

Article

Tenure Security and Responsible Land Management of Urban Informal Settlements on *Waqf* Land in Semarang City, Indonesia

Iwan Rudiarto ^{1,*} , Walter Timo de Vries ^{1,2,*} , Alvita Bhanuningtyas Rustanto ¹ and Kanaya Aliyanadira Hidayat ¹

¹ Department of Urban and Regional Planning, Diponegoro University, Semarang 50275, Indonesia; vitarustanto@alumni.undip.ac.id (A.B.R.); kanayaaliyanadira@alumni.undip.ac.id (K.A.H.)

² School of Engineering and Design, Technical University of Munich, 80333 Munich, Germany

* Correspondence: iwanrudiarto@lecturer.undip.ac.id (I.R.); wt.de-vries@tum.de (W.T.d.V.)

Abstract

The major challenge facing big cities in developing nations is allocating residential land to the urban poor, given the constraints on land availability. This article investigates how and why the management of *Waqf* land, a particular type of land tenure in urban informal settlements, transforms. The analysis draws on principles of responsible land management and focuses on the specific case of *Waqf* land owned by the Kauman Grand Mosque in Semarang City, Indonesia. With a questionnaire distributed among tenants of the *Waqf* land, it was possible to retrieve data on experiences with the management of the *Waqf* land. The questionnaire and subsequent analysis used a scoring sheet based on the 8R framework of responsible land management. The findings indicate that the management of *Waqf* land in the study area changed and improved over time, evolving from an informal to a more formal structure. The responses additionally demonstrate a gradual transformation whereby, gradually, nearly all aspects of the 8R framework of responsible land management are considered positively. Nevertheless, the aspects of reflexivity and retraceability still score low, as access to documentation is still limited, and evaluations of how effective the management of land is are infrequent. The study concludes that despite being an unconventional form of land management, the *Waqf* land tenure regime appears to secure informal types of urban tenure, especially in areas with limited land availability. Moreover, the *Waqf* land institution supports strong and cooperative relationships within the community.

Keywords: *waqf* land; informal settlement; 8R framework; responsible land management; urban tenure



Academic Editor: Dingde Xu

Received: 6 February 2025

Revised: 20 June 2025

Accepted: 23 June 2025

Published: 28 June 2025

Citation: Rudiarto, I.; de Vries, W.T.; Rustanto, A.B.; Hidayat, K.A. Tenure Security and Responsible Land Management of Urban Informal Settlements on *Waqf* Land in Semarang City, Indonesia. *Land* **2025**, *14*, 1365. <https://doi.org/10.3390/land14071365>

Copyright: © 2025 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Land tenure security represents a significant challenge in developing nations, where numerous individuals, communities, and enterprises do not possess clear and secure access to the land, resources, and property essential for their livelihoods [1]. Lack of land tenure security in various regions exacerbates poverty and contributes to social instability and conflict. Land tenure reform is a multifaceted and protracted process, yet it is crucial for the actualization of human rights, poverty reduction, economic advancement, and sustainable development. The community possesses houses and land as economic resources, like houses and land, but they often lack the necessary titles or legal documentation to rent or mortgage their property or to substantiate ownership. This leads to insecure property rights [2]. The lack of legal and practical security of tenure substantially impedes protection

against involuntary removal or eviction [3], thereby exposing vulnerable populations, including residents of informal settlements, to potential human rights violations [4].

Informal settlements are prevalent globally, particularly in developing nations experiencing rapid urbanization [5–7], resulting in vertical growth in some cities [8] and exceeding the carrying capacity in specific urban regions. Informal settlements are residential areas defined by a lack of tenure security on land or housing, including illegal occupancy and informal rental housing [9,10]. Their presence is usually on land not designated for residential use in the city's master plan [11]. Urban informal settlements are characterized by a lack of willingness to invest in housing, high population density, low-quality housing, and illegal tenure; however, the most significant characteristic is the absence of tenure security [12]. Prior research [13,14] indicates that inadequate informal settlement practices, insufficient supportive policies for the urban poor, and rising land prices constitute the primary challenges associated with these settlements. Consequently, addressing problems in and with informal urban settlements is often considered separate from addressing conventional urban challenges [15]. In many countries, the urban impoverished frequently have little other alternative but to inhabit informal settlements, as the private developers primarily develop property and houses for affluent and middle-class populations [16]. Tenure informality is a significant characteristic of informal settlements where land tenure is held informally, providing insufficient protection for occupants [17]. The absence of precise information necessary for planning and designing policies and programs aimed at upgrading and regularizing informal settlements is attributed to exclusion from the formal land management system [18,19].

Informal settlements tend to develop into dense mixed residential and small business areas over time. Often, land is held as a mix of various forms of urban tenure practices, including 'Waqf' lands. 'Waqf land tenure' originates from Islamic law and refers to land that is usually donated to a community for religious, social, or philanthropic use. Once qualified as *Waqf* land, it can no longer be sold, inherited, or transferred by the original owner or any land user. The community has to decide on its use. *Waqf* land is governed by a social institution for collective benefit, and the principles are comparable to common land law.

If informal settlements are constructed on *Waqf* land, the community affiliated with the religious, social, or philanthropic purpose can resolve disputes using non-litigation methods such as negotiation and alternative settlement channels [20]. Informal settlements typically lack formal authority, resulting in uncontrolled development of improvised homes [21], a similar situation also observed in informal settlements on *Waqf* land. Furthermore, *Waqf* lands often suffer from mismanagement because they are excluded from the commercial land market [22], which may lead to illegal occupancy for settlement purposes. Informal settlements have emerged on *Waqf* property due to underutilization or neglect, making it appealing to informal settlers seeking housing alternatives. The complexities surrounding *Waqf* land ownership and the challenges in formal development contribute to the proliferation of informal communities on this property, leading to "land donation" for the community's benefit with a rent system [23].

Research on *Waqf* land encompasses various domains, such as the development of idle *Waqf* land [24], the establishment of *Waqf*-based financial institutions [25,26], the utilization of cash *Waqf* for financing construction projects [27], and the development of *Waqf* land via a joint venture model [28]. Earlier studies have primarily focused on how and why *Waqf* land developed as a financial resource, yet have not considered how a *Waqf* land tenure arrangement could influence or affect public housing or settlement needs. Nonetheless, several relevant studies on *Waqf* land in Indonesia and other countries exist. These analyze, amongst other factors, which types of housing and urban informal

settlements have emerged in urban ‘kampungs’ (traditional urban settlements) in Surabaya, Indonesia [29]; how *Waqf* cooperatives in Karachi, Pakistan, finance housing [30]; which sharing options exist for public and social housing on *Waqf* land in Bangkok, Thailand [23]; where and why illegal settlements emerge on *Waqf* land in Egypt [10]; how disputes are addressed on *Waqf* property in settlement areas in Indonesia [20]; and how *Waqf* land created “*Waqf* space” in urban settlements in Semarang, Indonesia [31]. *Waqf* space denotes a spatial-cultural entity, generated and developed by religious practices. Still, these studies do not address the transformation of *Waqf* land with regard to urban tenures or its potential as an alternative for settlement provision for the urban poor, as this article does.

In Indonesia, *Waqf* is primarily practiced in a religious context or founded on mutual trust. This requirement ultimately results in the land being devoid of a legal foundation. Consequently, if issues arise regarding the ownership of *Waqf* land in the future, challenges will emerge, especially concerning proof [20]. Given the challenges associated with the urban poor’s possession of *Waqf* land, this research proposes the following research question: ‘How has the management of *Waqf* land been transformed from informal to formal settlement, and to what extent has responsible management of *Waqf* land been achieved?’ Our study examines the history and transformation of *Waqf* land management and the agreements established by the managing party, representing the Kauman Grand Mosque as the owner, with the community. Further, this study evaluates the effectiveness of responsible *Waqf* land management by applying the 8R framework, adapted from [32,33]. The reason for using the 8R framework is its comprehensive structure of R components, which contain all the necessary characteristics for this study. By utilizing the 8R framework, a comprehensive analysis of each R component is provided, along with the challenges and issues faced by the community regarding the utilization and management of *Waqf* land in the study area. This study employs a critical lens to examine the social and economic roles of the community, adding to an emerging field of urban studies that emphasizes the unique function of *Waqf* land in fostering sustainable urban informal settlements.

2. Levelling Tenure Security on *Waqf* Land

Urbanization in developing nations is marked by the proliferation of informal settlements and the underutilization of property, especially *Waqf* properties, an Islamic endowment. *Waqf* land, historically allocated for religious or charity purposes [34], frequently stays undeveloped due to legal intricacies and governance issues. Simultaneous rapid urban growth and the inadequacy of formal systems to provide housing needs have resulted in the emergence of informal settlements, including on *Waqf* land. Occupants may reside on *Waqf* land through informal or unauthorized means, creating conflicts between preservation of endowment principles and community needs. These informal areas occasionally lack legal acknowledgment and are characterized by insecure tenure and insufficient services.

Currently, however, most *Waqf* lands are poorly managed or legally encumbered, resulting in inefficient land use. Poorly managed *Waqf* land attracts people with limited or no access to land for housing, leading to the emergence of informal settlements on such lands. Informal settlements emerge from the disparity between swift urban expansion and the ability of formal housing systems to serve low-income groups. Historically regarded as unlawful and spontaneous, these settlements are now recognized as alternative urban configurations developed through grassroots initiatives [15]. Informal settlements typically consist of self-constructed housing, inadequate infrastructure, and unclear land tenure. They also demonstrate community resilience and innovation. Yiftachel [35] describes informality as existing in a “gray space,” which is characterized by its status as neither fully legal nor entirely illegal, emphasizing the state’s role in either legitimizing or marginalizing these areas.

