

Illegal Parking Control Strategy to Improve Sustainable Management of Urban Areas

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Abstract: Illegal parking in Sidenreng Rappang Regency has significant implications for spatial planning, traffic management, and public space utilization, negatively affecting the quality of life, accessibility, and local businesses. This study investigates strategic solutions to address this issue using a qualitative approach, incorporating in-depth interviews, focus group discussions, field observations, and document analysis. Data were analyzed using the SWOT framework and NVivo software, revealing that weak regulatory enforcement and inadequate infrastructure are the primary drivers of illegal parking. However, opportunities exist in the form of smart parking technologies, public-private partnerships, and sustainable urban development initiatives. The novelty of this study lies in its integration of qualitative analysis with advanced digital tools, such as NVivo software, to provide a structured, data-driven approach to addressing governance challenges in urban mobility. This combination enables a more nuanced understanding of the problem and facilitates the development of targeted, evidence-based solutions. Additionally, the study introduces innovative strategies, such as the integration of digital technologies (e.g., CCTV and mobile parking applications) and the promotion of public-private partnerships, to create sustainable parking management systems. The study proposes actionable strategies, including strengthening regulatory enforcement, expanding parking infrastructure, integrating digital technologies, and launching public awareness campaigns. This research contributes valuable insights to urban planning and governance literature, providing a potential model for other regions facing similar challenges. It underscores the importance of integrating technological advancements and community engagement in creating effective, long-term solutions to urban mobility issues, ultimately enhancing the quality of life and economic vitality in affected areas. The novelty of this approach combining qualitative methods with digital tools and innovative strategies positions it as a pioneering effort in addressing illegal parking and urban governance challenges.

Keywords: *Parking; Strategy; Sustainable management; Urban area*

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INTRODUCTION

Basically, to deal with social problems and population growth with its various demands, improvements are needed in the management of the city system to be more planned and integrated. To overcome social problems and manage population growth effectively, as well as various demands from the community, improvements are needed in the city management system. An integrated and well-planned city management approach is essential to meet the needs of the

ever-growing urban community. As Rusnaldi stated, the ultimate goal of city management is to ensure that government officials provide services in an integrated and coordinated manner so as to improve the quality of life of all citizens. This approach not only makes services more efficient but also ensures that city infrastructure meets modern requirements for sustainability and livability (Rusnaldi, 2022).

One important strategy for improving urban management lies in effective spatial planning, which seeks to create a balanced and harmonious relationship between urban space and the population it serves. One way to improve the urban management system is to implement spatial planning. Law Number 26 of 2007 concerning Spatial Planning emphasizes that spatial planning must be based on nine guiding principles, with one very important principle focusing on harmony, alignment, and balance (Isminingtias, 2017). In this principle, it is explained that spatial planning is carried out by realizing harmony between spatial structure and spatial patterns, harmony between human life and the environment, and balance of growth and development between regions and between urban areas and rural areas. According to this principle, spatial planning should be conducted in a way that establishes a symbiotic relationship between spatial structure (such as land allocation) and spatial patterns (the ways these spaces are utilized). Furthermore, this principle emphasizes the need for a balance between human activities and environmental conservation and encourages equitable growth in urban and rural areas. In essence, this principle recommends a complementary spatial management approach, namely that spaces are designed to complement each other so that there is no redundancy and overlap between zones. Thus, spatial planning must be implemented in a complementary manner, namely that spaces must complement each other and synergize with each other so that there is no overlap between regions.

The government's inadequate efforts in spatial management, especially to provide safe, comfortable, and smooth public transportation, coupled with the increasingly high mobility needs of society, encourage people to use private vehicles. A significant challenge in spatial management, particularly in urban areas, arises from the government's inadequate efforts to establish safe, convenient, and efficient public transportation options (Mercier et al., 2019). Along with the increasing number of urban residents and the demand for mobility, more and more people are interested in using private vehicles because they are considered more flexible, affordable, and comfortable. Private vehicles, which are often considered fashionable and affordable, seem to be able to meet individual transportation needs; however, private vehicles have unintended consequences. Data from the BPS of Sidenreng Rappang Regency shows that the number of motorized vehicles has increased significantly. In 2021, it was 141, 992, 573, and it increased to 148, 261, 817 the following year. Private vehicles, often seen as fashionable and affordable, appear to fulfill individual transportation needs; however, they bring unintended consequences. The reliance on private vehicles contributes to congestion, a growing need for parking spaces, and an increased carbon footprint. When people choose private transport over public options, urban areas face exacerbated traffic conditions, and public spaces become reallocated to parking lots, creating a cycle that undermines public space utilization and urban functionality (Vasudevan et al., 2021).

