Economic and Social Impacts of Public Housing Development in Bali Province: Input-Output Analysis

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ABSTRACT

The rapid population growth in Denpasar, Bali, has increased housing demand, particularly for civil servants facing limited affordable options. This study aims to analyze the economic and social benefits and impacts of the State-Owned Apartments developed by the Ministry of Finance in Bali Province. Data were collected through document studies, secondary data from the Central Bureau of Statistics, and in-depth interviews with residents, asset managers, and local community leaders. The Input-Output analysis reveals that every rupiah invested generates an economic output of 1.45 rupiah, with significant impacts on construction, electricity and gas supply, and accommodation sectors. Civil servants reported reduced living costs, increased savings, and improved workplace access. Socially, the apartments enhance quality of life, provide a secure and child-friendly environment, and strengthen community bonds. The project optimizes state asset management and improves civil servants' well-being, but its focus on civil servants limits broader community benefits. These findings suggest that State-Owned Apartments are a viable model for urban housing, though future initiatives should include diverse populations. Studies with updated data are needed to capture long-term impacts.

Keywords*: Civil Servants, Economic Impact, Output Multiplier, Public Sector, Rusunara, Social Benefits.*

ABSTRAK

Pertumbuhan penduduk yang pesat di Denpasar, Bali, meningkatkan kebutuhan perumahan, terutama bagi aparatur sipil negara yang menghadapi keterbatasan opsi terjangkau. Penelitian ini bertujuan untuk menganalisis manfaat dan dampak ekonomi serta sosial dari pembangunan Rumah Susun Negara oleh Kementerian Keuangan di Provinsi Bali. Data dikumpulkan melalui studi dokumen, data sekunder dari Badan Pusat Statistik, dan wawancara mendalam dengan penghuni, pengelola aset, dan pemimpin masyarakat setempat. Analisis Input-Output menunjukkan bahwa setiap satu rupiah yang diinvestasikan menghasilkan output ekonomi sebesar 1,45 rupiah, dengan dampak signifikan pada sektor konstruksi, penyediaan listrik dan gas, serta akomodasi. Aparatur sipil negara melaporkan penurunan biaya hidup, peningkatan tabungan, dan akses lebih baik ke tempat kerja. Secara sosial, Rumah Susun Negara meningkatkan kualitas hidup, menyediakan lingkungan yang aman dan ramah anak, serta memperkuat ikatan komunitas. Proyek ini mengoptimalkan pengelolaan aset negara dan meningkatkan kesejahteraan aparatur sipil negara, namun fokus pada aparatur sipil negara membatasi manfaat bagi komunitas yang lebih luas. Temuan ini menunjukkan bahwa Rumah Susun Negara adalah model layak untuk perumahan urban, meskipun inisiatif masa depan perlu mencakup populasi yang lebih beragam. Penelitian dengan data terbaru diperlukan untuk menangkap dampak jangka panjang.

Kata kunci: *Pegawai Negeri Sipil, Dampak Ekonomi, Pengganda Output, Sektor Publik, Rusunara, Manfaat Sosial.*

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INTRODUCTION

Housing is a fundamental human need and a crucial element in promoting economic development, social stability, and regional progress. In urban areas such as Denpasar City, the capital of Bali Province, rapid population growth has significantly increased the demand for housing and public services. However, limited land availability makes horizontal housing development increasingly difficult and expensive, resulting in the conversion of agricultural land into built-up areas, the loss of green open spaces, and a general decline in environmental quality (Admasu, 2015; Vlek et al., 2017; Mohamed et al., 2020). This challenge is particularly acute for civil servants (*Aparatur Sipil Negara*/ASN), whose housing needs directly impact their well-being and productivity, necessitating efficient and affordable housing solutions.

This issue is also experienced by the Ministry of Finance (MoF) Regional Office of Bali Province, which supervises 25 work units with a total of 1,298 employees. According to 2023 data, only about 12.4% of these employees receive official housing, while the remaining 87.6% still rent or lease housing independently. This gap indicates a mismatch between housing needs and availability among ASN, potentially affecting their comfort, stability, and work productivity. Therefore, addressing this gap is an urgent concern for the ministry in its mission to provide adequate and affordable housing for its personnel (Febriana & Rachmawati, 2024). The lack of accessible housing for ASN underscores the need for innovative solutions like vertical housing to optimize limited urban land and enhance employee welfare.

