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Identification of Important Issues in Aerotropolis Infrastructure Development: A Case Study of Yogyakarta International Airport

Raden Prabowo Yoga Pratama^{1*}, R. Rijanta², and Lutfi Muta'ali³

Faculty of Geography, Universitas Gajah Mada, Yogyakarta

Corresponding Author: Raden Prabowo Yoga Pratama prabowoyogapratama@gmail.com

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ABSTRACT

Yogyakarta International Airport (YIA) infrastructure development supports the aerotropolis concept, an airport designed to be an independent city with many business activities to provide sustainable benefits for the surrounding community. However, some sensitive issues regarding the development of YIA's aerotropolis infrastructure are found currently, which impacts the response and development of the community in the area. This research aims to identify important issues that have developed in the observed area due to the development of the airport's infrastructure. This is qualitative and explorative research, carried out by observation and literature study to identify the issues that occur. The USG method is used to determine important issues found in the observation area, which leads to the important issues that can be determined as priorities in the area. The results show that each region has one important issue in common, even though these regions have different regional characteristics. Important issues in each region around YIA's infrastructure are further discussed in this article. Important issues in each region around YIA's infrastructure are further discussed in this article

INTRODUCTION

An airport functions as a pivotal node within global transportation networks, facilitating the transfer of passengers and freight between diverse geographic locations. It embodies a complex infrastructure featuring runways, terminals, and logistical systems, essential for the efficient movement and connectivity of air traffic across regional and international geographic boundaries. Besides, airports have the potential to emerge as iconic landmarks for a region's tourism landscape. One of the new icons in the Special Region of Yogyakarta (DIY) is Yogyakarta International Airport (YIA) located in Kulon Progo Regency. This area is included in the southern coastal area of DIY, which is a strategic area for coastal development and management of marine products in DIY. In addition to expanding airport capacity in Yogyakarta, the YIA was constructed to address the transportation demands of southern Java, particularly Yogyakarta, southern, and southwest Central Java, while also catalyzing fostering economic growth in Yogyakarta. The integration of infrastructure planning around YIA aligns with an aerotropolis concept, bolstering regional development initiatives.

Adrian and Pradoto (2017) stated that aerotropolis might have a spread effect on the surrounding area of the airport and, thus, can escalate the economic growth of the community in the area. According to Rasyid (2016), the aerotropolis development strategy in Kulon Progo consists of three pillars, first, multimodal transportation that supports airport activities and connects activity centers; second, increasing regional competitiveness through increasing the industrial, trade and service sectors to support goods movement activities; and third, regional integration. An aerotropolis development concept that is suitable to be developed is using the concept of "integration-zoning through an arrangement of distributed growth centers".

Regional development, particularly in the vicinity of the airport, exhibits accelerated growth compared to surrounding areas (Kusumawati et al., 2016). Alfaresya (2018) and Rizal (2012) showed that there was an economic increase in income in

villages around the airport construction due to the growth in the number of businesses around the development project area. Additionally, as discussions center around the transformation of YIA into an aerotropolis, economic expansion in the vicinity will emerge from trade, tourism, and investment activities. An aerotropolis embodies a regional concept wherein infrastructure, land utilization, and economic activities pivot around the airport (Kasarda, 2015), thus, able to open new job opportunities, accelerate passenger, goods and service traffic, as well as have a domino effect in developing high economic growth, especially in the region of the south coast of DIY.

To achieve development that has a positive impact, Law No. 6 of 2014 concerning Villages (*UU No. 6 tentang Desa*) stipulates that the village government (kalurahan) must strengthen the socio-economy and community of its village. An outstanding issue that remains unresolved is the engagement of the village government in the planning process (Tindi, 2015). Nevertheless, sensitive issues persist concerning the development of aerotropolis infrastructure, influencing the response and progress of the surrounding community. This research aims to identify crucial concerns emerging in the vicinity of YIA attributed to airport infrastructure development.