Therefore, public space is used as parking space to minimize this problem. However, this is not in accordance with Sustainable Development Goal Number 11, which integrates parking management strategies to help create sustainable cities by reducing traffic congestion and carbon emissions and creating more comfortable spaces for city residents. This issue contradicts the objectives of Sustainable Development Goal (SDG) 11, which advocates for creating inclusive, safe, resilient, and sustainable cities. SDG 11 includes integrated parking management as a strategy to reduce urban congestion and carbon emissions and promote more livable spaces for residents (Faridha et al., 2024). In contrast, the conversion of public spaces into makeshift parking areas only worsens traffic conditions and violates the intended purpose of public spaces. Ideally, urban planning and management should ensure public spaces are used for communal benefit, providing residents with areas for recreation, socialization, and relaxation. Parking on public lands often leads to irregularities, where rules regarding parking zones are disregarded, creating congestion hotspots and diminishing the quality of shared spaces (Jioudi et al., 2019).

The use of public space as a parking lot actually exacerbates the problem of traffic jams because the public space used does not comply with existing regulations. In Indonesia, the Road Traffic and Transportation Law, specifically Article 43, paragraphs 1 and 2, restricts parking to

designated spaces away from public roads, of the Road Traffic and Transportation Law regulates that parking may only be carried out outside permitted roads (Albalate & Fageda, 2019). Yet, rapid urbanization has resulted in a growing discrepancy between societal needs and available infrastructure. In many regions, including SidenrengRappang Regency, a visible increase in illegal parking has arisen from a lack of adequate transport facilities and infrastructure coupled with a high reliance on private vehicles. This situation reflects a broader trend of regulatory challenges, where rapid development often outpaces the implementation of infrastructure solutions, such as designated parking areas or expanded public transit networks.

To address these pressing issues, a comprehensive urban planning policy and sustainable transportation strategy are needed. Investment in public transportation infrastructure, development of multimodal transportation systems, and strict enforcement of parking regulations are important steps to align urban growth with sustainable urban planning principles (Risimati et al., 2021). Furthermore, public awareness campaigns could help shift cultural attitudes toward embracing public transportation options over private vehicles. A holistic approach that combines policy, infrastructure, and community engagement will be pivotal in creating urban spaces that are sustainable, accessible, and aligned with long-term development goals (Norrman et al., 2016). Meanwhile, in reality, the rapid development currently occurring in society is not being balanced by adequate transportation facilities and infrastructure, resulting in the phenomenon of illegal parking in SidenrengRappang Regency, which can be seen in the following picture. Furthermore, the specific focus on SidenrengRappang Regency has unique characteristics compared to previous studies on large urban areas. The rapid development that is currently occurring in society is not balanced by adequate transportation facilities and infrastructure, so the phenomenon of illegal parking has emerged in SidenrengRappang Regency, as seen in the following figure.



Figure 1. Illegal parking on the road at SidenrengRappang Regency

Source: Observation results

Illegal parking that occurs, of course, hurts land use, so it must be responded to quickly and appropriately. Robson said that the strategy analysis theory used includes three factors: environment, value, targets, and resources (Gürel, 2017). Meanwhile, Previous studies have adopted technology in the form of CCTV and application-based parking systems to overcome illegal parking. Controlling illegal parking should be carried out persuasively and more actively by district or city governments by seeking prevention in the form of wise and firm strategies and steps (Parwata et al., 2021). The Organizational strategy must be directed at utilizing opportunities and preventing threats to the environment to overcome parking violations. Then, the environmental factors can be seen from security and accessibility, where the environmental theory used is the unity of space (Imran, 2016).