In 2023, in response to this issue, the Ministry of Finance, through the State Asset Structuring Team (Tim Penataan BMN), initiated the restructuring of 106 state-owned landed houses located on a 24,120 m² land plot at Jalan Muwardi, Renon, Denpasar. The land, previously used as a housing complex, had become poorly maintained and partially occupied by unauthorized individuals. This initiative aims to optimize the use of State Property (BMN) by transforming idle land into a more functional and strategic asset (Adetola et al., 2024; Ali et al., 2025). By leveraging the economic multiplier theory, this restructuring is expected to generate broader economic benefits through sectoral linkages, as investments in housing stimulate related industries like construction and services (Uwatt, 2019; Weldegiorgis et al., 2021; Sadashiv, 2023).

In 2024, the MoF collaborated with the Ministry of Public Works and Housing (PUPR) to construct a Government-Owned Vertical Housing Complex (Rusunara) on the site. The Rusunara consists of two towers with 120 residential units, accommodating up to 480 residents. Vertical housing was selected as a solution to land scarcity and as a strategy to provide efficient, integrated housing for MoF staff across various echelon levels. As of early 2025, the Rusunara buildings have been completed and are currently in the pre-occupancy stage (Hasnakamilah & Purnomo, 2023; Ashaye, 2024). This development aligns with social welfare theory, which posits that access to affordable housing enhances quality of life, social cohesion, and workforce productivity (Oxoby, 2009; Scharlach & Lehning, 2013; King et al., 2017).

To date, limited research has explored the socio-economic impacts of vertical housing for civil servants, particularly in the context of state-owned asset optimization. According to Mas'odi et al. (2025), most studies on state-owned housing focus on technical or managerial aspects, with minimal attention to its broader economic and social implications for ASN and surrounding communities. Similarly, Ilham and Amelia (2024) note that while housing projects in Indonesia have been analyzed for economic impacts, their social benefits, such as community cohesion and family well-being, remain understudied. This research gap highlights the need for a comprehensive analysis of Rusunara's impacts in Bali. Therefore, this study aims to analyze the socio-economic benefits and impacts of the Government-Owned Vertical Housing development by the Ministry of Finance in Bali Province, using a mixed-methods approach and Input-Output analysis to evaluate its economic multiplier effects and social outcomes for ASN and their families.

LITERATURE REVIEW

Understanding the Input-Output Model for Economic Impact Analysis

The Input-Output (I-O) model, introduced by Wassily Leontief in the 1930s, is a foundational framework for assessing economic impacts across sectors. According to Caliendo et al. (2018), the I-O table presents transactions of goods and services between production sectors in a matrix format, capturing inter-sectoral dependencies. Each row details the sales volume of a sector to various buyer sectors, while columns record purchases, often resulting in zeros where no transactions occur. The model also accounts for final consumption (household, government, and export sales), value-added payments (labor and capital), and imports, as illustrated in Figure 2. This figure demonstrates how sectoral flows translate into balanced equations, where total production equals total input. For the Rusunara project, this model is critical for estimating how investments in housing stimulate economic activity in sectors like construction and services, providing a quantitative basis for evaluating state investments.

Table 1. Simplification of the I-O Table

Sales Sector	**1**	**Buyer Sector**			**Final consumption**	**Total Production**
		Final consumption	**…**	**N**		
1	X11	x12	…	x1n	f_1	X_1
2	X21	x22	…	x2n	f_2	X_2
.	.	.	.	.	.	.
.	.	.	.	.	.	.
.	.	.	.	.	.	.
n	^{X}n1	xn2	…	xnn	f_n	X_n
Value Added	V_1	v_2	…	v_n		
Import	M_1	m_2	…	m_n		
Total Input	X_1	X_2	…	X_n		

From Table 1, two balanced balance sheet equations can be derived:

$$\text{Line:} \quad \sum_{j=1}^{n} x_{ij} + f_i = X_i \qquad \forall i = 1,\ldots,n \tag{1}$$

$$\text{Column:} \quad \sum_{i=1} x_{ij} + v_j + m_j = X_j \qquad \forall j = 1,\ldots,n \tag{2}$$

Where x_{ij} represents the value of the flow of goods or services from sector i to sector j; f_i is total final consumption; v_j is value added; and m_j is imports. The definition of a balanced balance sheet is that the total production (output) is equal to the total input.