The existence of informal settlements on *Waqf* land, as on the state's land, is closely related to tenure security issues. Tenure security refers to the degree of confidence land users have that their land rights will be recognized and protected. The tenure continuum model works on extralegal property systems, arguing that secure tenure can exist even without formal titles. It may be documented, socially recognized, or perceived. The model provides an opportunity to enhance tenure security through associated rights across various tenure categories (see Figure 1), which may lead to increased investments in housing, improved access to services, and reduced vulnerability to eviction [36,37].

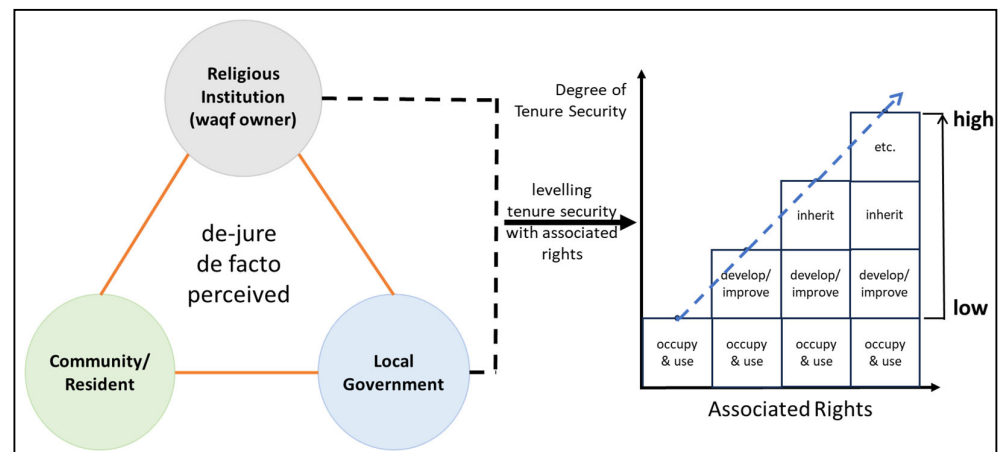


Figure 1. Levelling degree of tenure security and its associated rights on *Waqf* land.

The intersection of *Waqf* land, informal settlements, and tenure security presents a compelling lens through which to examine contemporary urban challenges, particularly in Muslim-majority countries. While these elements are often studied independently, integrating them reveals deeper structural issues and opportunities in land governance, particularly for marginalized urban populations. *Waqf* land, by its nature, is designed to serve public welfare. Yet, the institutional and legal rigidity surrounding its inalienability often leads to underutilization in contexts where urban poverty and housing shortages are most acute [38,39]. Informal settlements, emerging as grassroots responses to exclusion from formal housing markets, ironically occupy lands that were historically intended for social benefit, including *Waqf* lands. This phenomenon demonstrates both the spatial and ethical contradictions of urban development in contexts where religious institutions control significant land resources but operate in parallel to urban planning systems.

The acknowledgment of informal settlements on *Waqf* land is a protracted process, frequently characterized by conflict and disputes, particularly in cases where historical administration and documentation were insufficient. Conversely, informal settlements typically evolve over extended periods, often across generations. In certain instances, such as in Indonesia, these settlements have been integrated into land-use plans as designated residential areas. Collaboration among local governments, religious institutions that manage *Waqf* land, and the communities residing on such land is crucial for developing viable options for the persistence of informal settlements [40]. Models such as community-managed leases (community *Waqf*) or co-governance arrangements could be applied without breaching the Islamic legal principle of inalienability. These mechanisms may simultaneously enhance residents' sense of security and allow for planned urban integration.

3. Materials and Methods

3.1. Study Area

The study area is located in Siwalan Urban Village, Semarang City, an informal settlement that has been developed on *Waqf* land since the 1990s, forming a community group (see Figure 2). The development of this informal urban settlement has led to the establishment of the Community Association (*Rukun Warga*/RW), which currently comprises 10 Neighborhood Associations (*Rukun Tetangga*/RTs). Siwalan Urban Village encompasses an area of approximately 50 hectares, organized into four RWs and containing a total of 38 RTs. The informal settlement on the *Waqf* land covers approximately 7.9 hectares within a 50-hectare area of the Siwalan Urban Village, divided among three community associations (RWs).

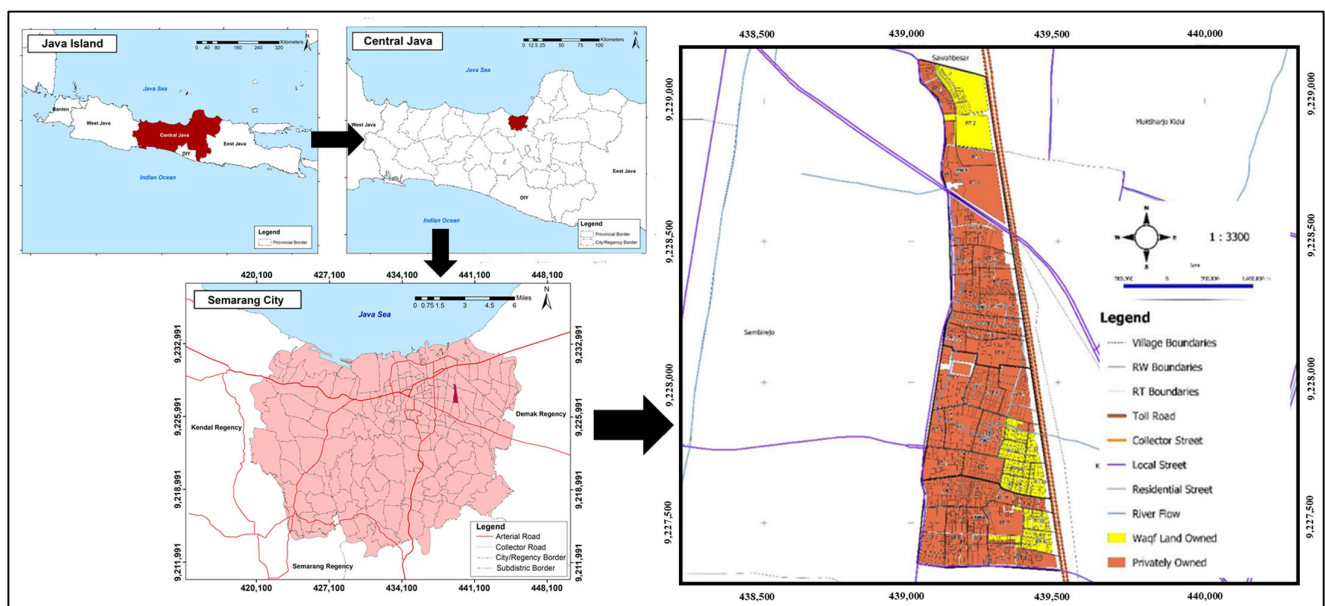


Figure 2. Study area and distribution of *Waqf* land.

The distribution of settlements on *Waqf* property in Siwalan Urban Village illustrates the interplay between religious endowment and urban development challenges. *Waqf* properties are typically distributed across various locations. The land manager of the *Waqf* land indicates that its dispersed arrangement results from historical accumulation over centuries, varied donor backgrounds, purpose-driven distribution for specific uses, political and administrative changes, and urban development. Figure 1 shows the distribution of the informal settlement on the *Waqf* property, located in RW 1, RW 2, and RW 4 of Siwalan Urban Village. The property remained unoccupied because of disorganization and abandonment. This prompted multiple communities to build houses, forming ten Neighborhood Associations (RTs) on *Waqf* land. This is how the *Waqf* land was developed into an informal settlement in the study area.

3.2. Data Collection

This study collected data from 84 randomly selected households, representing a 10% margin of error from a total population of 500 households occupying the *Waqf* land and registered by the *Waqf* landowner, i.e., Kauman Grand Mosque. The sample size was established based on the principle of practical representativeness from each Neighborhood Unit (RT). A larger portion of the sample was allocated to the Neighborhood Units (RTs) with a higher number of households residing on the *Waqf* land. They encompass a diverse

array of community areas, thereby reflecting a broad spectrum of experiences, perspectives, and circumstances.

A standardized questionnaire was distributed to collect data on the sample's characteristics and their approaches to responsible land management regarding the *Waqf* land they occupied. A pilot test was performed with a small group of five representative samples from the study area to verify that the questionnaire was coherent to respondents and complied with the research objectives. Further, an introduction and explanation were provided to ensure respondents understood the survey's purpose and were able to answer each question properly.

Data collection was conducted through a structured interview scheduled between March and April 2024. The characteristic information collected from this study was about family members, occupation, education, and the income level of the respondents. To address how the respondents deal with the responsible land management on *Waqf* land, the questionnaire was designed particularly to determine the assessment level of each 8R component: responsive, resilient, robust, reliable, respected, reflexive, retraceable, and recognizable. For this purpose, the questionnaire was structured using scales to assess the suitability of each R component from the respondents' perspectives. This study also interviewed the *Waqf* land manager as the representative from the Kauman Grand Mosque, as the owner of the *Waqf* land. The interview was conducted to explore the history and transformation, the agreement made, and how the settlement on the *Waqf* land is managed in the study area.

3.3. The 8R Framework Method

The 8R framework for responsible land management is a framework that can evaluate land management structures, processes, and impacts [32,41]. The framework assesses the extent to which potential land interventions align with essential responsibility criteria and thus can ensure that both stakeholders and recipients perceive the interventions as adequately responsible. The 8R paradigm emerged from the international literature and multilateral agreements and standards concerning "responsible" public administration, land governance, and spatial planning [31,33,42,43].

