Conceptual Framework

Grand Theory
Location Theory, The Concentric Zone Model, The Sector Model, Central Place Theory, Bid Rent Theory, Land Value Theory

Central Business District (CBD) Concept

Identification of 2 CBD's Areas in Pangkalan Bun

Market Affected CBD Area

Governmental Affected CBD Area

GIM and NJOP data collection per area

Data Analysis and Comparison

Relative Dominance of CBD Area in Pangkalan Bun

Implications for the Development of Pangkalan Bun City

Source: created for this research (2025)

RESULT AND DISCUSSION

HM Rafii Street is located within the administrative area of Madurejo Subdistrict, South Arut District, West Kotawaringin Regency. The landmarks that mark this activity center area are the Pancasila Roundabout and the Manis City Park of Pangkalan Bun. HM Rafii Street starts from the Pancasila Roundabout at the geographical coordinates -2.707993, 111.648174 and ends at the Pramuka Monument at the coordinates -2.721819, 111.640972, stretching for 1.9 kilometers.

Figure 2. Map of HM Rafii Street
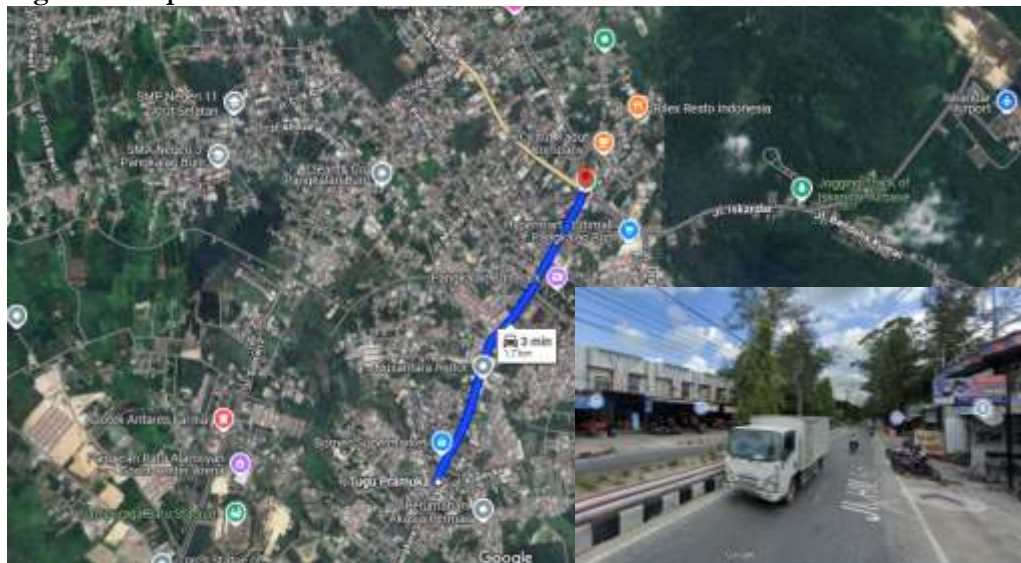
Source: maps.google.com

Along HM Rafii Street, there are numerous government buildings and community-owned commercial establishments. Government buildings located on HM Rafii Street include the Regional Development Planning/Research and Development Agency of West Kotawaringin Regency, the SKW II Office of BKSDA Central Kalimantan, the Environmental Agency of West Kotawaringin Regency, the Land Office of ATR/BPN West Kotawaringin, the Department of Transportation of West Kotawaringin Regency, the Civil Service Police Unit & Fire Department of West Kotawaringin Regency, the Regional House of Representatives (DPRD) of West Kotawaringin Regency, the Heavy Equipment UPTD and the Laboratory UPTD of the Public Works Office of West Kotawaringin Regency, the Inspectorate of West Kotawaringin Regency, the Primary Tax Service Office of Pangkalan Bun, the Traffic Police Unit Office (Satlantas) of West Kotawaringin Police Department, and the Office of Tanjung Puting National Park Authority.

In addition, HM Rafii Street is also home to many commercial businesses operated by the community, including Duta Serasi Paint Store, various food and beverage stalls, convenience shops, souvenir kiosks (Kawal), Kawasaki motorcycle dealership, SGI Motor workshop, Simponi Mart, Alfa Mart, BRI Sub-Branch Office at the Pancasila Roundabout, Sinta Church, Kudeta Mini Soccer, Pelangi Food Stall, and Borneo Supermarket. Within the activity center area of HM Rafii Street, there are several connecting roads that are affected by economic activities during the morning, afternoon, and evening hours, including Iskandar Street, Pemuda Street, Malijo Street, and parts of Utama Pasir Panjang Street.