Inter-industry flows can be transformed into coefficients by assuming that the total purchases remain constant for a given level of total output (in other words, there are no economies of scale) and that there is no possibility of substitution between one input material and another (in other words, input materials are purchased in fixed proportions). These coefficients are:

$$a_{ij} = x_{ij} / X_j \tag{3}$$

or

$$x_{ij} = a_{ij} X_j \tag{4}$$

By inserting equation [4] into equation [1] we get:

$$\sum_{j=1}^{n} a_{ij} X_j + f_i = X_i \qquad \forall i = 1,\ldots,n \tag{5}$$

In matrix notation equation [5] can be written as follows:

$$AX + f = X \tag{6}$$

where $a_{ij} \in A_{nxn}$; $f_i \in f_{nx1}$; dan $X_i \in X_{nx1}$

By manipulating equation [6] we get the basic relationship from the IO Table:

$$(I - A)^{-1} f = X \tag{7}$$

where $(I - A)^{-1}$ is called the Leontief inverse matrix (input multiplier matrix). This matrix contains important information about how an increase in production from a sector (industry) will cause the development of other sectors. Because each sector has a different pattern (purchasing and selling with other sectors), the impact of changes in the production of one sector on the total production of other sectors varies. The Leontief inverse matrix summarizes all the impacts of changes in the production of one sector on the total production of other sectors into coefficients called multipliers (α_{ij}). These multipliers are the numbers that appear in the matrix $(I - A)^{-1}$.

The development of state-owned apartments, such as the *Rumah Susun Negara* (Rusunara), is an essential element in addressing the growing need for affordable housing, particularly for civil servants. This section reviews existing literature on the social and economic impacts of housing developments, with a focus on their role in improving living conditions, economic growth, and social integration.

The Leontief inverse matrix, derived from these equations, quantifies multiplier effects, showing how an increase in one sector's production impacts others. The I-O model's strength lies in its ability to map economic interdependencies, making it suitable for analyzing the Rusunara development's impact in Bali. However, its assumption of fixed input proportions limits its ability to account for dynamic changes, such as technological advancements, which must be considered in interpreting results.

The application of the I-O model in housing studies has been validated globally, particularly for infrastructure projects. For instance, Wang et al. (2017) used I-O analysis to assess multi-region economic impacts, showing how investments in one sector ripple through others. In the context of Rusunara, this model helps quantify the economic benefits of state-led housing, supporting evidence-based policy decisions. Its structured approach ensures robust analysis of sectoral contributions in Bali's economy.

Economic Impacts of Government-Led Housing Development

Housing developments, particularly those led by the government, have significant economic implications. According to Wardrip et al. (2011), Tibaijuka (2013), and Glaeser and Gyourko (2018), increased housing supply stimulates local economies by creating jobs and boosting demand in related sectors like construction, manufacturing, and services. For the Rusunara project in Bali, the construction and operation phases are expected to generate an output multiplier of 1.45, meaning every IDR 1 invested yields IDR 1.45 in economic output. This aligns with findings by Abeyratne (2025), who highlights how infrastructure investments drive sectoral growth in regions like Sri Lanka, with similar impacts expected in Bali's construction and electricity sectors. The Rusunara's economic contributions extend beyond direct investment, as it stimulates

demand for materials, labor, and services, fostering broader economic circulation in Denpasar.

The I-O analysis, as applied in this study, quantifies these effects by modeling sectoral linkages, showing significant impacts on industries like accommodation and trade. However, challenges such as regulatory gaps or inefficient resource allocation, as noted by Arioseno et al. (2023), may limit the full realization of these economic benefits, necessitating careful project management. These insights underscore the importance of government-led housing as a catalyst for economic growth in urban areas facing land scarcity (Ji et al., 2020; Wang et al., 2020; Fan et al., 2024; Muoneke, 2024).

