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Land Consolidation Policies for Advancing Transit-Oriented Development: a Comparative Legal Study of ASEAN Countries

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Article	Abstract
<p>Received: Des 02, 2025; Reviewed: Jan 07, 2026; Accepted: Feb 09, 2026; Published: Feb 26, 2026</p>	<p><i>This article examines how land consolidation policies function as legal instruments to support Transit-Oriented Development (TOD) in three ASEAN countries: Indonesia, Singapore, and Thailand. Using a qualitative approach grounded in comparative legal analysis, this study explores the regulatory frameworks, institutional arrangements, and implementation practices that shape the relationship between land consolidation or land readjustment mechanisms and transit-based urban development. The findings reveal significant differences among the three countries. Indonesia continues to face fragmented regulations and socio-economic impacts on low-income groups; Singapore has successfully advanced TOD through strong state land ownership and centralized planning; while Thailand operates a more participatory and equitable land readjustment scheme. This study concludes that Indonesia can strengthen its land consolidation policies for TOD by adopting Singapore's institutional clarity and Thailand's participatory mechanisms, thereby moving toward a more inclusive and sustainable model of urban development.</i></p> <p>Keywords: <i>land consolidation; TOD; ASEAN law; land readjustment; urban policy</i></p>

A. INTRODUCTION

1. Urban development in Southeast Asia has accelerated rapidly over the past two decades, driven by population growth, shifts in economic structures, and spatial transformation (Leaf 2011). Indonesia is among the countries experiencing the highest pressure of urbanization, with more than half of its population now residing in urban areas—a figure projected to continue rising in the coming decades (Firman 2019). This surge in urbanization has created an urgent need for development models that are efficient, accessible, and capable of providing affordable housing. Transit-Oriented Development (TOD) has consequently emerged as a relevant approach, as it integrates land-use planning

with public transportation networks to create dense, connected, and sustainable urban areas (Suzuki et al. 2013).

- 2.
3. However, the implementation of TOD in Indonesia cannot be separated from long-standing land governance challenges. Overlapping institutional authority, fragmented sectoral regulations, and issues related to land tenure often hinder development processes (Lucas and Warren 2013). Within this context, land consolidation becomes an essential instrument. Normatively, land consolidation is intended not only to reorganize land parcels but also to support agrarian reform and promote equitable distribution of development benefits (Adrianto 2020). Nonetheless, previous studies indicate a gap between policy idealism and its practical implementation. Kusno (2012) highlights that relocation triggered by urban redevelopment frequently generates economic vulnerability for low-income communities, whereas Widiyanto (2021) finds that land consolidation often remains an administrative formality rather than a substantive participatory process. These tensions have fueled academic debates on whether land consolidation truly functions as an instrument of justice or whether it inadvertently legitimizes new forms of displacement.
- 4.
5. A comparative perspective with other ASEAN countries offers broader insight. Singapore, for example, has been able to implement TOD rapidly due to the state's strong control over land and its highly effective land acquisition mechanisms (Phang 2018). Although efficient, this approach provides limited space for public participation. In contrast, Thailand applies a land readjustment model that requires active contributions and involvement from landowners in the reorganization of urban areas (Nakayama 2014; JICA 2015). This mechanism allows development to proceed without displacing landowners from their communities while ensuring a more equitable distribution of benefits.
- 6.
7. The contrast between these two approaches has produced two major schools of thought. Some scholars argue that successful TOD requires strong state control, as demonstrated by Singapore (Yuen 2011), whereas others emphasize that equitable urban development must prioritize landowner and community participation, as practiced in Thailand (Sorensen 2000). Indonesia lies between these two paradigms. Thus, understanding how each country balances efficiency, participation, and social equity is crucial for reformulating Indonesia's land consolidation policies to better support TOD.
- 8.
9. This study aims to provide a comparative analysis of land consolidation policies in Indonesia, Singapore, and Thailand, while identifying key elements that may strengthen Indonesia's legal framework. The research is significant because it bridges the perspectives of public policy, land law, and urban planning to formulate a more responsive model of land consolidation for TOD development. Overall, the study concludes that Indonesia must enhance regulatory harmonization, clarify the roles of relevant institutions, and ensure substantive participation to protect vulnerable groups.