Pangeran Antasari Street and Indrasari Market are the first central activity areas in the city of Pangkalan Bun, dating back to the initial relocation of the Kotawaringin Sultanate's administrative center from Kotawaringin Lama to Pangkalan Bun.Pangeran Antasari Street spans 2.1 kilometers, starting from the BNI Clock Roundabout in Mendawai Subdistrict, located at the geographical coordinates -2.681255, 111.622432, and ending at the Indrasari Market Roundabout at -2.670801, 111.637673.

Figure 3. Map of Pangeran Antasari Street

Source: maps.google.com

Along Pangeran Antasari Street, there are numerous community-owned shop houses, including the Lingga Sejahtera BPR Building, Tiara Hotel, H. Imam Syafi'i Pharmacy, Sehat Jaya Pharmacy, Teratai Clinic, Aneka Tani Store, Bahagia Hotel, BRI Bank South Arut Unit, various clothing/fashion stores, Indra Kencana Market, Nurul Huda Jami Mosque, Mulia Gold Shop, Surya Kencana Department Store, Aneka Gold Shop, Firdaus Gold Shop, Firdaus 2 Gold Shop, Dinar Gold Shop, machinery/tool shops, Inter-village Transport Terminal, Abadi Hotel, Firdaus Syariah Hotel, BNI Bank Pangkalan Bun, Budiana Motor Honda dealership, West Kotawaringin PKK Secretariat, Maybank Pangkalan Bun, the Official Residence of the Regent of West Kotawaringin, Pangkalan Bun Customs Office (KPBC TMP C), Arut Riverside, West Kotawaringin Fire Department, BRI Bank Main Branch Pangkalan Bun, Tama Semangat 45, Tugu Field, South Arut Public Health Center, electronics shops, mobile phone retailers, clothing and accessories outlets (distro), Kodim 1014/Pangkalan Bun Military Command, Alibaba Hotel, Mahkota Hotel, Semangat 47 Restaurant, a row of hardware/furniture shops, Sirajul Muhtadin Jami Mosque, and Indrasari Market.

Within the central activity zone of Pangeran Antasari Street, several connecting roads are influenced by economic activities during the morning, afternoon, and evening hours. These include Sukma Aryaningrat Street, H. Udan Said Street, Pakunegara Street, and a part of Ahmad Yani Street (from Mercure Hotel to intersection).Based on online spatial planning data from the Gistaru ATR BPN application, the zoning/use designation for HM Rafii Street is categorized as commercial and for public/government interests (global public).

Figure 4. Zoning/Use Designation on HM Rafii Street

commercial zoning of HM Rafii	global public zoning of HM Rafii

Source: gistaru.atrbpn.go.id

Meanwhile, online spatial planning data from the Gistaru ATR BPN application shows that the zoning/use designation for Pangeran Antasari Street is similar to that of HM Rafii, namely for commercial and public/government interests (global public).

Figure 5. Zoning/Use Designation on Pangeran Antasari Street

| commercial zoning of P. Antasari | global public zoning of P. Antasari |
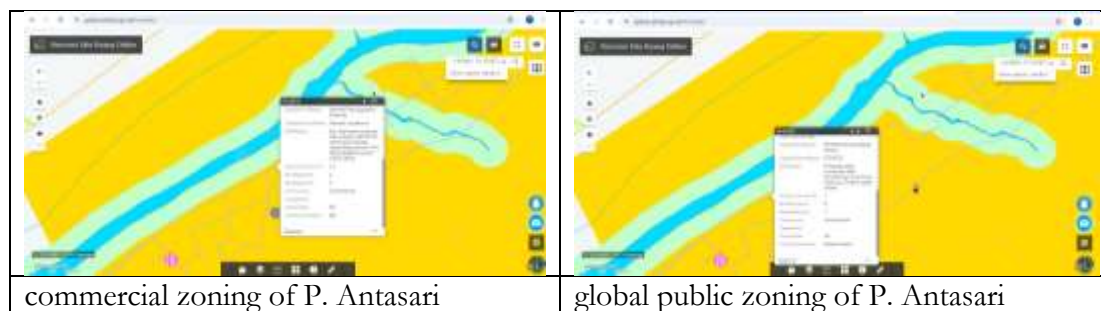
Source: gistaru.atrbpn.go.id

The Land Value Zone (Zona Nilai Tanah or ZNT) data catalog on the Bhumi ATR BPN application indicates that land value along HM Rafii Street falls within the range of IDR 500,000 – 1,000,000 per square meter. Meanwhile, land value along Pangeran Antasari Street ranges from IDR 1,000,000 – 2,000,000 per square meter.