The concept of responsible land management is encapsulated by a set of indicators known as the "8Rs" [32]. To assess whether these actions effectively respond to people's needs and address land management issues, they must be evaluated using specific indicators. The interventions should be responsive, resilient, robust, reliable, respected, reflexive, retraceable, and recognizable [44]. Table 1 outlines the issues related to each of the 8R aspects in responsible *Waqf* land management, modified to reflect the conditions of the study area.

The 8Rs serve as normative assessment factors in this study, supported by the existing literature on responsible land management as the theoretical foundation. An essential assumption is that the 8R framework effectively evaluates individual land management interventions at different stages of design and implementation, namely before, during, and after implementation. The 8R technique is grounded in practitioners' experience and supported by various research studies utilizing the framework. The 8R framework provides a succinct and thorough method for evaluating land tenure security in informal settlements on *Waqf* land. This approach provides valuable insights for enhancing land tenure security from informal to formal systems, and comprehending the specific community under study is essential for effectively addressing components of the 8R framework. In this study, the 8R framework has been adapted to evaluate only the initial impression, focusing specifically on the dominant roles of certain R components in responsible *Waqf* land management,

without looking into the processes, outcomes, and impacts as the concept typically entails. Table 2 presents the variables and scaling scores applied in this study.

Table 1. Connected issues of 8R aspects [adapted from [31]].

R Aspects	Concerning Issues
Responsive	Effectiveness of <i>Waqf</i> land managers in responding to local community needs/problems
Resilient	Measuring the adaptation ability for changes and bounce back
Robust	Measuring the ability to maintain stability under changing circumstances
Reliable	Measuring the trustworthiness of a decision from either party
Respected	Measuring community trust in landowners so that the project is not biased or doubtful
Retraceable	How well the relevant documents of the informal settlement development were documented
Recognizable	Recognition of institution and duties of <i>Waqf</i> land manager
Reflexive	Presence of mechanisms of agreement and monitoring-evaluation on <i>Waqf</i> land

Table 2. Variables and score scales.

Variable	Code	Components	Score Scales
Responsive	A1	Frequency of <i>Waqf</i> owners communicating with the community living on the <i>Waqf</i> land	1 to 5 (Never to Very Often)
	A2	Effectiveness of the community representatives in accommodating suggestions from residents of the <i>Waqf</i> land	1 to 5 (Very Ineffective to Highly Effective)
	A3	Effectiveness of the policy for paying dues to the Kauman Mosque for residence permits	1 to 5 (Very Ineffective to Highly Effective)
Resilient	B1	Availability of formal/legal protection for people living on <i>Waqf</i> land against eviction or forced relocation	1 to 5 (No Protection to High Protection)
	B2	Clarity and security of the guaranteed right of residence for residents on <i>Waqf</i> land to guarantee their protection	1 to 5 (Highly Not Secure to Very Secure)
	B3	Adaptability of the people living on <i>Waqf</i> land to needs and changes over time	1 to 5 (Highly Unadaptable to Highly Adaptable)
Robust	C1	Expectation met between <i>Waqf</i> landowner and the community living on the <i>Waqf</i> land	1 to 5 (Very Unconvinced to Very Convinced)
	C2	Effectiveness of an established <i>Waqf</i> settlement for people who have difficulty finding place to live	1 to 5 (Very Ineffective to Highly Effective)
	C3	Effectiveness of the <i>Waqf</i> land as settlement as a solution for people who have difficulties accessing land	1 to 5 (Very Ineffective to Highly Effective)
Reliable	D1	Credibility of the <i>Waqf</i> landowner in granting permission to occupy the land	1 to 5 (Very Untrustworthy to Highly Trustworthy)
	D2	Frequency of uncertainty experienced from <i>Waqf</i> landowners regarding permits	1 to 5 (Never to Very Often)
	D3	Trustworthiness in land manager's responsibility as the representative of <i>Waqf</i> landowner	1 to 5 (Very Untrustworthy to Highly Trustworthy)
	D4	Confidence in providing security	1 to 5 (Very Untrustworthy to Highly Trustworthy)
Respected	E1	Ensuring Recognition and Security	1 to 5 (Very Irresponsible to Very Responsible)
	E2	Frequency of communication between the communities and landowners	1 to 5 (Very Rarely to Very Often)
	E3	Frequency of the landowner explaining the details of ownership	1 to 5 (Very Rarely to Very Often)
	E4	The policy previously agreed between the <i>Waqf</i> landowner and community has been adjusted	1 to 5 (Highly Disagree to Highly Agree)
	E5	Effectiveness of the <i>Waqf</i> Land Committee in regulating land development and land use	1 to 5 (Very Ineffective to Highly Effective)

Table 2. Cont.

Variable	Code	Components	Score Scales
Retraceability	F1	The importance for residents to have residence permits on <i>Waqf</i> land in physical form	1 to 5 (Not Very Important to Very Important)
	F2	Ease/convenience to view previous ownership documents	1 to 5 (Not Very Easy to Very Easy)
	F3	Ease/convenience of accessing the agreement on the settlement	1 to 5 (Not Very Easy to Very Easy)
Recognizable	G1	Effectiveness of institutional structures (<i>RT/RW</i>) in representing residents in making decisions	1 to 5 (Very Ineffective to Highly Effective)
	G2	Performance in tenancy management	1 to 5 (Very Ineffective to Highly Effective)
	G3	Recognition in residents' opinion	1 to 5 (Never to Very Often)
Reflexive	H1	Agreement with Changes	1 to 5 (Highly Disagree to Highly Agree)
	H2	Community Contribution in changes	1 to 5 (Highly Did Not Contribute to Highly Contributed)
	H3	Effectiveness of monitoring the settlements	1 to 5 (Very Ineffective to Highly Effective)
	H4	Frequency of agreement changes	1 to 5 (Never to Very Often)

The final score for each R component is calculated by summarizing the scores from each question and dividing by the total number of samples. The result obtained represents the average score of each R component. The R Score (SR) is calculated using the following formula:

$$SR_x = \frac{T_x}{n} \quad (1)$$

where SR_x is = Score of the R component, T_x is the total score of the R component, and n is the number of samples.

4. Results

4.1. Socioeconomic Characteristics

Understanding the community's characteristics is critical for investigating the role of informal settlements and practices on *Waqf* property since these characteristics influence whether culturally embedded actions and policies are appropriate or not. Recognizing the historical settings unique to *Waqf* land reduces disputes and upholds religious frameworks, understanding social dynamics promotes resource allocation and collaboration. Finally, identifying these qualities can establish a baseline for assessing the effectiveness of the solutions and generate insight into the kind of community a project is affecting. The socioeconomic characteristics of the study area reveal a community facing significant challenges related to household structure, education, occupation, and income level. The settlement distribution in a specific location reflects the socioeconomic conditions of the population living in the respective area [45].

The data from the selected study area demonstrate that 67% of the total sample households have an average of four to five family members (see Figure 3a). In these households, usually only one individual works and provides the income for the entire household. A larger household size can lead to difficulties in land tenure (or even more in obtaining formal land rights), which severely influences the quality of life as well as the quality of the construction of the houses [21]. According to the survey, the greater demand for space and resources in larger households increases their tenure insecurity, making it more difficult for these families to maintain a sustainable living space. This, in turn, enlarges the economic challenges these households face.

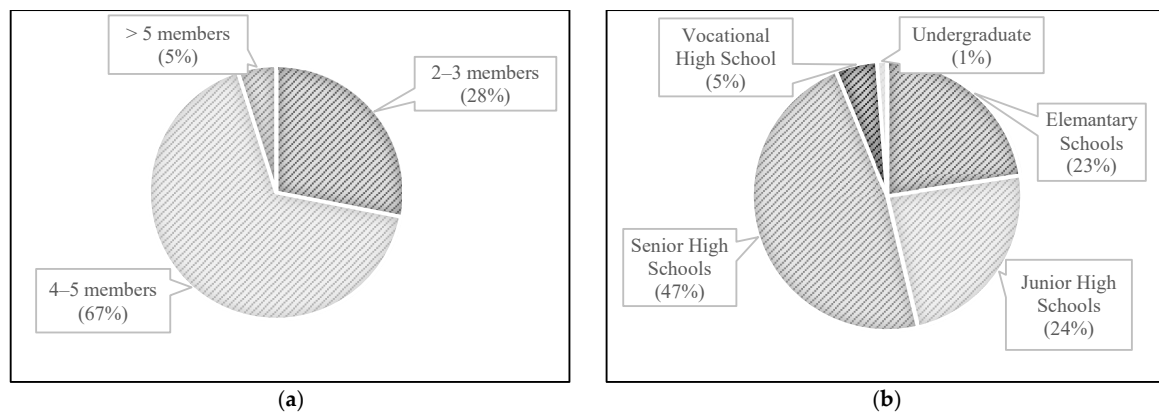


Figure 3. (a) Family members, and (b) education level.

Educational attainment (Figure 3b) was primarily at the high school level, but also encompassed senior and vocational education, and constituted approximately 52% of the total sample. Junior high school represented 24%, and elementary education 23% of the total sample. There is a low number of university graduates. Statistically, higher education levels correlate with and yield improved employment opportunities and increased earning potential, and thus impact economic mobility and quality of life through the intangible variable of knowledge and skills [45]. The survey shows a significant gap in higher education attainment, which may affect employment opportunities, economic mobility, and overall quality of life in the study area.