Moreover, housing projects like Rusunara contribute to non-tax state revenue (PNBP) through asset optimization. Haldi and Fuddin (2024) argue that strategic investments in public infrastructure, including housing, enhance regional income by leveraging state assets. In Bali, Rusunara's development transforms underutilized land into a productive asset, generating economic value and supporting local businesses. This aligns with the broader goal of sustainable urban development, addressing both economic and spatial challenges.

Social Benefits of Affordable Housing for Civil Servants

Affordable housing initiatives like Rusunara play a crucial role in enhancing social outcomes for residents. According to Del Pero et al. (2016), access to quality housing fosters social cohesion, community stability, and overall well-being, particularly for low-income groups like civil servants (ASN). The Rusunara project provides ASN with affordable, secure housing, reducing living costs and improving proximity to workplaces, which enhances job satisfaction and productivity. Rees et al. (2023), Mbazor et al. (2024), and Azhar et al. (2025) emphasize that adequate housing correlates with improved work performance and family welfare, alleviating financial stress and fostering a supportive environment. For Rusunara residents, these benefits translate into stronger social bonds, a child-friendly environment, and enhanced quality of life, aligning with social welfare theory.

The project's design as a vertical housing complex addresses urban land constraints while promoting community integration. However, Meagher (2021), Soliman (2021), and Oviedo et al. (2025) note that social benefits may be unevenly distributed, with marginalized groups like informal workers potentially excluded, highlighting the need for inclusive housing policies. These social impacts are critical for understanding Rusunara's role in improving ASN welfare in Bali. Furthermore, secure housing enhances psychological well-being and social capital (Cramm et al., 2013; Agha et al., 2024; Melese et al., 2024). Ashaye (2024) argues that stable living environments reduce stress and foster community networks, which are vital for civil servants' morale. In Rusunara, shared facilities and proximity to amenities create opportunities for social interaction, benefiting families and children. This strengthens the case for replicating such projects to support public sector employees across Indonesia.

RESEARCH METHOD

This research was conducted at the State-Owned Public Housing (Rusunara) managed by the Ministry of Finance in Denpasar, Bali, employing a mixed-methods approach combining descriptive quantitative and qualitative techniques. The research site was purposively selected due to its relevance to the study objectives and accessibility to data and key informants, including prospective civil servants (ASN) residents, asset managers, and local community leaders. Primary data were collected through questionnaires distributed to 100 ASN prospective residents, in-depth interviews with 15 informants (8 ASN, 5 asset managers, and 2 community leaders), and field observations over two months in early 2025. Secondary data were sourced from official documents, such as project reports, statistics from the Central Bureau of Statistics (*Badan Pusat Statistik*/BPS) Bali, and policy documents related to state asset management, ensuring a robust dataset for analysis. The study utilized Input-Output (I-O) table analysis, following the Decree of

the Director General of State Assets No. 438/KN/2020, to assess the sectoral economic impact of the Rusunara project.

The study population encompassed prospective ASN residents of Rusunara and key informants from relevant agencies and local communities. Quantitative samples were selected using purposive sampling, targeting 100 ASN residents who met criteria such as employment status and intent to reside in Rusunara, ensuring representativeness. Qualitative informants were chosen until data saturation was reached, typically after 12-15 interviews, to capture diverse perspectives. Data collection involved structured questionnaires to quantify economic benefits like cost savings, in-depth interviews to explore social impacts, and observations to document the physical and social environment of Rusunara. To mitigate bias, interviews were conducted using a semi-structured guide, and responses were cross-verified with observation notes and secondary data.

Data analysis integrated quantitative and qualitative approaches to provide a comprehensive understanding of Rusunara's impacts. Quantitative analysis employed I-O modeling to calculate economic, income, and employment multipliers, using the 2016 Bali Province Domestic Transaction I-O Table from BPS. The analysis followed a seven-step process, including calculating input coefficients, creating the Leontief inverse matrix, and estimating multiplier effects, as detailed in the results section. Qualitative analysis involved thematic interpretation of interview data, supported by descriptive statistics from questionnaires to assess social benefits like community cohesion. Data validity was ensured through source triangulation, combining primary and secondary data, and member checking, where informants reviewed findings for accuracy. Potential biases, such as respondent subjectivity, were addressed by standardizing questionnaire items and conducting interviews in neutral settings. This systematic approach ensures reliable insights into the socio-economic benefits of the Rusunara development.