The issue of illegal parking presents a significant challenge that negatively impacts land use, necessitating an urgent and effective response (Ige, 2021). The detrimental effects of illegal parking extend beyond mere inconvenience; they disrupt traffic flow, contribute to congestion, and often compromise public safety. To address this issue comprehensively, district and city governments must adopt a proactive approach that emphasizes both prevention and enforcement (He & Hultman, 2021). The negative impacts of illegal parking are not only disturbing comfort but also disrupting traffic flow, causing congestion, and often endangering public safety. To address this problem comprehensively, district and city governments must take a proactive approach that emphasizes prevention and law enforcement. This approach includes not only handling the symptoms of illegal parking but also implementing strategic steps to address the root of the problem. Effective control of illegal parking should be conducted persuasively and actively, leveraging community engagement and public awareness to encourage responsible parking behaviors among residents and visitors.

To formulate an effective parking management strategy, it is essential to analyze the relevant factors that influence parking behaviors (Piccioni et al., 2019). Utilizing the strategy analysis theory, which encompasses environmental conditions, community values, target demographics, and available resources, can provide a comprehensive framework for developing solutions. Environmental factors such as security and accessibility play a critical role in shaping parking behaviors (Bivina et al., 2019). For instance, if legal parking options are perceived as unsafe or inconvenient, drivers may be more inclined to resort to illegal parking. Therefore, a unified approach to spatial management that prioritizes safety and accessibility is crucial. This may include enhancing lighting in parking areas, improving signage, and ensuring that legal parking spaces are conveniently located to encourage compliance.

Given the urgent need for a strategic response to the illegal parking crisis, a study entitled "Illegal Parking Control Strategies to Improve Sustainable Regional Governance" was prepared. This study aims to identify and propose effective control measures that not only reduce the problem of illegal parking but also contribute to broader and sustainable regional governance goals. This study distinguishes itself through its focus on a semi-urban context, a multidimensional approach with SWOT and NVivo analysis, and the integration of technology and stakeholder collaboration. In addition, its relevance to sustainable development goals makes this study relevant for managing illegal parking that is not only efficient but also sustainable. This approach provides new insights and practical solutions that can be applied to areas with similar characteristics. By reviewing case studies, best practices, and stakeholder perspectives, this study seeks to offer practical recommendations that can be implemented by local governments. Ultimately, the goal is to create a balanced and functional urban environment that supports responsible land use while improving the quality of life of residents and supporting the local economy (Wang et al., 2016). Through this strategic approach, SidenrengRappang Regency can move towards a more organized and sustainable urban landscape, reducing the prevalence of illegal parking and its associated negative impacts.

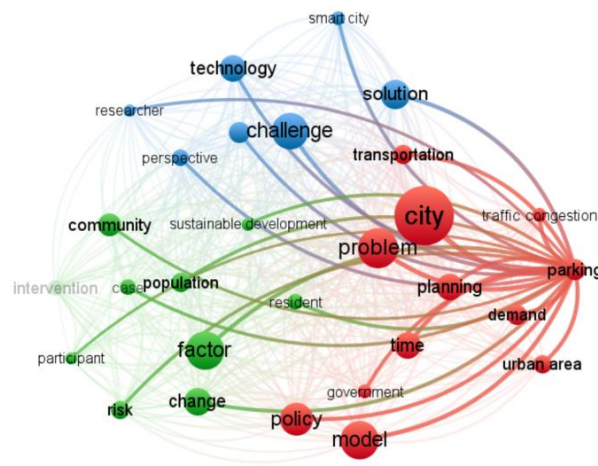


Figure 2. Current Status of VOSViewer

The image illustrates the interconnections between various factors that play a role in the strategy for controlling illegal parking to improve the sustainable management of urban areas. In the context of the research titled *Illegal Parking Control Strategy to Improve Sustainable Management of Urban Areas*, this visualization highlights the relationships between the main problems, potential solutions, and influencing factors in managing illegal parking. In the graph, *city*, and *problem* appear as dominant elements with multiple connections to other aspects, indicating that illegal parking is part of a broader urban issue. *Parking* is one of the key concepts linked to challenges such as *traffic congestion*, *demand*, and *metropolitan areas*, suggesting that illegal parking contributes to traffic congestion and the increasing demand for parking spaces in cities. From a solution perspective, the concepts of *technology*, *challenge*, and *solution*, represented in blue, suggest that technology can be an effective strategy for controlling illegal parking.