Regarding occupation (see Figure 4a), 26 or 31% of respondents in the study area are freelancers, followed by (manual) laborers at 23% in various capacities. Self-employed individuals, including booth managers and street vendors, represent 18%, comparable to Micro, Small, and Medium Enterprises (MSMEs) engaged in trading. Simultaneously, security personnel and home service constituted 10% of the total respondents. These figures illustrate that a significant portion of the community is engaged in informal occupations, predominantly in self-employment within the neighborhood. The interconnection between informal settlements and informal occupations highlights that informal settlements represent a significant and dynamic sector influencing urban growth [46].

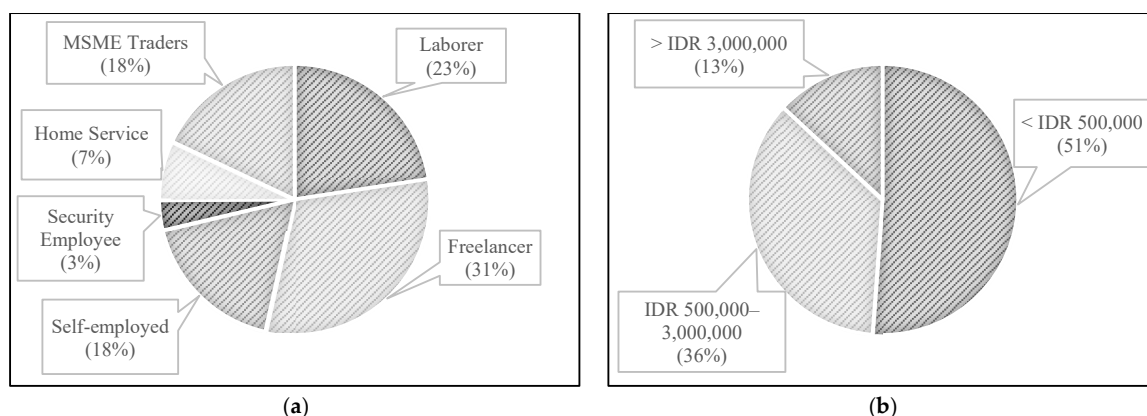


Figure 4. (a) Types of occupation, and (b) income per household per month.

Monthly income per household is an indicator of a community's socioeconomic status and reflects the overall financial conditions and lifestyles. This indicator is thus a proxy to assess and locate poverty levels, and can highlight spatial income inequality through the analysis of income distribution among households. Additionally, it can help prioritize where and to whom social welfare and economic assistance should be provided [45].

Figure 4b shows that the average monthly income per household is below IDR 500,000, representing 51% of the total respondents. This is followed by 36% of respondents earning between IDR 500,000 and IDR 3,000,000, and 13% earning more than IDR 3,000,000. This indicates that over fifty percent of the community lacks sufficient financial resources, potentially impacting their ability to meet basic needs and exacerbating economic challenges within the settlement, especially concerning the sustainability of monthly dues established as the standard payment for residing on *Waqf* property. In order to obtain extra income, the majority of households are exploring job alternatives in diverse informal sectors, including local vendors and more in-home services.

4.2. History and Transformation

The *Waqf* land associated with the Kauman Grand Mosque has existed since the 17th century, and this Mosque's land is distributed in various locations in the area from Semarang City to the Demak Regency. Previously, *Waqf* land was dispersed to various locations and received insufficient attention from scholars and practitioners. This has led to improper management [47]. In certain instances, *Waqf* land was even occupied by unauthorized parties. The management of *Waqf* land was previously conducted by the Ministry of Religious Affairs through the *Nazir*, as representatives, following Regulation of the Minister of Religious Affairs No. 4 of 2009. The *Nazir* is the entity that receives *Waqf* property from the *Waqif*, the individual who donated the *Waqf* land, for management and development according to its designated purpose at that time.

The community started occupying *Waqf* land in 1992 by commencing the construction of semi-permanent houses without obtaining the necessary permissions. Earlier studies show that individuals invest in specific housing levels due to the absence of formal tenure, aiming to secure themselves against involuntary displacement [48,49]. Without any evident regulatory direction, the study area has gradually become occupied by second-generation families. This proves that while the original settlers of *Waqf* land established their families there, their descendants have remained in the region, and thus followed practices of adverse possession. In 2012, the administration of the *Waqf* land was reverted to the Kauman Grand Mosque as a result of an agreement between the Mayor of Semarang City, the Ministry of Religious Affairs, and the Kauman Grand Mosque. Figure 5 indicates the history and transformation of *Waqf* land management in the study area.

The Kauman Grand Mosque significantly contributes to addressing the land occupation issues faced by the community. Over time, this land occupation has resulted in the formation of 10 neighborhood units (RTs) on *Waqf* land, leading to disputes between the Kauman Grand Mosque, the owner, and the community occupying the land. To prevent conflicts and disputes, the Kauman Grand Mosque ultimately provided long-term leases to the community following numerous discussions and negotiations. A decision was reached to establish a monthly payment system for the community residing on the *Waqf* land. In this context, the Kauman Grand Mosque's role can be divided into three parts to ensure the sustainability of the established system. Firstly, collecting monthly payments via mosque personnel who collaborate with the RT chairman regarding the *Waqf* land. Secondly, conveying the types of policies enacted due to changes taking place on the *Waqf* land. Thirdly, documenting the data of residents occupying the *Waqf* land and issuing signboards as markers and recognition.

A monthly payment system was established with the transfer of *Waqf* land management from the Ministry of Religion to the Kauman Grand Mosque in 2012. The payment depended on the size of the area of land occupied by each family. The systematic management of *Waqf* land tenancy agreements addresses significant challenges for both the mosque and the community. From the mosque's perspective, these measures are essential

for preventing neglect of the Waqf land, ensuring its preservation and effective utilization through documented contracts, regular rent payments, and rigorous arrears management. This technique guarantees stable revenue to support the mosque’s operations and secure the long-term value of the land. The agreements give the community a fundamental sense of security and stability, enabling residents to occupy the land without fear of eviction or relocation. Adhering to contract requirements enables community members to maintain their homes confidently, fostering a collaborative partnership that benefits both the religious institution and the community. However, this approach is significantly reliant on the dedication of both parties [50], the Waqf land manager and the community, particularly the Kauman Grand Mosque.

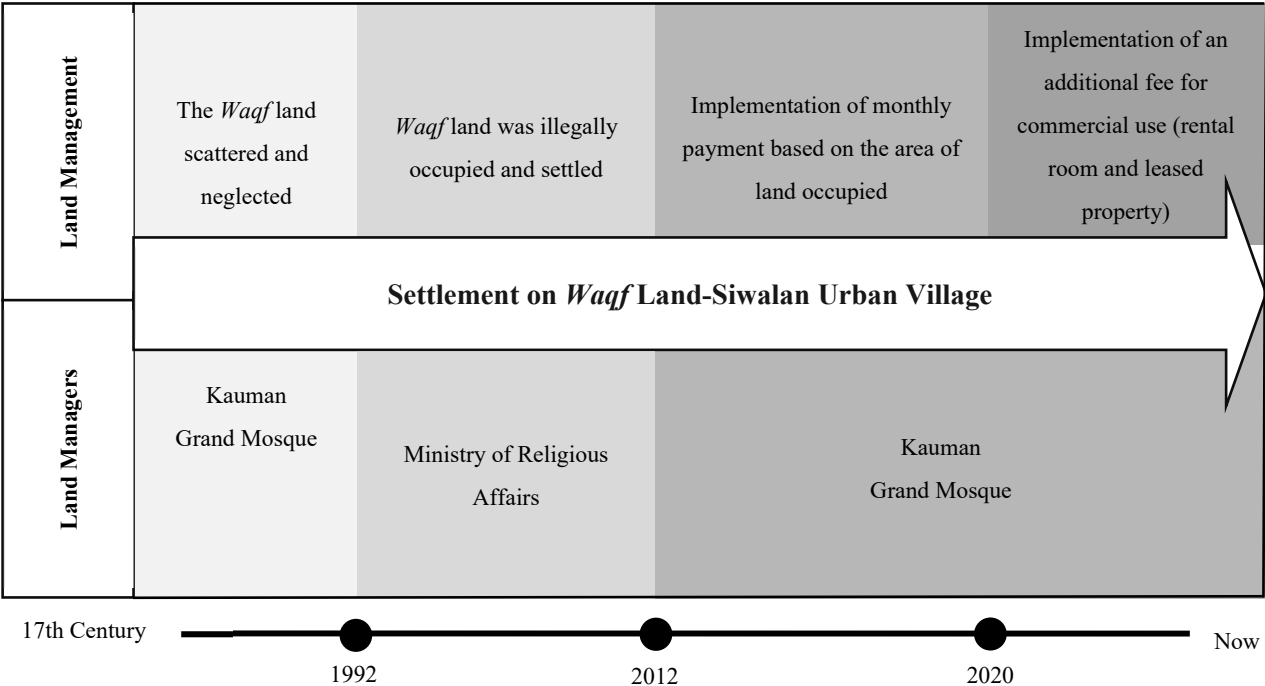


Figure 5. Transformation of *Waqf* land management.