Figure 6. ZNT in the Two CBDs of Pangkalan Bun City

| ZNT of HM Rafii Street | ZNT of Pangeran Antasari Street |

Source: bhumi.atrbpn.go.id

Based on data obtained from the Regional Revenue Agency (Badan Pendapatan Daerah) of West Kotawaringin Regency, and village/subdistrict administrative (Baru Subdistrict, Raja Subdistrict, Madurejo Subdistrict, and Pasir Panjang Village) the following are the data on the Tax Object Sale Value (NJOP) of HM Rafii Street and its surrounding affected areas:

Street Name	NJOP
HM Rafii St.	IDR 537.000,00 per square meter
Iskandar St.	IDR 1.274.000,00 per square meter
Pemuda St.	IDR 537.000,00 per square meter
Malijo St.	IDR 243.000,00 per square meter
Pasir Panjang Main St. (partial)	IDR 335.000,00 per square meter

Meanwhile, for Pangeran Antasari Street and the surrounding affected areas, the NJOP was obtained as follows:

Street Name	NJOP
Pangeran Antasari St.	IDR 3.745.000,00 per square meter
Sukma Aryaningrat St.	IDR 3.745.000,00 per square meter
H. Udan Said St.	IDR 2.508.000,00 per square meter
Pakunegara St.	IDR 1.274.000,00 per square meter
Ahmad Yani St. (partial)	IDR 1.274.000,00 per square meter

Based on data from the Regional Revenue Agency (Bapenda) and subdistrict/village administrative, the average NJOP on Pangeran Antasari Street reaches IDR 3.745.000,00 per square meter, while on HM Rafii Street it is around IDR 537.000,00 per square meter. This difference indicates that land in the trading area has a higher market value than the government area.

Meanwhile, to see the influence of each CBD on the affected area (represented by the street name), the NJOP value of each road on the CBD NJOP is as follows:

a. in the affected area of the government center of HM Rafii Street, the data obtained is NJOP Iskandar Street 237% of the CBD, NJOP Pemuda Street 100% of the CBD, NJOP Malijo Street 45% of the CBD, and NJOP Pasir Panjang Main Street (partial) 62% of the CBD.

b. in the area affected by the Pangeran Antasari Street/Pasar Indrasari trade center, data was obtained on the NJOP of Sukma Aryaningrat Street 100% of the CBD, the NJOP of H. Udan Said Street 67% of the CBD, the NJOP of Pakunegara Street 34% of the CBD, and the NJOP of Ahmad Yani Street (partial) 34% of the CBD.

Based on data collected from the Valuation Information System (SIP) database, a total of 1,531 transaction records were found in Madurejo Subdistrict, where HM Rafii Street is located, and 116 transaction records were found in Raja Subdistrict and Baru Subdistrict, where Pangeran Antasari Street is located. The dataset covers transactions from the period 2017 to 2024, with a lower limit filter applied to include only land values starting from IDR 100,000 per square meter.

Each transaction record contains attributes such as serial number, administrative subdistrict of the property, type of land rights, land area, transaction value, price per square meter, transaction date, geographic coordinates (latitude and longitude), and year of transaction. These records were then uploaded into Google My Maps so that each transaction location point can be visualized on the map for data filtering within the boundaries of the research area.

Figure 7. Transaction data in Madurejo and Raja Subdistricts

Source: Google Maps

Based on a survey conducted on commercial properties around HM Rafii Street, five rental data points and market property values were collected in accordance with the minimum requirement to calculate the Gross Income Multiplier (GIM), resulting in the following data:

No	Property	Annual Rent Value	Property Value	GIM
1.	Data A	IDR 30.000.000,00	IDR 139.426.273,05	4,65
2.	Data B	IDR 30.000.000,00	IDR 121.997.988,92	4,07
3.	Data C	IDR 30.000.000,00	IDR 139.426.273,05	4,65
4.	Data D	IDR 25.000.000,00	IDR 139.426.273,05	5,58
5.	Data E	IDR 30.000.000,00	IDR 243.995.977,83	8,13
Average GIM				5,41

Meanwhile, the estimated Gross Income Multiplier (GIM) for properties around Pangeran Antasari Street, based on available data, was calculated as follows:

No	Property	Annual Rent Value	Property Value	GIM
1.	Data F	IDR 40.000.000,00	IDR 319.081.345,00	7,98
2.	Data G	IDR 50.000.000,00	IDR 319.081.345,00	6,38
3.	Data H	IDR 45.000.000,00	IDR 319.081.345,00	7,09
4.	Data I	IDR 45.000.000,00	IDR 319.081.345,00	7,09
5.	Data J	IDR 25.000.000,00	IDR 212.720.896,67	8,51
Average GIM				7,41

Based on the GIM (Gross Income Multiplier) calculations for HM Rafii Street and Pangeran Antasari Street, the following conclusions can be drawn:

a. Urban Area Characteristics

Pangeran Antasari Street exhibits a strong dominance of commercial functions. The presence of retail stores, service providers, and high levels of commercial activity establishes this area as a hub of economic circulation for the local population. This character forms a dynamic, competitive, and market-responsive primary commercial CBD.

In contrast, HM Rafii Street displays a more administrative and institutional character. Although some economic activities are present, the dominance of governmental functions renders the area less responsive to market dynamics and limits its economic rental capacity. This makes the area more suitable as a secondary CBD that supports the city's institutional structure.

b. Investment Efficiency

From an investment efficiency perspective, the Pangeran Antasari area is more favorable for property investors. With an average GIM of 7.41, investors can potentially recover their capital within approximately 7 years—significantly faster than the HM Rafii area, which requires over 9 years with a GIM of 5.41.

This efficiency reflects not only market strength but also indicates that capital allocation in the commercial area is more productive than in the governmental zone. This becomes a key consideration in urban development strategies that rely on private investment and area revitalization.

c. Future Risk Potential

Although the commercial area offers higher efficiency, it also carries greater risks. Its dependence on market dynamics makes areas like Pangeran Antasari more vulnerable to economic fluctuations, shifting business trends, and the impacts of digitalization, which may reduce future demand for physical rental spaces.

Conversely, institutionally-based areas like HM Rafii Street tend to be more stable, as demand for space is driven by relatively constant governmental needs. However, this stability may

come at the cost of lower profitability and stagnant economic growth if not supported by complementary functions.

Based on GIM analysis, Pangeran Antasari Street demonstrates greater dominance as the primary Central Business District in Pangkalan Bun due to its higher property economic efficiency. However, this dominance must be accompanied by long-term risk management strategies, particularly concerning market dynamics and the need for spatial adaptation.Meanwhile, HM Rafii Street continues to play an essential role as a supporting CBD that strengthens urban governance structure. The combination of both areas forms a complementary dual-CBD configuration that balances administrative and market-oriented economic functions.

CONCLUSION

Based on the analysis of the Central Business District (CBD) areas in Pangkalan Bun City using the Gross Income Multiplier (GIM) and the Government-assessed Property Value (NJOP), the following conclusions can be drawn:

1. The area influenced by commercial activities—namely Pangeran Antasari Street and its surroundings—shows an average GIM of 7.41 and a peak land NJOP of IDR 3.745.000,00/m². These figures indicate high land-use economic efficiency and strong market activity intensity. This condition aligns with the characteristics of a CBD described in the Concentric Zone Model by Ernest W. Burgess (1925), where the urban core is composed of concentric rings with the central commercial zone occupying the innermost and most valuable area due to its accessibility and competition in land use.

2. The area influenced by governmental activities, such as HM Rafii Street and its surroundings, has a lower average GIM of 5.41 and more varied and generally lower land NJOP values (ranging from IDR 243.000,00 to IDR 1.274.000,00/m²). This suggests that the area's economic intensity is lower and its dominant function is administrative rather than commercial. This spatial pattern is aptly described by Homer Hoyt's Sector Theory (1939), which proposes that urban development is not only concentric but also sectoral, extending along specific corridors or access routes, including government sectors.

3. These findings are also consistent with Central Place Theory by Walter Christaller (1933), which explains that economic activity centers form a hierarchy and spatial structure based on service functions. The commercial area (Antasari) occupies the highest hierarchical level as the primary service center in the city, while the governmental area functions as a complementary structure that is not economically dominant.

4. When analyzed through the lens of Location Theory by Johann Heinrich von Thünen (1826), it becomes evident that the commercial area, being closer to the core of economic interaction, possesses higher land values due to its greater income-generating potential. According to von Thünen's Bid Rent Theory (as interpreted by Hall, 2002), locations with the best access to the market center will command the highest land values. This is reflected in the high NJOP and GIM values observed in Pangeran Antasari Street and its vicinity.

5. These findings also reinforce the principles of Land Value Theory as proposed by David Ricardo (1817) and William Alonso (1964), which state that land value is determined by the income potential derived from its use. With higher GIM and NJOP values in the commercial zone, it can be concluded that this area offers greater revenue potential compared to the government zone, thereby supporting higher land values and reflecting greater economic location efficiency (Alonso, 1964; Ricardo, 1817).