Terms such as *smart city* and *transportation* indicate that technology-based solutions, such as smart parking systems and improved transportation policies, can help mitigate the negative impacts of illegal parking. Additionally, *policy* and *models*, which are connected to *planning* and social factors like *community* and *population*, emphasize the importance of regulations and community involvement in developing sustainable solutions. Thus, the image demonstrates that controlling illegal parking is not solely dependent on government policies but also requires a technology-driven approach, community engagement, and a comprehensive understanding of the factors influencing urban parking issues. Sustainable management must take all these aspects into account to create long-term and effective solutions for urban areas.

RESEARCH METHOD

This research employed a qualitative approach, focusing on understanding and determining effective strategies for controlling the illegal parking phenomenon in SidenrengRappang Regency. By engaging multiple stakeholders—namely the government, community members, and business owners—as both objects and subjects of the research, the study aims to capture a comprehensive view of the issue. This participatory approach not only facilitated the collection of diverse perspectives but also fostered collaboration among stakeholders, which was essential for developing effective solutions to the problem of illegal parking.

This study used a qualitative research type with a comprehensive approach that integrates primary and secondary data, involving in-depth interviews, FGDs, field observations, and document analysis. This study lasted for 6 months since January 2024. It involved various stakeholders, namely the government (Transportation Agency, Spatial Planning Agency, and officers who have direct responsibility for parking and public space management), community members, and business owners, both as objects and subjects of research selected based on their roles, understanding, and those affected by illegal parking. This study aims to obtain a comprehensive view of the problem. This participatory approach not only facilitated the collection of various perspectives but also encouraged collaboration between stakeholders, which was very

important to develop effective solutions to the problem of illegal parking. This study used data triangulation from three stakeholder groups (government, community, and business actors), then continued with member checking to validate the results of the SWOT analysis through follow-up interviews or group discussions.

Government involvement is critical, as they are responsible for enforcing parking regulations and developing city planning policies. Their insights into existing regulations, challenges in enforcement, and potential areas for improvement will inform the development of more effective strategies (Blanc & Faure, 2020). Community members, on the other hand, can provide valuable feedback on how illegal parking affects their daily lives, including the impacts on safety, accessibility, and overall quality of life. Their experiences and suggestions can highlight practical solutions that resonate with the needs of residents. Business owners, as key stakeholders, can share how illegal parking affects customer access and business operations, offering a unique perspective on the economic ramifications of the issue. To systematically analyze the collected data, the research employed SWOT analysis, which assessed the strengths, weaknesses, opportunities, and threats related to illegal parking in the region (Benzaghta et al., 2021). This analytical tool provided a structured framework for evaluating both internal and external factors that contribute to the illegal parking phenomenon. By identifying strengths, such as existing community awareness initiatives or government resources, and weaknesses, such as insufficient enforcement mechanisms or public resistance to regulation, the research could outline a comprehensive view of the current landscape.

Additionally, the use of NVivo qualitative data analysis software enhances the organization and interpretation of research data. NVivo allows for a structured and sequential analysis, enabling researchers to categorize and code responses efficiently (Feng & Behar-Horenstein, 2019). This software facilitates the identification of patterns, themes, and correlations within the qualitative data, thereby enriching the analysis process. By synthesizing insights from various stakeholders and employing robust analytical tools, this research aims to produce actionable strategies for controlling illegal parking in SidenrengRappang Regency, ultimately contributing to improved urban management and sustainable governance in the area.