4.3. Form of Handling and Agreement

The agreements established between land managers and occupiers in Siwalan Urban Village are regulated by a systematic and structured process, especially regarding *Waqf* property. The agreements are based on a written contract that is valid for two years and includes provisions for renewal. The agreement is uniformly extended in all instances, irrespective of the household’s capacity to fulfil the monthly payment requirements. The calculation will be classified as debt, due at the end of the year, reflecting a level of partiality and flexibility. As shown in Figure 6, the rental fees are contingent upon land area, set at IDR 450 per square meter per month (USD 1 = IDR 16000). The mosque employees oversee and collect rent from the community, ensuring transparency and compliance with lease conditions. The mosque appoints a representative from the residents, usually the Head of the Neighborhood Units (RTs), to act on behalf of the residents and to oversee the collection of monthly contributions from the community. This strategy guarantees a consistent revenue stream for the mosque’s operations and maintenance, while also offering alternatives for its residents.

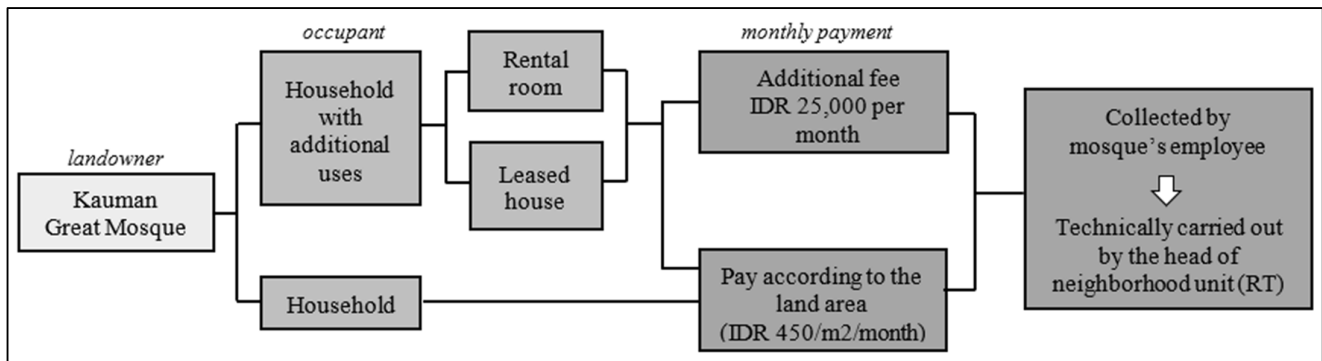


Figure 6. Form of handling and payment system.

As noted earlier, before the Kauman Grand Mosque assumed full responsibility for the *Waqf* land, the occupants made no payments and resided without authorization, rendering them vulnerable to eviction. Formal agreements were established following the transfer of authority for managing the *Waqf* land to the Kauman Grand Mosque. The main objective of the agreement is to preserve and secure the *Waqf* land. The agreements help protect the land's value and usefulness to the community by setting clear terms, ensuring consistent management, and providing effective oversight. This management model assists land managers and occupants by promoting sustainability, accountability, and spatial justice, ensuring equitable access to land resources for meeting basic needs [51,52]. The agreements outlined the occupants' identities and the legal stipulations regarding permissible actions. Further, additional changes were made as certain residents modified their homes for commercial use, including rental rooms and leased properties, with an extra monthly fee of IDR 25,000 imposed. Amidst all the changes, the mosque and the community consistently emphasized the importance of thoughtful discussion to achieve a consensus.

4.4. The 8R Framework Assessment of Waqf Land Management

A radar graph is utilized to enhance understanding of appropriate *Waqf* land management based on the previously mentioned 8R Framework. The radar graph facilitates the visualization of data distribution. This radar graph analysis clarifies the average outcomes of the completed data processing. The highest and lowest average outcomes are presented, and the underlying factors are elucidated. Table 3 and Figure 7 show the results of the 8R assessment.

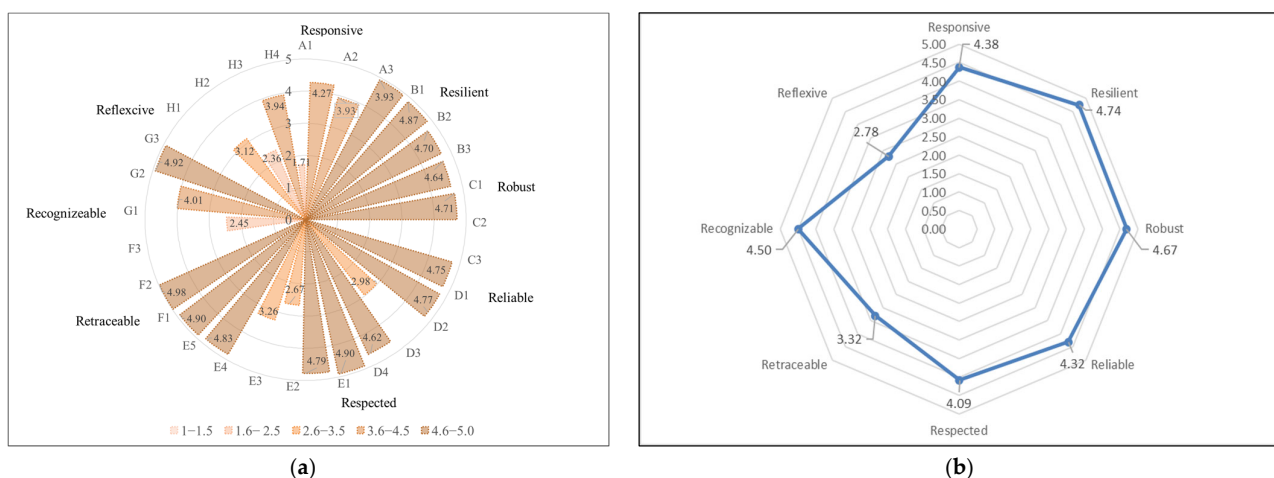


Figure 7. The result of 8R assessment: (a) components and (b) variables.

Table 3. Results of 8R framework assessment.

Variables	Code	Components	Scores	Scores Average
Responsive	A1	Frequency of <i>Waqf</i> owners communicating with the community living on the <i>Waqf</i> land	4.27	4.38
	A2	Effectiveness of the community representatives in accommodating suggestions from residents of <i>Waqf</i> land	3.93	
	A3	Effectiveness of the policy for paying dues to the Kauman Grand Mosque for residence permits	4.93	
Resilience	B1	Availability of formal/legal protection for people living on <i>Waqf</i> land against eviction or forced relocation	4.87	4.74
	B2	Clarity and security of the guaranteed right of residence for residents on <i>Waqf</i> land to guarantee their protection	4.70	
	B3	Adaptability of the people living on <i>Waqf</i> land to needs and changes over time	4.64	
Robust	C1	Expectation met between <i>Waqf</i> landowner and the community living on the <i>Waqf</i> land	4.71	4.67
	C2	Effectiveness of an established <i>Waqf</i> settlement for people who have difficulty finding place to live	4.56	
	C3	Effectiveness of the <i>Waqf</i> land as settlement as a solution for people who have difficulties accessing land	4.75	
Reliable	D1	Credibility of the <i>Waqf</i> landowner in granting permission to occupy the land	4.77	4.32
	D2	Frequency of uncertainty experienced from <i>Waqf</i> landowners regarding permits	2.98	
	D3	Trust in the land manager's responsibility as the representative of the <i>Waqf</i> landowner	4.62	
	D4	Confidence in providing security	4.90	
Respected	E1	Ensuring recognition and security	4.79	4.09
	E2	Frequency of communication between the communities and landowners	2.67	
	E3	Frequency of the landowner to explain the details of ownership	3.26	
	E4	The policy previously agreed between the <i>Waqf</i> landowner and community has been adjusted	4.83	
	E5	Effectiveness of the <i>Waqf</i> Land Committee in regulating land development and land use	4.90	
Retraceability	F1	The importance for residents to have residence permits on <i>Waqf</i> land in physical form	4.98	3.32
	F2	Ease/convenience to view previous ownership documents	2.54	
	F3	Ease/convenience of accessing the agreement on the settlement	2.45	
Recognizable	G1	Effectiveness of institutional structures (<i>RT/RW</i>) in representing residents' decision-making	4.01	4.50
	G2	Performance in tenancy management	4.92	
	G3	Recognition in residents' opinion	4.58	
Reflexive	H1	Agreement with Changes	3.12	2.78
	H2	Community contribution to changes	2.36	
	H3	Effectiveness in monitoring the settlements	3.94	
	H4	Frequency of agreement changes	1.71	

The resilient position is the highest, recorded at 4.74. This suggests that the resilient aspect possesses the highest total average and demonstrates significant influence and effective application in the context of the *Waqf* land in Siwalan Village. The highest average score of resilience was derived from the three component scores of B1 (4.87), B2 (4.70), and B3 (4.64). The formal legal protection is the primary contributing factor, as the

community is embraced and recognized by the Kauman Grand Mosque as the owner of *Waqf* land. A formal agreement between the mosque, the land manager, and the community delineates the rights and responsibilities of each party, thereby fostering a continuous and secure environment for the community. The mosque's robust support in recognizing and formalizing the agreement and active engagement with the community to address issues through structured agreements significantly enhanced the resilience score.

The robust aspect received the second-highest average score of 4.67. The average scores of robustness were derived from the scores of C1 (4.71), C3 (4.75), and C2 (4.56). The result indicates the *Waqf* holder's capacity to sustain the stability and effectiveness of their policies under diverse conditions, including the unauthorized construction of settlements on *Waqf* land. The *Waqf* holder needed to establish new policies and collaborate with the residents of the *Waqf* settlements to safeguard their mutual interests. The ability of *Waqf* managers to sustain policy stability and effectiveness amidst various pressures and changes indicates the presence of a robust and adaptive management system.