METHODS

The village government (kalurahan) plays an important role in designing and implementing effective development strategies. In this case, it can serve as a catalyst for development and as a policy architect that fosters the growth of villages (Tindi, 2015). The village government also has an important role in creating an environment to empowers village communities, by providing assistance, spreading positive messages as well as helping to foster autonomy and creativity among rural populations (Sinambela, 2017).

Regarding the delineation of airport infrastructure development within the YIA aerotropolis area, research was carried out in four sub-districts within Kepawonan (sub-district) Temon, Kulon Progo Regency. The research

encompasses Sindutan, Palihan, Glagah, and Kebonrejo subdistricts (Figure 1).

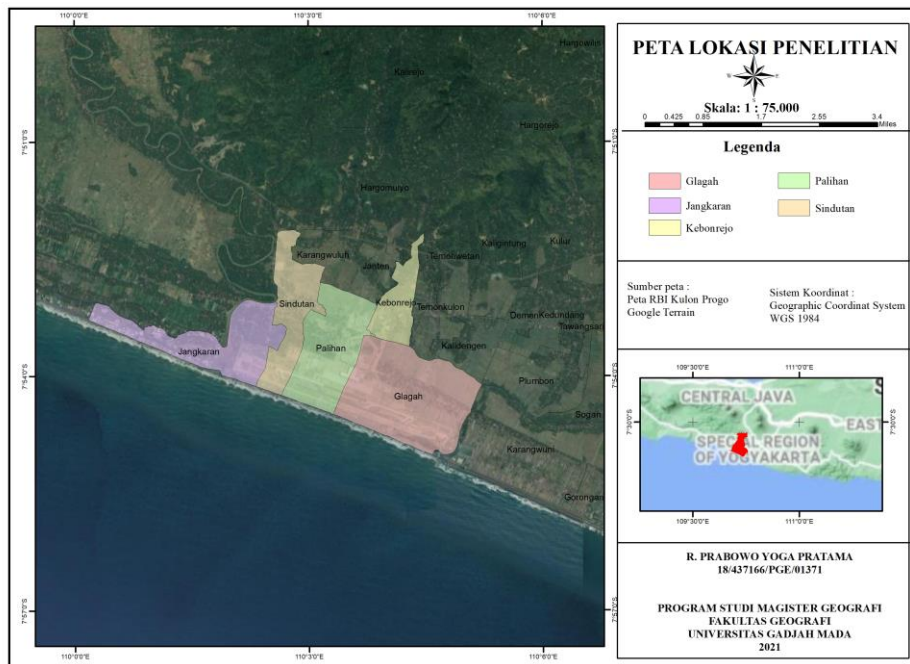


Figure 1. Map of Research Objects

The research conducted in this paper is qualitative and exploratory, allowing for an open-ended approach. This type of research focuses on concept development and gathering factual information. Qualitative research aims to comprehensively understand phenomena experienced by research subjects by describing them in words and language within a specific, natural context, utilizing diverse natural methods (Moleong, 2009). The purposive sampling technique was also used to determine specific considerations or criteria essential for this study. Key informants, considered influential in village development planning, were chosen. The study comprised 20 respondents, constituting Team 11, a team responsible for formulating the Village Medium-Term Development Plan (RPJMDes), representing various areas under investigation. Based on Law no. 6 of 2014 concerning Villages and Minister of Home Affairs Regulation no. 114 of 2014 concerning Village Development Guidelines, Team 11 consists of: 1) Village head (lurah); 2) Sub-district secretary (carik); 3) Community empowerment organization (*Lembaga Pemberdayaan Masyarakat Kelurahan*, LPMK); and 4) Members, including village officials, community empowerment institutions, village

community empowerment cadres, and community elements.

RESULTS AND DISCUSSION

Based on a review of the Kulonprogo Regent's Regulation No. 10 of 2016 concerning spatial planning for the relocation of residents affected by the new airport, the government has designated the Temon District as the relocation area. Palihan Subdistrict is the subdistrict with the largest area affected by the airport relocation, totaling 67,461 m² (44%), followed by Glagah Subdistrict with an area of 58,780 m² (38%), Sindutan Subdistrict with an area of 18,100 m² (12%) and the smallest impact is Kebonrejo Subdistrict with an area 10,380 m² (7%). The scale of relocation within sub-districts directly impacts the number of residents who will inhabit new dwellings and engage in different types of employment. This shift is a result of the transformation of residents' agricultural land into airport infrastructure and its associated facilities.