RESULTS AND DISCUSSION

The analysis of interview results processed with NVivo software reveals that illegal parking in SidenrengRappang Regency has a complex and varied impact on different stakeholders, especially the local government, community members, and business owners. This phenomenon highlights both positive and negative aspects of unregulated parking activities, which are categorized in the NVivo Crosstab Query into strengths, weaknesses, threats, and opportunities. The analysis reveals that while illegal parking poses significant challenges, it also creates unexpected advantages, particularly for the government, which perceives this issue as comprising 53.33% strengths, 26.27% weaknesses, 13.33% threats, and 6.67% opportunities. The government's perception of illegal parking as largely beneficial, with strengths comprising more than half of the impact (53.33%), underscores a unique aspect of this issue. Illegal parking, although not formally recognized or regulated, has inadvertently become a source of revenue for the region. In practical terms, the presence of unauthorized parking spots creates opportunities for informal fee collection, where individuals or groups may charge parking fees on these illegal spaces. Although these fees are not officially sanctioned or documented within formal fiscal reports, they still contribute to the local economy (Mahlangu et al., 2022). This informal income, generated outside established revenue channels, adds to the region's original regional income (PAD). If properly managed or formalized, the government could channel this revenue toward public services or urban infrastructure improvements, potentially turning an informal system into a controlled, beneficial revenue stream.

However, the informal nature of this income also brings complexities. While it appears advantageous, the government's reliance on unauthorized parking fees can pose ethical and regulatory challenges (Naing et al., 2020). If this revenue is to be utilized sustainably, the government would need to implement strict policies to ensure that fees are collected and distributed through legal channels, promoting transparency and accountability. Additionally, formalizing these parking fees could provide financial relief for the local budget, possibly reducing

the need to allocate funds from other sources for urban development projects (Minelli, 2023). However, this would require changes to parking regulations, enforcement mechanisms, and transparent monitoring to prevent corruption and ensure that revenue from parking fees benefits the community directly. The analysis also highlights that 26.27% of the government's perception of illegal parking relates to weaknesses, reflecting the operational and structural challenges it brings to the region. Illegal parking indicates an evident gap in urban planning and enforcement. The government's struggle to regulate parking activities suggests that existing policies and resources are insufficient to meet the demands of a growing population and increased vehicle ownership (Cohen, 2023). The prevalence of unauthorized parking reflects limitations in current infrastructure, including a lack of designated parking spaces, ineffective public transportation options, and inadequate enforcement. Addressing these weaknesses would require investment in public infrastructure, strategic urban planning, and enhanced regulatory frameworks to manage parking more effectively (Malekpour et al., 2015). Beyond weaknesses, the analysis shows that the government views illegal parking as a threat, making up 13.33% of its perception. This perceived threat underscores concerns about the long-term consequences of unregulated parking on urban order and environmental sustainability. Unauthorized parking contributes to increased traffic congestion, disrupts urban aesthetics, and may discourage tourism and economic growth. Additionally, unregulated parking may lead to further encroachment of public spaces, impacting green areas and recreational zones essential for community well-being (Larson et al., 2020). The government must weigh these threats against any potential short-term benefits and address them through integrated policies that encourage sustainable urban development (Stead, 2016).

Lastly, the analysis identifies a small but notable 6.67% perception of opportunities associated with illegal parking. While limited, these opportunities suggest that the government may view the phenomenon as a chance to reform and strengthen its parking management system. For instance, the government could use this issue as an impetus to establish designated parking zones, develop partnerships with private parking services, or create incentives for public transportation use (Shen et al., 2021). Such reforms could help turn illegal parking from a problem into an organized, revenue-generating activity that aligns with sustainable development goals. By adopting technology for monitoring and regulating parking, the government can also reduce administrative burdens and improve efficiency, potentially creating a model that other regions facing similar issues could replicate (Farooqi et al., 2019). In summary, the multidimensional impacts of illegal parking in SidenrengRappang Regency highlight both challenges and potential advantages for the local government. While the revenue generated through informal parking fees provides a fiscal advantage, the government must address the systemic weaknesses and threats associated with unregulated parking to achieve a balanced urban management approach (Sprei et al., 2019).