The third highest score among various R frameworks is the recognizable aspect, with an average score of 4.5, calculated from the average scores of G1 (4.01), G2 (4.92), and G3 (4.58). This demonstrates the *Waqf* owner's unique ability to recognize and understand the priorities and needs of the residents living on the *Waqf* land. The *Waqf* owner has enacted significant measures to ensure that each resident feels valued and recognized, as indicated by the high score. Implementing the signboard on each residence constitutes a fundamental action (see Figure 8). The board includes essential information, such as the name of the head of the family, the address, and the house serial number on the *Waqf* land. This initiative enhances the sense of security and belonging.

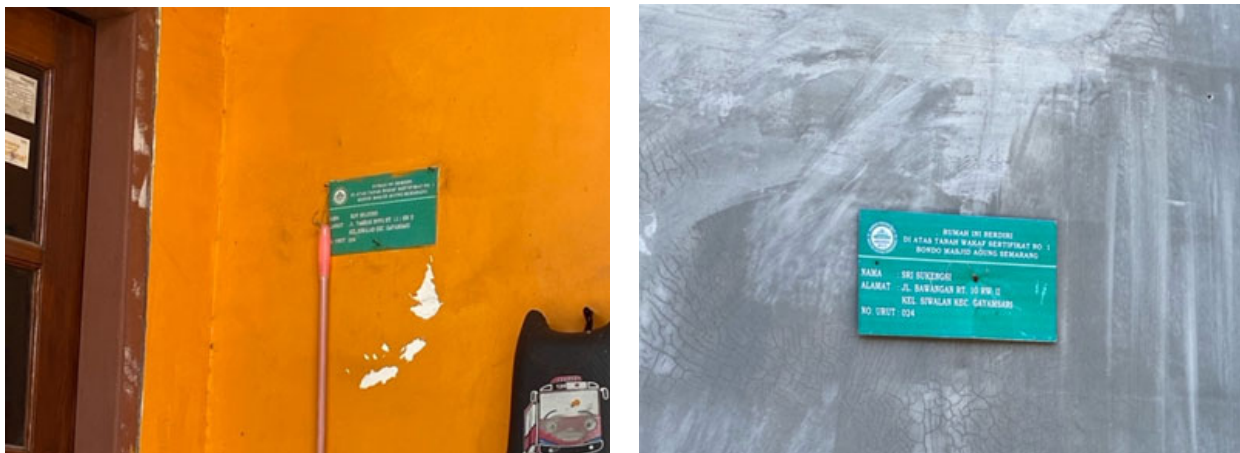


Figure 8. Identification board (consisting of names, addresses, and house serial numbers) as physical proof.

The average score for responsiveness is 4.38, reflecting the effectiveness of *Waqf* owners in addressing the issues and needs of residents on *Waqf* land. The highest contributing score is A3 (4.93), followed by A1 (4.27) and A2 (3.93). Responsiveness in this context denotes the capacity of *Waqf* landowners to promptly address residents' complaints, suggestions, or needs. The findings indicate that the policy of paying dues is effective in the management system of *Waqf* land, as the community acknowledges this policy as a recognition of their existence. Effective and adaptable policies demonstrate the *Waqf* land manager's Responsiveness to community needs and perspectives.

The reliability aspect has an overall average score of 4.32, with the highest contribution from component D4 (4.90), followed by D1 (4.7), D3 (4.62), and D2 (2.98), which has the lowest score. The high scores of D4 and D9 indicate the significant public trust in

the residence permit policy concerning *Waqf* land, which additionally ensures security of tenure. Conversely, trust has been established within the community, as *Waqf* land managers granted authority to appointed community representatives who serve as contact persons and collectors of monthly dues. Further, this may enhance public confidence in the actions of the *Waqf* owner concerning policy changes. Trustworthiness is essential for improving the effectiveness of the management of *Waqf* land in the study area. The significant reliability suggests that the *Waqf* landowner has successfully cultivated strong connections with the community. *Waqf* owners can implement policies and address future challenges more effectively when they possess high public trust. Continuous efforts are necessary to maintain and improve this trust.

Regarding the respect aspect, the assessment shows a moderately high level, with a total average score of 4.09. From the five components, the highest average score is E5 (4.90), followed by E4 (4.83), E1 (4.79), E3 (3.26), and E2 (2.67). The *Waqf* owner has taken significant steps to guarantee that each resident feels appreciated and acknowledged. This is shown by the higher score of good responsibility of *Waqf* land managers in registering and administering the *Waqf* land, followed by the effectiveness of regulating the land development in the study area. However, the community perceives that communication between the Kauman Grand Mosque as the *Waqf* landowner and residents is inadequate, as it occurs solely through the appointed *Waqf* land manager.

Retraceability denotes the capacity to track and authenticate *Waqf* land's historical ownership and licensing modifications. The results indicate that the retraceability total average score is 3.32, reflecting a moderately low score from three components, namely F1 (4.98), F2 (2.54), and F3 (2.45). The high score of F1 indicated that the community is aware of the importance of physical evidence as recognition to settle on *Waqf* land. However, in general, the survey results indicate low effectiveness in this aspect, suggesting that residents encounter challenges in accessing information about the history of land ownership and policy changes. The community acknowledges the significance of physical evidence of residence on *Waqf* land as an assurance for ongoing possession. On the other hand, the community's access to records for people residing on *Waqf* land owned by the Kauman Grand Mosque is limited, as only community representatives are permitted to view these records. Therefore, the delivery of trust to *Waqf* managers as representatives of the community is important in order to ensure that all records pertaining to holders and licensing are properly maintained.

The last R component is reflexive, which recorded the lowest total average score of 2.78. The final average score was calculated from components H3 (3.94), H2 (3.12), H1 (2.36), and H4 (1.71). The community believes that the monitoring of *Waqf* land conducted by landowners is successful in tracking developments in the study area, as indicated by the H3 score. The introduction of monthly dues is included in the policy assessment, with most of the community expressing opposition to any increases. Anticipated policy changes will engage the community residing on the *Waqf* land more actively. In practice, the role and contributions of the community are mainly reflected through appointed community representatives. This suggests challenges related to transparency and reflectiveness in *Waqf* land management within the study area.

5. Discussion

The primary contributors to responsible *Waqf* land management are resilience (4.74), robustness (4.67), and recognizability (4.5). This demonstrates that the management system has significantly enhanced the settlement's resilience and capacity to recover from challenges and disruptions, as noted by [53]. The enhanced resilient score signifies strong protection for individuals living on *Waqf* land, providing clarity and security for residents,

especially against evictions frequently occurring in such settlements [3]. Robustness is associated with the sustainability of ‘policy strength’ and the capacity of a society and its institutions to withstand transformation [54]. Maintaining trust and effective cooperation between *Waqf* landowners and residents is crucial for the sustainability of *Waqf* land management. These two aspects indicate that the *Waqf* owner possesses a robust and flexible management system, effectively sustaining trust and fostering positive community collaboration, while in recognizability, implementing personalized measures allows the *Waqf* owner to foster a more resilient and trustworthy community. Residents feel acknowledged and valued, as they understand that the *Waqf* management recognizes their presence and identity, and hence increases their tenure security level [49] (see Figure 9). This method exemplifies the *Waqf* owner’s commitment to creating an inclusive and supportive community by prioritizing individual needs and addressing them thoughtfully.

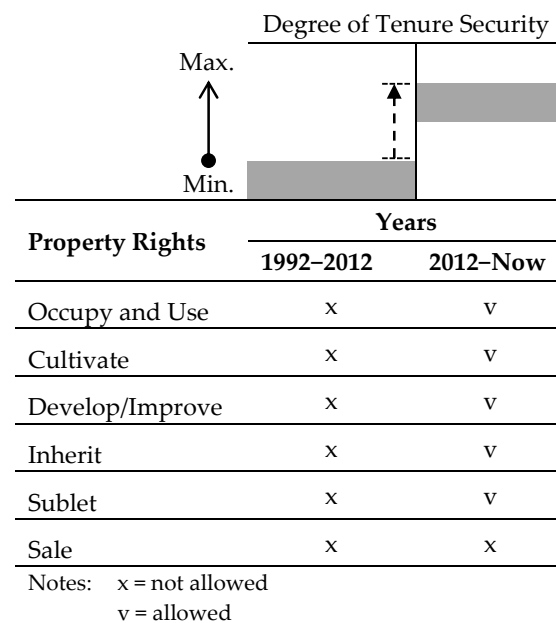


Figure 9. Level of tenure security.

Meanwhile, the aspects responsive, reliable, and respected also received relatively high scores with average scores of 4.38, 4.32, and 4.09. High responsiveness fosters effective communication between parties and enables rapid response to emerging issues. This emphasizes the necessity for *Waqf* managers to respond promptly and efficiently to raise awareness effectively, which requires flexible legal interpretations and participatory decision-making [55]. Implementing transparent and open policies will facilitate the establishment of trust between the *Waqf* owner and residents. In the reliability aspect, measurement on effective communication, transparency in decision-making, and prompt responses to emerging issues can be implemented. *Waqf* owners must adjust policies to align with society’s evolving needs and aspirations while remaining vigilant to potential conflicts or dissatisfaction arising from these changes. The respected aspect must be enhanced to ensure that residents feel at ease and valued, as they know that the *Waqf* management acknowledges their existence and identity. This subsequently improves their overall sense of security and stability within their living environment. The survey indicated that direct communication concerning *Waqf* land between *Waqf* owners and holders was limited, leading to uncertainty regarding the residents’ status at certain times. Thus, establishing a direct and clear communication channel and conducting regular meetings to address existing issues and requirements is essential in order to avoid disputes [20]. This

intensive interaction fosters stronger relationships and ensures that the voices and needs of the community are considered in all decision-making processes.