YIA Infrastructure Development Issues

Workforce Reduction

The issue of employee layoffs was one of the issues heard from the end of 2021 to the beginning of 2022. Angkasa Pura management, as the YIA airport manager, had to downsize its workforce due to significant losses incurred as a result of the COVID-19 pandemic. The YIA airport's revenue has only reached 10% of the annual target, exacerbating the challenges, particularly in 2021, where the number of passengers is projected to be no more than 1.2 million (Agus, 2021). In addition, Angkasa Pura is presently conducting an assessment of employees whose contracts are set to expire on December 31, 2021. Workforce reductions are affecting employees from various areas surrounding the airport, including Sindutan Village, Palihan Village, Glagah Village, and Kebonrejo Village. Discussions on this matter will persist through the end of 2022, involving sub-district and airport authorities.

The Increase in the Number of Newcomers

The heightened economic activity in the vicinity of YIA contributes to a rise in the influx of immigrants to the area. Rizal, (2012) reported the social impacts resulting from the construction of YIA airport. The rapid development of development around YIA airport needs to be balanced with social development. The digitalization gaps in public services, particularly in information and communication technology, pose challenges for the communities residing around airports to adapt and compensate. The development of YIA has the potential to attract numerous immigrants from other regions seeking opportunities within the vicinity of the airport.

Flood

The problem of flooding around YIA airport is one of the consequences stemming from the airport construction project. The flooding occurred due to incomplete infrastructure for flood prevention. During the construction phase, the river narrowed, exacerbating the situation. Zebua (2022) reported that the flood in Kulon Progo in October 2022 was the worst flood experienced by residents around Kebonrejo Village.

Rise in Tax Object Selling Value (Nilai Jual Objek Pajak, NJOP)

Padmaratri (2020) reported that NJOP in Kulon Progo Regency increased by 600%. This issue was confirmed by the Kulonprogo Regency Government through the Regional Finance and Assets Agency (BKAD), but not all regions encountered this rise.

Investment Fraud

The significant occurrence of investment fraud in multiple sub-districts affected by YIA airport infrastructure is attributed to the limited investment knowledge among the victims. The perpetrators target groups receiving compensation for land acquired by the airport, recognizing that these potential victims possess substantial sums of money.

Increase in Unemployment

According to Putsanra (2020), there has been a surge in unemployment in the vicinity surrounding YIA. The majority of affected individuals struggle to secure employment due to their previous roles as agricultural laborers. Additionally, the rise in unemployment around YIA airport is attributed to several individuals who lacked prudence in utilizing compensation funds from the airport project's land acquisition. Some individuals perceive the government-provided compensation as insufficient for their daily needs. Moreover, numerous entrepreneurs who initiated businesses using these funds faced bankruptcy due to their lack of business experience. Many women in the impacted subdistricts express challenges in finding new employment opportunities.

Interest in Higher Education

The public has started recognizing that the presence of YIA airport will necessitate higher educational qualifications and skills. This demand extends beyond jobs within the airport area, as supporting infrastructures, i.e. hotels, restaurants, gas stations, and others will generate specific job opportunities. Consequently, some individuals who foresee this potential are sending their children to pursue higher education, aiming to enhance their competitiveness for employment around YIA airport. Moreover, according to Anshori (2021), the YIA development project succeeded in attracting

several educational institutions to establish learning centers in the area. The count of educational institutions has been progressively rising each year since the inception of the development project.

Critical Issue of YIA Infrastructure

Adisasmita (2011) emphasized the importance of prioritizing infrastructure and transportation facilities in regional development. Economic and developmental activities within a region necessitate robust support through the provision of effective and efficient transportation services. Conversely, these efficient transportation services play a crucial role as both a support system and a catalyst for regional development. Nasution (2015) similarly asserted that there is a two-way interactive relationship between transportation and regional development, with each component supporting and complementing the other.