Discussion

The community in SidenrengRappang Regency is the second most affected group by the illegal parking phenomenon, experiencing both minor benefits and considerable disadvantages. According to the Crosstab Query analysis conducted through NVivo, the community's perspective on illegal parking comprises 20% strengths, 20% weaknesses, 60% threats, and 0% opportunities. This breakdown indicates that, while there is a small positive aspect to illegal parking, the negative impacts overwhelmingly outweigh any perceived benefits. The 20% strength attributed to the community's perspective reflects one main advantage: easier parking access. Illegal parking provides convenience for individuals who seek to park quickly and closely to their destinations, especially in areas lacking sufficient formal parking spaces. This convenience reduces the time spent looking for legal parking options and may even decrease parking costs for drivers, as informal parking tends to be cheaper than regulated spaces. For community members who frequently drive, this easy access represents a noticeable improvement in their daily routines, offering a practical solution to the challenge of limited parking infrastructure in high-traffic areas (Zhang, 2017). However, this benefit of easy access must be considered within a broader context of urban functionality and public welfare. Despite the immediate convenience illegal parking offers, the unregulated nature of these parking areas creates a series of long-term issues. Firstly, unauthorized parking leads to increased traffic congestion, as vehicles parked in non-designated areas can obstruct roadways, narrow traffic lanes, and disrupt the flow of vehicles. This congestion impacts both drivers and pedestrians, slowing down travel times, raising accident risks, and

creating frustration among community members (Huang et al., 2018). The frequent obstruction of sidewalks and public spaces compromises pedestrian safety, particularly for vulnerable groups such as children, the elderly, and people with disabilities, who may find navigating these areas increasingly challenging. Moreover, illegal parking significantly contributes to environmental issues, most notably through air pollution. As traffic congestion rises due to unauthorized parking, vehicles spend more time idling or moving at slower speeds, which results in higher emissions of harmful pollutants (Alobaidi et al., 2020). This worsens air quality in densely populated areas, potentially affecting residents' health, particularly those with respiratory conditions such as asthma. The increased emissions from congested traffic also contribute to the urban heat island effect, which elevates temperatures in city centers. For a community aiming for sustainable development, these environmental consequences are concerning, as they undermine public health and contribute to broader climate-related challenges.

The presence of weaknesses, which account for 20% of the community's perspective, highlights additional challenges associated with illegal parking. The lack of structured parking facilities reflects a gap in urban planning and infrastructure, demonstrating that the region's growth in vehicle ownership has outpaced the government's ability to manage parking effectively. This weakness indicates that the community must rely on makeshift parking solutions that do not meet formal standards or safety requirements. Without sufficient enforcement or development of alternative parking solutions, community members may feel compelled to use unauthorized parking spaces despite the associated risks. This lack of suitable alternatives reflects a governance issue that needs addressing to improve residents' quality of life. The analysis shows that 60% of the community's perspective is dominated by threats, underscoring the broader risks posed by unregulated parking activities. Illegal parking not only compromises traffic flow and safety but also impacts the livability and aesthetic appeal of urban areas. Public spaces designed to serve the community as recreational or social hubs may be repurposed for parking, diminishing the availability of green and communal spaces. This reallocation of public space reduces residents' access to leisure areas and limits the options for social interactions and outdoor activities, which are essential for mental well-being and community cohesion. Additionally, the lack of regulation around illegal parking may indirectly encourage the perception that city bylaws can be overlooked without significant consequences. This erosion of rule enforcement can have a cascading effect on other areas of urban management, potentially leading to a disregard for other public regulations (Gunarto et al., 2023). When community members see that illegal parking is tolerated, it may foster a culture where rules are ignored, further complicating efforts to maintain order and safety in public spaces. In conclusion, while illegal parking provides minor benefits to the community in terms of easy access, this positive aspect is overshadowed by numerous negative impacts, including increased congestion, environmental degradation, and a reduction in quality of life. Addressing these issues requires a collaborative approach between the government and community members to develop structured parking solutions, enhance public transportation options, and enforce parking regulations effectively. By prioritizing sustainable urban planning, the community can reduce the prevalence of illegal parking, improving both mobility and the urban environment for all residents.