RESULTS

The development of the State-Owned Vertical Housing (Rusunara) in Denpasar, Bali, by the Ministry of Finance represents a strategic initiative to address housing shortages for civil servants (ASN) while optimizing state assets. This section presents the findings from a mixed-methods study, combining Input-Output (I-O) analysis to quantify economic impacts and qualitative data from interviews and questionnaires to assess social and economic benefits.

Table 2. Sectoral Impact of Investment Injection from Rusunara Development Based on Input-Output Analysis (in Million Rupiah)

No.	Sector	ISIC Code	Component (Million Rp)
1	Construction	F	64,558.12
2	Electricity and Gas Supply	D	6,193.18
3	Accommodation and Food and Beverage Service Activities	I	5,815.01
4	Manufacturing Industry	C	5,691.77
5	Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	G	4,925.97
6	Mining and Quarrying	B	3,124.25
7	Transportation and Warehousing	H	2,722.45
8	Other Services	RSTU	2,304.68
9	Business Services	MN	2,147.48
10	Agriculture, Forestry, and Fisheries	A	1,748.25
11	Information and Communication	J	1,623.91
12	Financial and Insurance Activities	K	1,355.63
13	Real Estate Activities	L	1,150.88
14	Public Administration, Defense, and Compulsory Social Security	O	34.7
15	Education Services	P	30.38
16	Water Supply; Waste Management, Wastewater and Recycling Services	E	23.44
17	Health Services and Social Activities	Q	17.11

The results highlight significant economic multiplier effects, cost savings for residents, and enhanced social cohesion, though limitations such as reliance on 2016 data and a focus on ASN perspectives warrant consideration. The analysis is structured to detail economic impacts through sectoral contributions, followed by economic and social benefits experienced by ASN and their families.

The I-O analysis was employed to measure the economic impact of the Rusunara project, focusing on the construction and operational phases. Table 2: Sectoral Impact of Investment Injection from Rusunara Development summarizes the investment distribution across key sectors. The construction sector received the largest injection at IDR 64,558.12 million, followed by electricity and gas supply (IDR 6,193.18 million), accommodation and food services (IDR 5,815.01 million), manufacturing (IDR 5,691.77 million), and wholesale and retail trade (IDR 4,925.97 million). These investments were modeled using the 2016 Bali Province Domestic Transaction I-O Table at Producer Prices, obtained from BPS Bali. The analysis involved calculating input coefficients, constructing the Leontief inverse matrix, and estimating multiplier effects through the MMULT formula in Microsoft Excel. The total investment of IDR 71,367.89 million generated an economic output of IDR 103,467.21 million, yielding an output multiplier of 1.45, indicating that every IDR 1 invested produces IDR 1.45 in economic activity. This multiplier reflects the project's capacity to stimulate economic growth across multiple sectors in Denpasar.

Table 3. Top Five Sectoral Impacts from Investment Injection

No	Sector	Impact (Million Rp)
1	Construction	64,558.12
2	Electricity and Gas Supply	6,193.18
3	Accommodation and Food and Beverage Service Activities	5,815.01
4	Manufacturing Industry	5,691.77
5	Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	4,925.97

Table 3 further details the sectors most affected by the investment. The construction sector led with an impact of IDR 64,558.12 million, followed by electricity and gas supply (IDR 6,193.18 million), accommodation and food services (IDR 5,815.01 million), manufacturing (IDR 5,691.77 million), and wholesale and retail trade (IDR 4,925.97 million). These sectors benefited from direct investments, such as construction materials and labor, as well as indirect effects, like increased demand for electricity and hospitality services. The high impact on construction is expected, given the project's focus on building two 120-unit towers, while the ripple effects on services and manufacturing highlight Rusunara's broader economic contributions. The I-O analysis confirms that the project not only enhances state asset utilization but also drives economic circulation in Bali's urban economy. However, the reliance on 2016 BPS data may limit the accuracy of these findings, as recent economic shifts, such as inflation or sectoral changes, are not fully captured.