The critical issues concerning infrastructure development at YIA were identified through in-depth interviews with Team 11 within the observation area. Seven prevalent issues emerged

from discussions with sub-districts and the community, encompassing workforce reduction, the increase in the number of newcomers, flood, rise in tax object selling value (*NJOP*), investment fraud, rising unemployment, and a growing interest in higher education. While each sub-district faces unique challenges, there are common issues shared across different areas, as illustrated in Figure 2. Notably, concerns such as investment fraud, employee layoffs, *NJOP* increases, and an influx of new arrivals are consistently encountered in the sub-districts surrounding YIA airport.

Based on issues identified through literature reviews in newspapers, a verification process was conducted in the observed region to confirm the validity of the concerns. Utilizing the USG method, respondents provided assessments that reveal the strategic issues perceived by the community in each observed area (Figure 3).

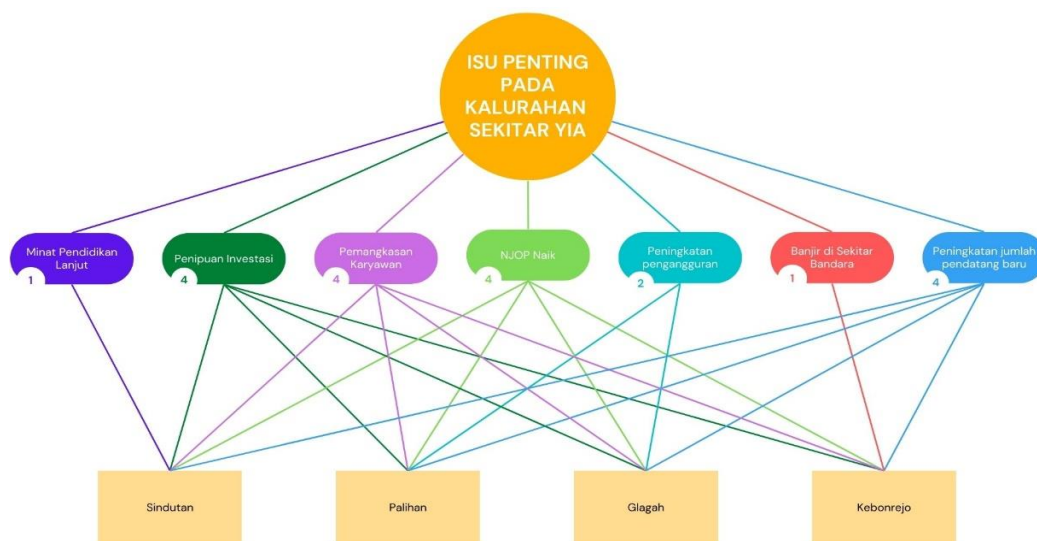


Figure 2. Map of Strategic Issues on YIA's Infrastructure Development

Critical issues are the current unfolding and exerting an impact on the observed area. Through comprehensive interviews, a significant concern was identified that permeated the entire research area — specifically, the issue of workforce reduction. The layoffs occurred between the end of 2021 and the beginning of 2022, affecting local workers from the surrounding sub-districts. The workers held various

roles, such as airport security, cleaners, and parking attendants. They originally engaged as contract workers with renewable agreements every six months. The financial crisis at YIA airport was triggered by the adverse effects of the COVID-19 pandemic, spanning from 2020 to 2022, leading to a decline in air transportation usage and subsequently, a negative impact on the airport's revenue.

"The layoffs are also prevalent in this area, impacting several residents. Historically, the reason has been attributed to the ongoing effects of the COVID pandemic." Mr Sawabi (Pamong of Sindutan Sub-district/PALAPA).

"However, we acknowledge that during the pandemic, the airport experienced complete darkness at night, despite the assure that it would be reinstated once operations returned to normal" Mr. Sao Wijaya Wiwaha (the Head of Kebonrejo Sub-district).