Business owners in SidenrengRappang Regency face significant challenges due to the illegal parking phenomenon, bearing the brunt of its negative impact. The analysis from the NVivo Crosstab Query shows that business owners perceive illegal parking as a 100% threat with no identifiable strengths, opportunities, or advantages. This high percentage indicates that illegal parking does not contribute positively to the business environment in any way, instead introducing multiple barriers that can affect daily operations, customer access, and overall profitability. One of the primary issues business owners encounter is the obstruction of their storefronts and entrances. Due to the unregulated nature of illegal parking, vehicles often occupy spaces directly in front of businesses, blocking access points that customers would typically use to enter and exit. This situation significantly disrupts the flow of foot traffic and reduces the visibility of storefronts, which can deter potential customers from stopping by (Zoika et al., 2021). For many small businesses that rely on walk-in customers, reduced accessibility and visibility can directly impact sales, as passersby may opt for businesses that are more conveniently accessible. The transformation of storefront areas into makeshift parking lots also diminishes the aesthetic appeal of business districts. Unregulated and often chaotic parking arrangements can make commercial

areas appear cluttered and disorganized, which may lead to a negative perception of the business environment (Chubarova, 2020). Customers are more likely to be drawn to well-organized and visually appealing shopping districts where they feel comfortable and safe. In contrast, areas dominated by illegal parking may seem less welcoming, affecting not only individual businesses but the commercial appeal of the district as a whole.

Furthermore, illegal parking can disrupt planned commercial activities and events that businesses might organize to attract customers. For example, if business owners intend to host sales events, displays, or community gatherings in front of their stores, the presence of unauthorized vehicles can restrict the space available for these activities. This lack of control over their own property impedes their ability to enhance customer engagement and maximize sales opportunities. Such disruptions can hinder efforts to create a vibrant, community-centered shopping experience, which is vital for building customer loyalty and supporting local economic growth (Fitrianingrum & Cahyadi, 2020). The financial implications of illegal parking for business owners are also considerable. When vehicles occupy customer-access areas, businesses may lose customers who would otherwise make purchases. This loss of patronage can lead to reduced revenues, particularly for small businesses that rely heavily on daily customer turnover. Additionally, businesses affected by illegal parking may feel compelled to invest in solutions to deter unauthorized parking, such as hiring security personnel, installing signage, or requesting regular enforcement from local authorities. These efforts require additional expenses, which further strain the financial resources of business owners, especially small enterprises with limited budgets (Wong et al., 2018). Illegal parking also creates challenges in terms of safety and liability for businesses. When cars are parked haphazardly in front of stores, they may obstruct emergency exits or encroach on walkways, creating potential hazards for pedestrians. If accidents occur due to blocked pathways or improperly parked vehicles, business owners may face legal repercussions or have to cover the costs associated with property damage or personal injury. The threat of liability adds an additional layer of concern, as businesses must now contend not only with the inconvenience and revenue loss from illegal parking but also with potential legal and financial risks (Reessena & Jamba, 2022).

Moreover, illegal parking can have a compounding effect on the local economy by creating a negative cycle of reduced business activity and lower commercial investment. When business owners experience frequent disruptions and declining profits due to parking issues, they may be less inclined to reinvest in their businesses or expand their operations (Hanspal, 2016). This reduction in business growth can lead to a stagnation of the commercial environment, ultimately affecting employment opportunities, local tax revenue, and the economic vitality of the area. If illegal parking continues to affect businesses adversely, it could lead to a decline in property values and discourage new businesses from opening in the affected areas, further reducing the appeal of the business district. In summary, the illegal parking phenomenon in SidenrengRappang Regency poses a severe and multifaceted threat to business owners. The impact extends beyond mere inconvenience to encompass loss of revenue, aesthetic deterioration, safety risks, and potential legal liabilities (Sari et al., 2023). Addressing this issue would require concerted efforts from both local authorities and community stakeholders to implement strict parking regulations, provide designated parking zones, and improve enforcement. By tackling the problem of illegal parking, the community can create a more supportive environment for businesses, fostering a thriving commercial sector that benefits both entrepreneurs and residents alike.