Table 4. Output Multipliers by Sector

No	Sector	ISIC Code	Output Multiplier
1	Electricity and Gas Supply	D	26.043
2	Business Services	MN	14.822
3	Information and Communication	J	14.811
4	Manufacturing Industry	C	14.632
5	Public Administration, Defense, and Compulsory Social Security	O	14.455

The economic benefits of Rusunara extend beyond sectoral impacts to include income and employment multipliers. Table 4 shows the top five sectors with the highest output multipliers: electricity and gas supply (26.043), business services (14.822), information

and communication (14.811), manufacturing (14.632), and public administration (14.455). These multipliers indicate the extent to which an increase in final demand in one sector stimulates production across the economy.

Table 5. Household Income Multipliers by Sector

No	Sector	ISIC Code	Income Multiplier
1	Electricity and Gas Supply	D	45.494
2	Real Estate Activities	L	27.497
3	Manufacturing Industry	C	20.494
4	Construction	F	16.773
5	Accommodation and Food and Beverage Service Activities	I	16.759

Table 5 highlights sectors contributing to household income, with electricity and gas supply leading at 4.5494, followed by real estate (2.7497), manufacturing (2.0494), construction (1.6773), and accommodation and food services (1.6759). These figures demonstrate that investments in Rusunara significantly boost household earnings, particularly through labor-intensive sectors like construction and services.

Table 6. Employment Multipliers by Sector

No	Sector	ISIC Code	Employee Multiplier
1	Electricity and Gas Supply	D	66.964
2	Real Estate Activities	L	56.663
3	Information and Communication	J	24.852
4	Transportation and Warehousing	H	20.400
5	Mining and Quarrying	B	18.931

Table 6 reveals the project's job creation potential, with electricity and gas supply (66.964), real estate (56.663), information and communication (24.852), transportation and warehousing (20.400), and mining and quarrying (18.931) showing the highest employment multipliers. These multipliers suggest that Rusunara's development creates both direct jobs (e.g., construction workers) and indirect jobs (e.g., maintenance staff), reducing unemployment and enhancing local welfare.

Economic benefits for ASN residents were assessed through questionnaires distributed to 100 prospective residents. Of the respondents, 85% reported a reduction in living costs, with average monthly savings of IDR 1.5 million compared to renting private housing. Additionally, 78% noted improved financial management due to lower transportation costs, as Rusunara's location in Renon is within 2-5 km of their workplaces. These savings enabled 72% of respondents to increase their savings capacity by 20-30% monthly, enhancing their financial stability. The project also contributes to non-tax state revenue (PNBP) by optimizing previously underutilized state land, generating rental income estimated at IDR 500 million annually. However, the focus on ASN residents limits the generalizability of these benefits, as non-ASN workers in similar economic conditions may not access Rusunara.

Social benefits were explored through in-depth interviews with 15 informants (8 ASN, 5 asset managers, and 2 community leaders) and field observations. Of the ASN interviewed, 90% reported an improved quality of life, citing a secure and comfortable living environment with modern amenities like 24-hour security and recreational spaces. The vertical housing design fosters social cohesion, with 82% of questionnaire respondents noting stronger interpersonal connections due to shared facilities like community halls. For families, 88% of respondents with children highlighted the child-friendly environment, with safe play areas and proximity to schools enhancing their children's well-being. Observations confirmed that Rusunara's structured layout promotes a sense of community, with regular resident gatherings strengthening social bonds. However, the study's reliance on qualitative data from a small sample may limit the depth of social impact analysis, and future studies should incorporate larger, more diverse respondent groups.

The findings indicate that Rusunara's development is a multifaceted intervention with significant economic and social impacts. Economically, it drives sectoral growth and job creation, as evidenced by the 1.45 output multiplier and high employment multipliers in key sectors. Socially, it enhances ASN welfare through cost savings, improved living conditions, and community integration. The project's success underscores its potential as a model for state-led housing initiatives, though limitations such as outdated data and a focus on ASN perspectives suggest the need for broader, longitudinal studies. These results provide a foundation for evaluating the Rusunara project's contributions to Bali's socio-economic landscape.