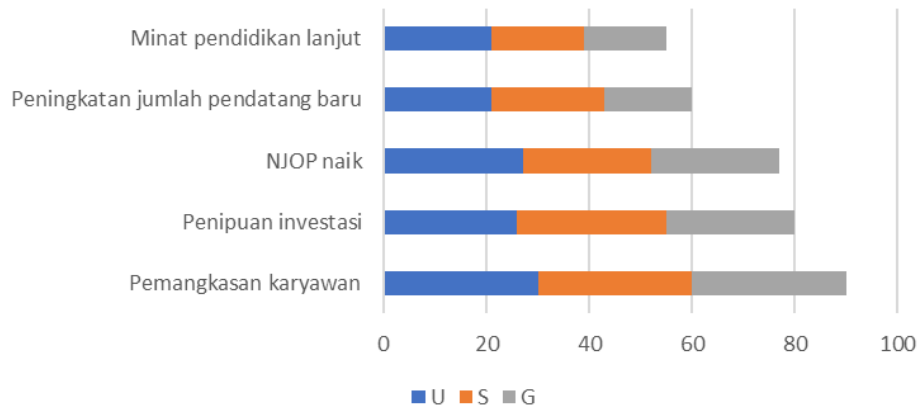


Figure 3. Sindutan District

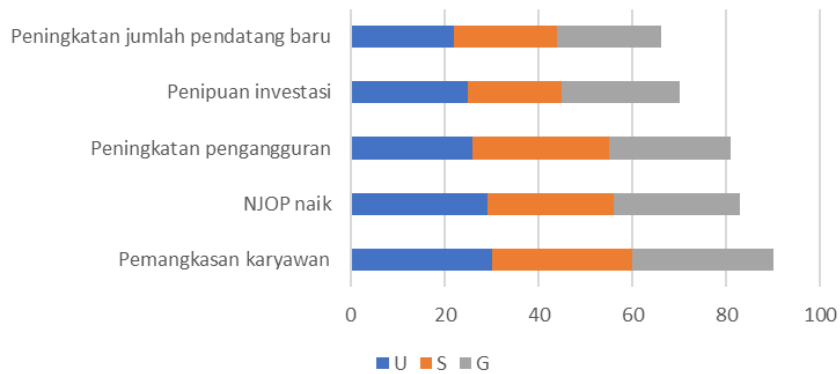


Figure 4. Palihan District

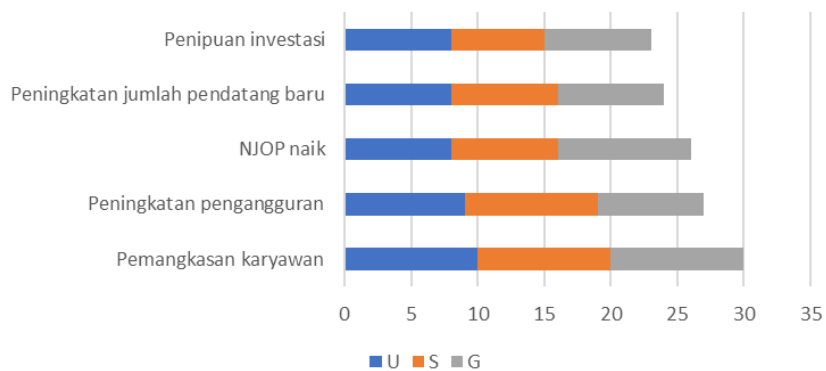


Figure 5. Glagah District

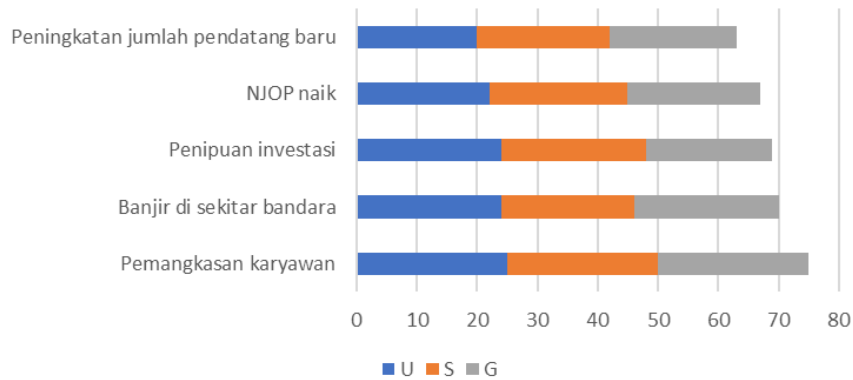


Figure 6. Kebonrejo Sub-District

At the onset of the YIA airport construction, Angkasa Pura, serving as the airport manager, pledged to prioritize the employment of residents. Over time, however, individuals hired at the YIA airport found themselves predominantly engaged in non-strategic roles, including cleaning, security, and parking staff positions. The local community's low level of education and limited specialized skills render these workers susceptible to layoffs. Job opportunities in and around the airport, including positions in hotels or gas stations, often demand qualifications that exceed the available skill set. One significant obstacle is the reluctance to accept applicants from the village, primarily due to a requirement that they be married, despite the prevailing cultural norm in the village where the majority marry at a young age, typically under 20 years.

“The prevailing hot-button issue remains the ongoing layoffs of employees. I am particularly concerned about the impact on the local youth, who could potentially have modest employment opportunities but, unfortunately, are facing layoffs. Those employed at the airport, including roles in trolleys, cleaning services, and security, find themselves without strategic positions” Mr. Iriyanto (LPMK Palihan Sub-district).

“The concern arises from the initial promise made by Angkasa Pura, assuring that affected residents would find employment opportunities. While some initially secured positions through outsourcing, a significant number have faced layoffs since the beginning of 2022. The initial requirements

emphasized prioritizing affected residents, but it has been discovered that they failed to fit specific criteria, including body height and educational qualifications. Notably, a challenging criterion is the marital status, as unmarried individuals face additional obstacles.” Mrs. Panti (Carik of Glagah Sub-district)