6. Overall, the results of this study indicate that the dominant CBD in Pangkalan Bun City is the commercial area (Pangeran Antasari Street and surroundings), while the governmental area (HM Rafii Street) functions as a secondary CBD with a more administrative character. This

reflects the functional and sectoral evolution of the city's spatial structure, in line with classical urban theory models.

The findings of this research, which indicate that the CBD area influenced by commercial activities along Pangeran Antasari Street is economically more dominant than the government-affected area along HM Rafii Street, align with and reinforce the outcomes of various prior studies conducted at both national and international levels.

1. The study by Amarrohman et al. (2023) in Simpang Lima, Semarang, confirmed that proximity to the CBD positively affects land value, especially when supported by commercial facilities and infrastructure such as wide roads and shopping centers. Similarly, this study also observed that higher NJOP and Gross Income Multiplier (GIM) values in the Pangeran Antasari area correlate with a higher concentration of commercial and service activities, demonstrating the economic pull of commercial CBDs.

2. Jia et al. (2020) highlighted that the closer a residential area is to the CBD, the higher the rental and purchase prices—findings that parallel the higher property values recorded in the Pangeran Antasari zone. This correlation further supports Von Thünen's and Losch's location theories, which were also validated by Pratama (2016) and Safitri (2016), who showed that distance from the CBD significantly impacts land value in Solo Baru and Surabaya, respectively.

3. Hladkyi (2021) emphasized the role of CBDs in enhancing profitability and competitiveness of the service sector, especially in urban cores. This reinforces the idea that Pangeran Antasari Street, with its higher economic density, offers long-term potential for commercial and service-oriented investments.

4. Batubara et al. (2019) and Nainggolan (2013) employed multivariable regression and centrality index methods to show that land value and economic potential are significantly impacted by proximity to infrastructure and economic hubs, echoing the pattern observed in Pangkalan Bun's commercial CBD.

5. Tarigan et al. (2020) in their study of CBD Polonia in Medan identified that accessibility, infrastructure, and land use significantly influence CBD development. The stronger commercial dynamics along Pangeran Antasari Street in the present study may indicate a more favorable mix of these variables, compared to the more government-oriented and residentially inclined HM Rafii area.

6. Methodological innovation from Yu, Ai, and Shao (2015) in determining CBD boundaries using network-based Kernel Density Estimation could be explored in future studies of Pangkalan Bun to provide more precise spatial delineation of its economic centers.

7. In sum, the findings of this research are consistent with the broader literature on CBD analysis, particularly in confirming that commercial influence, proximity to economic activities, and infrastructure access play crucial roles in defining the dominance and potential of an urban zone.

For future development of Pangkalan Bun City, this research have some suggestions:

1. For Local Government

It is recommended that the Government of West Kotawaringin Regency consider the findings of this study in the formulation of spatial planning and regional development policies. Pangeran Antasari Street and its surrounding areas, which have demonstrated stronger economic dominance based on GIM and land NJOP indicators, should be guided and facilitated as the city's primary CBD. Meanwhile, HM Rafii Street and its vicinity should be maintained as the governmental center, with more efficient spatial management to ensure a balanced urban structure.

2. For Investors and Business Actors
This study reveals that the commercial center area offers a higher rate of return on investment. Therefore, this area should be prioritized for commercial and property development, while also considering infrastructure capacity and compliance with existing spatial regulations.

3. For Academics and Future Researchers
This research opens opportunities for further in-depth studies, such as spatial analysis using urban geography approaches or integration with historical data to understand temporal trends in land value and rental patterns. Additionally, the use of technologies such as Geographic Information Systems (GIS) can enhance the validity and visualization of research findings within a broader contextual framework.

4. For Urban Planners and Spatial Policy Makers
An adaptive and data-driven spatial planning strategy is required, taking into account land-use efficiency, accessibility, and the dominant functions of urban areas. The findings of this study can serve as a foundation for developing functional zoning, designing incentives for land intensification in dominant CBD areas, and maintaining the synergy between economic functions and public services across the urban landscape.

RESEARCH LIMITATION

This study is limited to the use of two economic indicators—Gross Income Multiplier (GIM) and Government-assessed Property Value (NJOP)—without extensive consideration of social, transportation, or environmental factors. Consequently, the findings may not capture the full complexity of CBD dynamics. The views expressed are solely those of the author and do not represent the official position of any affiliated institution.

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