B. MATERIALS AND METHODS

1. This research employs a comparative qualitative approach that focuses on analyzing the legal frameworks, institutional structures, and policy implementation dynamics in three ASEAN countries. The data sources include key national regulations—such as Indonesia's Basic Agrarian Law of 1960 (UUPA), Presidential Regulation No. 86/2018, and Ministry of ATR/BPN Regulation No. 12/2019; Singapore's Land Acquisition Act; and Thailand's

Land Readjustment Act—alongside academic literature, policy reports, and comparative studies on urban planning.

The analysis was carried out in three stages:

- 2.
3. 1. Doctrinal Analysis, used to examine the structure and substance of the legal frameworks.
- 4.
5. 2. Comparative Analysis, conducted to assess similarities and differences among the approaches adopted by each country.
- 6.
7. 3. Interpretive Analysis, applying public policy theory, social justice perspectives, and urban planning concepts to understand the empirical implications of each model.

C. RESULT AND DISCUSSION

8.

1. Variations in Legal Models of Land Consolidation and TOD

1.

1. The legal approaches to land consolidation within TOD development in Indonesia, Singapore, and Thailand exhibit significant differences shaped by each country's regulatory framework, institutional structure, and policy orientation. Indonesia adopts a hybrid model that integrates land consolidation with agrarian reform and spatial planning agendas. Although the regulatory instruments—such as Ministry of ATR/BPN Regulation No. 12/2019 and Presidential Regulation No. 62/2018—provide a normative foundation, implementation frequently encounters major challenges, including overlapping authority, weak cross-sectoral coordination, and limited replotting mechanisms that preserve the socio-economic access of affected communities. As a result, land consolidation in Indonesia often shifts into vertical relocation that does not provide direct benefits for residents.

2.

3. In contrast, Singapore implements a highly centralized system through the Land Acquisition Act, which grants the state broad authority to acquire land for public purposes. With dominant state land ownership and strong institutional integration among the Land Transport Authority (LTA), Housing and Development Board (HDB), and Urban Redevelopment Authority (URA), TOD development proceeds rapidly, consistently, and with minimal obstacles. The Singapore model is extremely efficient, although it offers limited negotiation space for landowners.

4.

5. Thailand occupies a unique position by adopting a land readjustment model focused on landowner participation. This approach enables the government and the community to jointly reorganize land parcels so that landowners retain property after redevelopment. The system preserves the social and economic value of original residents and can reduce social conflict, although it requires more time due to its reliance on collective agreement..

2.

2. Policy Dynamics and Socio Legal Implications

4.

1. The dynamics of land consolidation policy indicate that institutional governance is the primary factor determining the effectiveness of TOD implementation. Indonesia faces considerable institutional challenges due to fragmented authority among the National Land Agency (BPN), local governments, and transportation institutions. The

lack of regulatory harmonization leads to inconsistent planning and implementation of TOD projects. Singapore presents a contrasting model, where unified planning authorities facilitate integrated and rapid decision-making. Meanwhile, Thailand addresses land conflict issues through readjustment committees that bring together landowners, government officials, and experts on an equal basis.

2.

3. From a social justice perspective, Indonesia continues to face significant challenges, particularly for low-income groups affected by relocation. Loss of economic access, lifestyle disruption, and limited commercial spaces are common issues. Singapore maintains social justice through the distribution of affordable HDB housing integrated with public transport networks. Thailand demonstrates strong performance through participatory mechanisms that allow residents to remain in their communities after redevelopment, preserving their social cohesion.

4.

5. Overall, the effectiveness of TOD implementation is closely tied to the land management model. Singapore remains the most effective given its strong state control. Thailand is moderately effective due to its participatory approach. Indonesia, however, continues to struggle with land conflicts, high land acquisition costs, and weak policy synchronisation..

5.

6. 3. Comparative Insights for Indonesia

7.

1. The comparison with Singapore and Thailand highlights the need for Indonesia to strengthen institutional integration in TOD management. This reform includes establishing a coordinating authority for TOD that oversees land policy, transportation, housing, and spatial planning. Indonesia can also adopt Thailand's principle of substantive participation by involving communities directly in planning, land valuation negotiations, and compensation schemes. Ensuring economic protection for low-income groups should be a central objective so that relocation does not result in the loss of livelihoods.