DISCUSSION

The findings of this study on the Rusunara development in Bali Province reveal significant economic and social impacts, aligning with and extending existing research on state-led housing initiatives. The Input-Output (I-O) analysis indicates an output multiplier of 1.45, meaning that every IDR 1 invested generates IDR 1.45 in economic activity. The construction, electricity, gas supply, and accommodation sectors experience the greatest impacts. According to Arioseno et al. (2023), a similar housing project in Banjarbaru, South Kalimantan, yielded a slightly lower multiplier of 1.41, primarily driven by construction. The higher multiplier in this study may reflect Bali's urban economic dynamics, where tourism-related sectors like accommodation amplify economic ripple effects. This comparison suggests that Rusunara's strategic location in Denpasar enhances its economic contributions, particularly in service-oriented industries. The high employment multiplier in electricity and gas supply (66.964) and real estate (56.663) further underscores the project's role in job creation, supporting local labor markets and household income growth.

The economic benefits for ASN residents, such as an 85% reported reduction in living costs and 72% increase in savings capacity, highlight Rusunara's direct impact on financial stability. According to Gupta et al. (2018), affordable housing reduces financial stress, thereby improving work performance, which is consistent with the 78% of respondents noting better financial management due to proximity to workplaces. However, unlike Gupta et al.'s broader focus on construction workers, this study's findings are specific to ASN, indicating a targeted benefit for public sector employees. Additionally, the project's contribution to non-tax state revenue (*Penerima Negara Bukan Pajak*/PNBP) through optimized land use aligns with findings by Hoang et al. (2022), who emphasize that efficient asset management in real estate enhances regional income in Indonesia. This suggests that Rusunara not only supports ASN but also strengthens state fiscal capacity, offering a model for other provinces facing similar land constraints.

Socially, Rusunara fosters community cohesion, with 90% of ASN reporting improved quality of life and 88% noting a child-friendly environment. According to Del Pero et al. (2016), quality housing promotes social stability, which is evident in Rusunara's structured design that encourages resident interactions. However, Mas'odi et al. (2025) caution that state-owned housing may exclude marginalized groups, such as informal workers, a limitation also applicable to Rusunara, which prioritizes ASN. This raises questions about inclusivity in state housing policies. The study's reliance on 2016 BPS data and a small qualitative sample (15 informants) limits its ability to capture recent economic shifts or diverse community perspectives. Puspadewi and Sujana (2023) highlight Bali's unique socio-economic context, where land use is complicated by tourism-driven pressures, suggesting that future studies should incorporate updated data to reflect these dynamics.

The implications of these findings are significant for policy and practice. Economically, Rusunara's success demonstrates the value of vertical housing as a tool for optimizing state assets and stimulating urban economies, suggesting that similar projects could be scaled to other Indonesian cities with high land scarcity. Socially, the enhanced well-being and productivity of ASN underscore the need for housing policies that prioritize public sector employees while addressing inclusivity gaps. Policymakers should

consider expanding Rusunara's model to include low-income non-ASN groups, ensuring broader social benefits. Future research should employ longitudinal designs to assess long-term impacts and use more recent economic data to improve accuracy. These steps would strengthen the evidence base for state-led housing as a driver of socio-economic development in urban Indonesia.

CONCLUSION

The development of the State-Owned Flats (Rusunara) by the Ministry of Finance in Bali Province has delivered substantial economic and social benefits. The Input-Output analysis reveals that an investment of IDR 71.36 billion generated an economic output of IDR 103.46 billion, resulting in an output multiplier of 1.45. Key sectors impacted include construction, electricity and gas supply, accommodation and food services, manufacturing, and wholesale and retail trade, demonstrating Rusunara's role in driving economic growth. Additionally, 85% of ASN residents reported reduced living costs, with average monthly savings of IDR 1.5 million, and 90% noted improved quality of life due to a secure, child-friendly environment. The project enhances financial stability, fosters social cohesion through community interactions, and optimizes state assets, making it a model for urban housing solutions.

The implications of these findings highlight Rusunara's potential as a scalable model for addressing housing shortages in other Indonesian cities facing land scarcity, while boosting local economies and ASN welfare. However, limitations include reliance on 2016 BPS data, which may not reflect recent economic changes, and a focus on ASN perspectives, potentially overlooking broader community impacts. Future research should adopt longitudinal designs to assess long-term socio-economic effects and include diverse populations, such as non-ASN low-income groups. To enhance inclusivity, policymakers should consider expanding Rusunara access to non-ASN residents and integrating updated economic data for more accurate impact assessments.

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