The least significant scores are for the aspects retraceability (3.32) and reflexiveness (2.78). The attributes of retraceability and reflexivity receive the lowest average ratings owing to limited access to relevant documents and infrequent alterations. No reassessment was conducted to identify areas for potential improvement. This issue is essential for maintaining land management responsibilities to avoid disputes and mismanagement of the enhancement. Enhancing inclusive and participatory development may improve tenure security for urban poor and low-income residents [51]. The limited effectiveness in the reflexive aspect suggests that the policy evaluation and adjustment process remain suboptimal. Residents perceive a lack of representation in the decision-making process, and the policies enacted are frequently not subjected to a comprehensive evaluation regarding their impact. Consequently, current policies may lack relevance or effectiveness over time, potentially hindering the development and welfare of communities on *Waqf* lands. Ramadhani et al. [56] emphasize the significance of physical evidence, particularly written agreements, as a crucial means of proof in instances of agreement failure by one party. *Waqf* managers must ensure that all records pertaining to holders and licensing are properly maintained and readily accessible to the public. Transparency in information dissemination enhances public trust in *Waqf* management and guarantees all stakeholders equal access to essential information. Therefore, enhancing the retraceability aspect will bolster the community's sense of security and trust in *Waqf* land management.

The inability to review and adapt policies in response to evolving conditions and needs is attributed to policies that do not influence the dynamics between the *Waqf* owner and the community. Furthermore, the lack of traceable and verifiable documentation diminishes transparency and accountability, thereby undermining trust and a sense of security among residents. Consequently, it is imperative to facilitate access to *Waqf* land documents. By enabling the public to easily access and verify pertinent documents, such as land certificates and agreement documents, residents of *Waqf* land can gain a clearer understanding of their rights and obligations. This measure will also alleviate the uncertainty and anxiety residents may experience regarding the legal status of the land they occupy.

Concerning the policy of increasing monthly payments for those expanding their property functions, it is crucial to assess the impact and implications of this policy by considering variations in business scale and financial capacity among boarding house and contract owners. The disparity in the new policy, which is exclusively applied to boarding house owners and renters, requiring them to pay an additional fixed monthly fee, suggests an inequity in the treatment of small business owners compared to those with larger enterprises. In this context, boarding house owners or small renters with a limited number of rooms will be more adversely affected than owners with numerous rooms. Efforts to adjust policies to ensure greater fairness and sustainability for all stakeholders will contribute to the establishment of an inclusive and sustainable environment, ultimately enhancing social welfare in the study area.

6. Conclusions

The findings indicate that the study area has experienced a transformation of informal settlements into more formal ones. These findings are recognized by the *Waqf* landowners, the Kauman Grand Mosque. The transformation involves multiple processes, beginning with land placement and culminating in an agreement between the owner and the user. This agreement is formally recognized through the installation of placement signboards and an inventory list of users maintained by the landowner. This process involves extensive negotiation and communication, given that the residents residing on *Waqf* land do not

own the land. The recognition granted is significantly influenced by the willingness and flexibility of the *Waqf* landowner to accommodate informal settlements on the *Waqf* land, as well as the community's commitment and acceptance of the proposed conditions aimed at preserving and benefiting the *Waqf* land.

The community's commitment and acceptance are manifested through an agreement between the owner and the users. It is crucial for enhancing community resilience regarding the allocation of *Waqf* land. The implemented agreement can potentially increase the status of *Waqf* residents from squatters to holders of a higher tenure category. The contractual policy mandating the payment of dues as outlined in the agreement provides residents of the *Waqf* land with enhanced security regarding land protection, as they have been granted permission to remain. From the mosque's perspective, the agreement represents an effort by the land managers to protect *Waqf* assets and maintain the integrity of the property. From the community's perspective, these agreements offer a practical solution that addresses their immediate needs by ensuring security and stability in their living environment. Formalizing their occupation and property usage enhances the community's confidence and legitimacy, alleviating fears of displacement. The agreement effectively preserves *Waqf* assets while providing a secure living environment for the community, highlighting the importance of careful stewardship of *Waqf* property.

In planning contexts, it is essential to prioritize land tenure security when addressing similar occurrences in other regions. The interconnection between land tenure security and responsible land management is evident; however, the emphasis should be placed on the degree of land tenure itself. Stable land tenure is essential as it provides inhabitants with rights and protections against eviction, fosters economic stability, and incentivizes investment in property improvements. Consistency is essential for sustainable community development and effective land management. Upon establishing tenure security, attention can be focused on responsible land management to ensure the property serves its intended purpose and benefits the community.

This study addressed the significance of the practice of formalizing informal urban settlements. However, it did not explore the socio-economic development opportunities. This is suggested as certain communities have established businesses on *Waqf* land, thereby expanding the potential uses of *Waqf* land beyond simple occupation. Future research should examine the advantages of *Waqf* land in enhancing community living standards and well-being. Future research may also investigate the extent to which the findings of this study can be replicated in other areas as well. We acknowledge that communities are different, but their circumstances may be similar, especially in the same Indonesian regulatory context. Such studies can confirm our findings. Additionally, one could compare the practices in other regulatory and territorial contexts where—similar to Indonesia—*Waqf* land exists alongside statutory land tenure. These include Turkey, Egypt, Pakistan, Jordan, and Malaysia. Such studies could evaluate the role of formal institutions and formal agreements in executing *Waqf* land management principles and practices.

This study identifies the predominant components of R in evaluating responsible land management; nevertheless, the transformation process involved has not been thoroughly detailed. This study only highlights the present circumstances in which *Waqf* land occupied by the community has attained explicit acknowledgement, alleviating any concerns over their status. We posit that the recognition of existing *Waqf* land likely entailed rigorous negotiation and discourse among multiple stakeholders, warranting more exploration in further studies.

Author Contributions: I.R.: research design, data analysis, and writing and finalization of the paper. W.T.d.V.: research design, and improving and reviewing the paper. A.B.R. and K.A.H.: data collection, data analysis, and refining the research framework. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by Diponegoro University with grant number: 259-173/UN7.D2/PP/VII/2022.

Institutional Review Board Statement: Our institution does not require ethics approval for reporting case research that involves human subjects in data collection. This study utilizes micro-level survey data. Participants were informed beforehand about the detailed content of the investigation and provided with informed consent during the survey. Any additional inquiries regarding the surveyed data may be addressed to the corresponding author.

Data Availability Statement: The original contributions presented in the study are included in the article. Further inquiries can be directed to the corresponding author.

Acknowledgments: We would like to acknowledge all the team members for their efforts in collecting data during the field survey. This work was supported by the staff exchange and adjunct professor program from World Class University (WCU) program 2025, Diponegoro University.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Kirk, M.; Mabikke, S.; Antonio, D.; Chigbu, U.E.; Espinoza, J. *Land Tenure Security in Selected Countries: Global Report*; UN Habitat: Nairobi, Kenya, 2015.
2. Widowati, D.A.; Yurista, A.P.; Bosko, R.E. Hak Penguasaan atas Sumber Daya Alam dalam Konsepsi dan Penjabarannya dalam Peraturan Perundang-Undangan. *J. Legis. Indones.* **2019**, *16*, 147.
3. Moroni, S. Property as a human right and property as a special title. Rediscussing private ownership of land. *Land Use Policy* **2018**, *70*, 273–280. [[CrossRef](#)]
4. Zhang, M.; Yan, X. Does informal homeownership reshape skilled migrants' settlement intention? Evidence from Beijing and Shenzhen. *Habitat Int.* **2022**, *119*, 102495. [[CrossRef](#)]
5. Wekesa, B.W.; Steyn, G.S.; Otieno, F.A.O. A review of physical and socio-economic characteristics and intervention approaches of informal settlements. *Habitat Int.* **2011**, *35*, 238–245. [[CrossRef](#)]
6. Mahabir, R.; Crooks, A.; Croitoru, A.; Agouris, P. The study of slums as social and physical constructs: Challenges and emerging research opportunities. *Reg. Stud. Reg. Sci.* **2016**, *3*, 399–419. [[CrossRef](#)]
7. Inostroza, L. Informal urban development in Latin American urban peripheries. *Landsc. Urban Plan.* **2017**, *165*, 267–279. [[CrossRef](#)]
8. Dewa, D.D.; Buchori, I.; Rudiarto, I.; Sejati, A.W. Modifying the contact perimeter approach for measuring urban compactness gradients in the Joglosemar Urban Region, Indonesia. *J. Geovisualization Spat. Anal.* **2023**, *7*, 4. [[CrossRef](#)]
9. Zhang, Y. The credibility of slums: Informal housing and urban governance in India. *Land Use Policy* **2018**, *79*, 876–890. [[CrossRef](#)]
10. Nassar, D.M.; Elsayed, H.G. From Informal Settlements to sustainable communities. *Alex. Eng. J.* **2018**, *57*, 2367–2376. [[CrossRef](#)]
11. Abdelhalim, K. *Participatory Upgrading of Informal Areas—A Decision-Makers' Guide for Action*; Participatory Development Programme in Urban Areas (PDP) in Egypt: Cairo, Egypt, 2010.
12. Alizadeh, B.; Mirgholami, M.; Dadashpoor, H.; Farabiasl, N.; Allan, A. The impact of land tenure security on housing investment at informal settlements (The case of Eslam Abad neighborhood, Tehran). *Space Ontol. Int. J.* **2019**, *8*, 77–85.
13. Otiso, K.M. State, voluntary and private sector partnerships for slum upgrading and basic service delivery in Nairobi City, Kenya. *Cities* **2003**, *20*, 221–229. [[CrossRef](#)]
14. Davis, D.E. Reflections on “the politics of informality”: What we know, how we got there, and where we might head next. *Stud. Comp. Int. Dev.* **2018**, *53*, 365–378. [[CrossRef](#)]
15. Roy, A. Urban informality: Toward an epistemology of planning. *J. Am. Plan. Assoc.* **2005**, *71*, 147–158. [[CrossRef](#)]
16. Durand-Lasserve, A.; Selod, H. The Formalization of Urban Land Tenure in Developing Countries. In *Urban Land Markets: Improving Land Management for Successful Urbanization*; Springer: Dordrecht, The Netherlands, 2009; pp. 101–132. [[CrossRef](#)]
17. Khalifa, M.A. Redefining slums in Egypt: Unplanned versus unsafe areas. *Habitat Int.* **2011**, *35*, 40–49. [[CrossRef](#)]
18. Paudyal, D.R. Pro-poor Land Management System: A Study Considering Dynamic Aspect of Land Tenure in Nepal. In Proceedings of the XXIII FIG Congress, Munich, Germany, 8–13 October 2006.
19. Paudyal, D.R.; McDougall, K. Spatial Data Infrastructure for Pro-Poor Land Management. In Proceedings of the 24th International Federation of Surveyors International Congress, Sydney, Australia, 11–16 April 2010.