8. 4. Post-Integration Developments

Governance and institutional arrangements remain central to the effectiveness of land consolidation. Indonesia lacks a single institutional structure capable of coordinating all related sectors. In contrast, Singapore has established an integrated ecosystem among LTA, HDB, and URA, enabling TOD implementation to proceed systematically. Thailand relies on land readjustment committees that serve as collaborative platforms balancing governmental and community interests.

From an economic perspective, Indonesia continues to depend on state budget allocations (APBN) and private partnerships, making land acquisition costly and potentially delaying projects. Singapore overcomes these obstacles through a land banking strategy, allowing the government to acquire land early and recapture land value increases to support equitable access. Thailand uses value-capture schemes by selling portions of replotting outputs to finance infrastructure.

Regarding social and environmental sustainability, Indonesia is vulnerable to gentrification because vertical relocation often disrupts social networks and economic access. Singapore maintains social sustainability through well-planned HDB

developments integrated with green spaces and public transport. Thailand preserves social continuity by allowing residents to remain in the same area after reorganization.

5. Empirical Evidence of Successful Practices

5.1 Indonesia

Although Indonesia faces regulatory and institutional limitations, several empirical cases demonstrate the potential for successful land consolidation and TOD-oriented development, particularly in metropolitan areas.

1) Dukuh Atas TOD – Indonesia’s First Multi-Transit Hub

Dukuh Atas serves as the most comprehensive multimodal integration hub, connecting KRL, MRT, LRT Jabodebek, TransJakarta, and pedestrian networks. Although formal replotting was not applied, the area demonstrates that integrated transportation can increase land-use intensity, attract private investment, and improve urban connectivity. Economic activity and MSMEs have grown following pedestrian improvements and multimodal access.

2) Lebak Bulus TOD – Impact of MRT Development on Area Commercialization

Lebak Bulus has undergone significant changes in land value and urban development patterns. Since the MRT began operations, the district has transformed into a new commercial corridor with apartments, offices, and retail centers. This shows that TOD accelerates development and creates investment corridors even without formal land consolidation.

3) Kampung Deret & Tanjung Duren – Localized Replotting Models

Although not classified as TOD projects, Kampung Deret and several Jakarta kampung improvements apply basic replotting principles, allowing residents to return to upgraded locations. These cases demonstrate Indonesia’s potential to adopt a land readjustment model similar to Thailand when supported by stronger institutional frameworks.

4) Jatinegara–Cawang TOD – Steps Toward Spatial Urban Integration

The LRT Jatinegara–Cawang corridor opens opportunities for informal land consolidation through corridor improvement and enhanced pedestrian networks. The government’s spatial control efforts, including building intensity management around stations, indicate a movement toward more integrated urban planning.

5) Bandung – Tegalluar TOD (High-Speed Rail)

The Tegalluar area, home to the Jakarta–Bandung High-Speed Rail station, has seen rapid increases in land value. The West Java Provincial Government has begun planning land consolidation to create new residential centers around the station.

Although still in early stages, investment patterns show strong potential for large-scale TOD in the future.

5.2 Singapore

Singapore has the strongest record in integrating public housing with its transportation system. Nearly all urban districts follow TOD principles, with several becoming global references.

1) Tampines New Town – A Complete Public-Housing-Based TOD

Tampines exemplifies comprehensive TOD: housing, schools, commercial centers, and social facilities are all within walking distance of the MRT. Reliance on private vehicles is extremely low. This success underscores the importance of integrated planning by LTA, HDB, and URA.

2) Woodlands Regional Centre – Transport Hub–Driven TOD

Woodlands acts as a major hub connecting MRT lines, bus interchanges, and pedestrian networks. Development occurs in parallel with transportation planning, resulting in consistent economic growth. It shows how TOD can create new economic centers outside the central business district.

3) One-North – Innovation-Driven TOD

One-North integrates office clusters, transport nodes, and worker housing within a single innovation district. This vertical-horizontal TOD model supports a highly competitive creative economy cluster.

4) East–West Line Development – 40 Years of TOD Consistency

The East–West Line, developed since the 1980s, represents long-term TOD success. Land values along the MRT corridor have remained stable and continue to support economic growth and social sustainability.