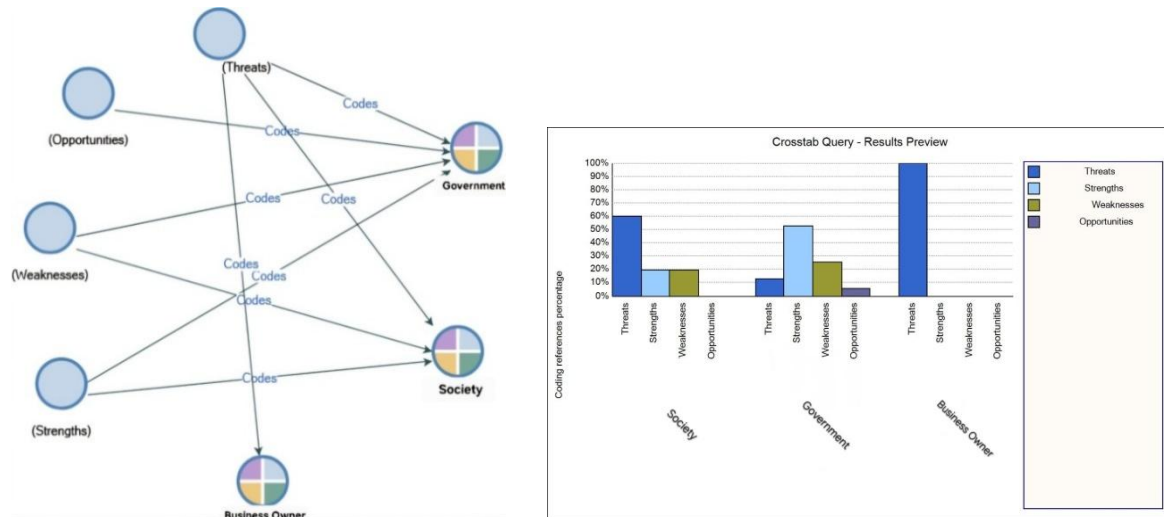


Figure 3. Project Map and Crosstab Query
Source: NVivo

Based on the results of this discussion, the following strategy is offered by considering aSWOT analysis to control illegal parking, which is still a problem in Sidenreng Rappang Regency to this day.

Table 1. The Strategy of Illegal Parking at SidenrengRappang Regency by SWOT Analysis Results

	Connection	Strategy
Strength + Opportunity	Leveraging technological regulatory support to optimize parking management and increase public awareness.	Using digital applications and CCTV for parking management
Strength + Challenge	Harnessing government capacity to address vehicle growth and protect public spaces	Improving government training and optimizing regulation-based spatial planning
Weaknesse + Opportunity	Addressing parking infrastructure with public-private partnerships	Developing public-private partnerships to build efficient parking lots
Weaknesses + Challenges	Reducing public space conflicts through law enforcement and strategic spatial design	Enforce strict rules and build parking infrastructure according to spatial planning

The table of SWOT analysis has described that the strategy for handling illegal parking in SidenrengRappang Regency can be carried out by optimizing regulatory and technological support, strengthening government capacity, and building public-private partnerships. To capitalize on strengths and opportunities, the use of digital applications and CCTV can improve parking management, while government training and regulation-based spatial planning can address vehicle growth. On the other hand, to overcome weaknesses and challenges, the necessary strategies include developing parking infrastructure through public-private partnerships and implementing strict regulations to reduce conflicts over the use of public space.

CONCLUSION

This research was limited to the semi-urban context and reveals that illegal parking in SidenrengRappang Regency has a significant impact on the community, government, and business actors. For the community, illegal parking causes congestion, misuses public space, and reduces pedestrian safety. Meanwhile, the government faces challenges in governance due to weak supervision, lack of parking infrastructure, and a crisis of public trust. However, the government also has the opportunity to utilize technology and public-private collaboration as solutions. Business actors are the parties most affected economically due to disrupted customer

access and decreased attractiveness of business areas. The study recommends strengthening regulations, building official parking infrastructure, adopting technology, and increasing public awareness to address this issue. Collaboration between government, society, and business actors is needed to create effective and sustainable governance.

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