20. Faisal, F. *Waqf Land Disputes and Alternative Settlements*. *Randwick Int. Soc. Sci. J.* **2021**, *2*, 259–268. [\[CrossRef\]](#)
21. Fernandes, E. *Regularization of Informal Settlements in Latin America*; Lincoln Institute of Land Policy: Cambridge, UK, 2011.
22. Payne, G. Urban land tenure policy options: Titles or rights? *Habitat Int.* **2001**, *25*, 415–429. [\[CrossRef\]](#)
23. Kahraman, S. *Waqf and the Urban Housing Question: Islamic Land Donations for Housing in Bangkok*. *Am. J. Econ. Sociol.* **2021**, *80*, 637–663. [\[CrossRef\]](#)
24. Mohammad, M.T.S. *An Ideal Financial Mechanism for the Development of Waqf Properties in Malaysia*, 2nd ed.; Universiti Teknologi Malaysia Press: Skudai, Malaysia, 2006.
25. Cizacka, M. Cash *Waqf* as Alternative to NBFIs Bank. In Proceedings of the International Seminar on Non-bank Financial Institutions: Islamic Alternatives, Kuala Lumpur, Malaysia, 1–3 March 2004.
26. El-Gari, M.A. The Qard Hassan Bank. In Proceedings of the International Seminar on Nonbank Financial Institutions, Islamic Alternatives, Kuala Lumpur, Malaysia, 1–3 March 2009.
27. Jalil, A. *Waqf instruments for construction contract: An analysis of structure*. *J. Muamalat Islam. Financ. Res.* **2008**, *5*, 14.
28. Hashim, M.A. *Oxford Sokong Wakaf Korporat*; Utusan Malaysia: Petaling Jaya, Malaysia, 2012.
29. Tauran, T. Beyond the informal settlement: The Land Tenure Situation of Urban Kampung in Surabaya, Indonesia. *IOP Conf. Ser. Earth Environ. Sci.* **2021**, *916*, 012010. [\[CrossRef\]](#)
30. Khan, M.K.; Abdul, R.S.Z.; Bardai, B.; Saruchi, S.A. Framework of affordable cooperative housing through an innovative *Waqf*-based source of finance in Karachi. *J. Islam. Account. Bus. Res.* **2023**, *14*, 379–397. [\[CrossRef\]](#)
31. Rochani, A.; Yuliasuti, N.; Sudarwanto, B. Sustainable *Waqf* Space in Urban Kampong; The Case of Kampong Kauman, Semarang City. *J. Islam. Archit.* **2024**, *2*, 487–502. [\[CrossRef\]](#)
32. de Vries, W.T.; Chigbu, U.E. Responsible Land Management—Concept and application in a territorial rural context. *Fub Flächenmanagement Bodenordn.* **2017**, *79*, 65–73.
33. de Vries, W.T.; Rudiarto, I. Testing and Enhancing the 8R Framework of Responsible Land Management with Documented Strategies and Effects of Land Reclamation Projects in Indonesia. *Land* **2023**, *12*, 208. [\[CrossRef\]](#)
34. Kahf, M.; Mohamed, A.N. Cash *Waqf*: An innovative instrument of personal finance in Islamic banking. *J. Islam. Econ. Bank. Financ.* **2017**, *13*, 13–29.
35. Yiftachel, O. Theoretical notes on gray cities': The coming of urban apartheid? *Plan. Theory* **2009**, *8*, 88–100. [\[CrossRef\]](#)
36. Payne, G. *Land, Rights and Innovation: Improving Tenure Security for the Urban Poor*; ITDG Publishing: Rugby, UK, 2002.
37. De Soto, H. *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*; Basic Books: New York, NY, USA, 2000.
38. Kuran, T. The provision of public goods under Islamic law: Origins, impact, and limitations of the *Waqf* system. *Law Soc. Rev.* **2001**, *35*, 841–897. [\[CrossRef\]](#)
39. Lim, H. *Land, Law and Islam: Property and Human Rights in the Muslim World*; Bloomsbury Publishing: London, UK, 2008.
40. Ansell, C.; Gash, A. Collaborative governance in theory and practice. *J. Public Adm. Res. Theory* **2008**, *18*, 543–571. [\[CrossRef\]](#)
41. de Vries, W.T.; Rudiarto, I.; Piyasena, N.M. *Geospatial Science for Smart Land Management: An Asian Context*; CRC Press: Boca Raton, FL, USA, 2023.
42. Zevenbergen, J.A.; de Vries, W.T.; Bennet, R.M. *Future Directions in Responsible Land Administration*; Taylor & Francis: Abingdon, UK; CRC Press: Boca Raton, FL, USA, 2015.
43. Bougon, J. Responsive, responsible and respected government: Towards a New Public Administration theory. *Int. Rev. Adm. Sci.* **2007**, *73*, 7–26. [\[CrossRef\]](#)
44. Ameyaw, P.D.; Dachaga, W.; Chigbu, U.E.; De Vries, W.T.; Abedi, L. Responsible Land Management: The Basis for Evaluating Customary Land Management in Dormaa Ahenkro, in Ghana. In Proceedings of the World Bank Conference on Land and Poverty Conference, Washington, DC, USA, 19–23 March 2018.
45. Rudiarto, I.; Handayani, W.; Wijaya, H.B.; Insani, T.D. Spatial distribution of socioeconomic characteristics in rural's Java: A Case from Three Different Rural Areas in Central Java. *IOP Conf. Ser. Earth Environ. Sci.* **2018**, *123*, 012024. [\[CrossRef\]](#)
46. Kombe, W.J.; Kreibich, V. Reconciling informal and formal land management: An agenda for improving tenure security and urban governance in poor countries. *Habitat Int.* **2000**, *24*, 231–240. [\[CrossRef\]](#)
47. Fadhillah, N. Sengketa Tanah Wakaf Dan Strategi Penyelesaiannya. *De Jure J. Huk. Dan Syar'iah* **2011**, *3*, 71–85. [\[CrossRef\]](#)
48. Payne, G.; Durand-Lasserve, A.; Rakodi, C. Social and Economic Impacts of Land Titling Programmes in Urban and Peri-Urban Areas. In Proceedings of the World Bank Urban Research Symposium, Washington, DC, USA, 14–16 May 2007.
49. Reerink, G. *Tenure Security for Indonesia's Urban Poor*; Leiden: Leiden University Press: Leiden, The Netherlands, 2011.
50. Rudiarto, I.; Zaim, Z.; Buchori, I.; Wijaya, H.B. The Dynamics of Village Land Management: A Case from Central Java, Indonesia. In *Geospatial Science for Smart Land Management*; CRC Press: Boca Raton, FL, USA, 2024; pp. 366–375. [\[CrossRef\]](#)
51. Uwayezu, E.; de Vries, W.T. Scoping land tenure security for the poor and low-income urban dwellers from a spatial justice lens. *Habitat Int.* **2019**, *91*, 102016. [\[CrossRef\]](#)
52. Friendly, A. The right to the city: Theory and practice in Brazil. *Plan. Theory Pract.* **2013**, *14*, 158–179. [\[CrossRef\]](#)

53. Wardiansyah, K.; Arba, H.; Haeratun. Legal analysis of non-litigious settlement of *Waqf* land disputes by the land office of Bima Regency. *Int. J. Multidiscip.* **2024**, *9*, 215–222. [[CrossRef](#)]
54. Lowndes, V.; Roberts, M. *Why Institutions Matter: The New Institutionalism in Political Science*; Palgrave Macmillan: Basingstoke, UK, 2013.
55. Ismail, C.Z.; Salim, N.J.; Hanafiah, N.J.A. Administration and management of *Waqf* land in Malaysia: Issues and solutions. *Mediterr. J. Soc. Sci.* **2015**, *6*, 613. [[CrossRef](#)]
56. Ramadhani, P.P.; Paserangi, H.; Heryani, W. Legal certainty of the deed of agreement made by a notary based on the power to sell (Case study case number: 41/PDT. G/2016/PN. PA). *Indones. Priv. Law Rev.* **2021**, *2*, 95–108. [[CrossRef](#)]

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.