5) Paya Lebar Quarter – Mixed-Use TOD with Private Investment

Paya Lebar Quarter demonstrates how private developers can contribute to TOD without undermining public control. Office towers, housing, and entertainment areas are seamlessly integrated with the MRT station.

5.3 Thailand

Thailand has numerous land readjustment projects that serve as the backbone of its urban transportation development. Its participatory approach results in one of the lowest levels of land conflict in Southeast Asia.

1) Ladprao Development – A Highly Successful Urban Replotting Model

Ladprao shows that participatory land consolidation can reorganize dense neighborhoods without displacing residents. Land values rise, road access improves, and transportation integration progresses faster.

2) Rangsit Land Readjustment – Reducing Land Fragmentation

Rangsit demonstrates how readjustment merges small plots into functional parcels for infrastructure and transit development. This improves regional connectivity while accelerating corridor development.

3) Khon Kaen Transit Development – Pioneer of Non-Capital TOD

Khon Kaen is the first non-capital city in Thailand to develop community-based transit systems. Landowners invest in transit construction, enabling them to capture greater economic benefits post-redevelopment.

4) Bangkok Redevelopment around BTS & MRT

BTS Skytrain and MRT development has generated informal TOD models through rising land values and shifting land-use patterns. Many station areas experienced economic growth without requiring large-scale land acquisition.

5) Chonburi–Rayong Redevelopment – Readjustment for an Economic Corridor

This project connects land readjustment with the Eastern Economic Corridor (EEC). Improved transport and industrial expansion demonstrate how land replotting supports macro-economic growth.

D. CONCLUSION

The comparative analysis of land consolidation policies supporting Transit Oriented Development (TOD) in Indonesia, Singapore, and Thailand demonstrates that successful implementation is largely determined by the quality of land governance, the degree of institutional integration, and the extent of community participation. Singapore represents the most effective model, supported by a strong legal framework, dominant state control over land, and well-integrated institutions such as URA, LTA, and HDB, which enable TOD planning to proceed consistently, efficiently, and with a long-term orientation. Thailand offers a contrasting approach through land readjustment, in which landowners directly participate in the reorganization process. This model has proven effective in reducing social conflict, maintaining spatial continuity, and distributing development benefits more equitably. Meanwhile, Indonesia faces the greatest challenges due to regulatory and institutional fragmentation, weak cross-sector coordination, and implementation practices that do not yet fully reflect the core principles of land consolidation.

From a socio-legal perspective, Indonesia continues to face risks of gentrification and unequal access for low-income communities, especially as vertical relocation often fails

to address livelihood restoration. In contrast, Singapore maintains social stability through an extensive public housing system that is both affordable and well-integrated with public transport networks. Thailand demonstrates strong performance in promoting social justice, as its participatory model ensures residents can remain in their original neighborhoods after redevelopment. These differing approaches show that TOD effectiveness is not solely determined by land control, but by the extent to which land consolidation mechanisms balance development efficiency, social equity, and long-term sustainability.

Empirical practices across the three countries further reinforce these findings. Singapore's long-standing TOD success is evident in developments such as Tampines, Woodlands, and One-North. Thailand's accomplishments in projects such as Ladprao, Rangsit, and Khon Kaen highlight the potential of participatory spatial reorganization to accelerate development while preserving community cohesion. Although Indonesia has not fully integrated land consolidation into TOD practices, the multimodal progress at Dukuh Atas, rising land values in Lebak Bulus, and replotting experiences in Kampung Deret illustrate the country's considerable potential—provided governance structures and policy frameworks are strengthened.

Overall, this study concludes that the ideal TOD model for Indonesia is a hybrid approach that combines the strengths of all three countries. Singapore's institutional efficiency and integration should be blended with Thailand's substantive participation and social justice orientation, while remaining aligned with Indonesia's agrarian reform agenda and diverse social context. Land consolidation for TOD can succeed only if supported by regulatory harmonization, a unified coordinating authority, sustainable financing schemes, and strong protections for low-income communities. With structural reforms and an inclusive approach, Indonesia has significant potential to develop TOD that is not only economically viable, but also equitable, sustainable, and aligned with the broader public interest.

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