Angkasa Pura had pledged to rehire workers whose contracts were terminated at the end of the previous year; however, as of mid-2022, no follow-up has occurred. Certain workers were proposed to return on a specific schedule, such as one month in and one month out, but no additional communication or action has transpired. Meanwhile, residents whose temporary contracts were terminated still struggle to secure new employment opportunities. Locating workers from the vicinity sub-districts has proven challenging, as individuals who had initially registered for employment at the airport failed to communicate their status to their respective sub-districts. Speculation abounds in the public sphere, suggesting that temporarily laid-off workers will be recalled by Angkasa Pura. However, no concrete evidence or confirmation has substantiated this claim.

“Currently, there are no job vacancies available, as individuals who were previously employed are now facing the status of being laid off. Whether their situation is categorized as temporary layoffs or permanent dismissals, the current job openings remain unavailable” Mrs. Susanti (Carik of Palihan Sub-district).

CONCLUSION

The important issues that emerged in the context of Yogyakarta International Airport's infrastructure development in the vicinity of sub-districts are workforce reduction, the increase in the number of newcomers, flood, rise in tax object selling value (NJOP), investment fraud, rising unemployment, and a growing interest in higher education. The important issues that emerged in the context of Yogyakarta International Airport's infrastructure development in the vicinity of sub-districts are workforce reduction, the increase in the number of newcomers, flood, rise in tax object selling value (NJOP), investment fraud, rising unemployment, and a growing interest in higher education.

Employee retrenchment stands out as a critical issue across all observed areas. The impending employee layoffs, if realized, are anticipated to contribute to a heightened unemployment rate in the region. Addressing this concern requires concerted efforts from both the government and the private sector. It is essential to implement specific measures to ensure that infrastructure development in Yogyakarta International Airport (YIA) leads a substantial positive impact, supporting the successful realization of the aerotropolis concept in the region.

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