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Accelerated Housing Development, Fiscal Decentralization and Economic Growth: Evidence from Indonesia

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ABSTRACT

This study examines the impact of housing development on provincial economic growth in Indonesia, taking into account the role of fiscal decentralisation. Panel data from 34 provinces covering the period 2015–2024 were analysed using the System Generalised Method of Moments to account for growth dynamics and potential endogeneity. Economic growth is measured by the real GRDP growth rate, housing development by the percentage of households living in adequate housing, and fiscal decentralisation by the ratio of local government revenue to total revenue. The results indicate that housing quality makes a positive contribution to regional economic performance as part of the physical capital that underpins productivity. Fiscal decentralisation also has a positive effect by providing policy flexibility for local governments. However, the interaction between the two produces a weakened effect, indicating that without effective institutional coordination, fiscal autonomy may reduce the effectiveness of housing expenditure. The synchronisation of housing policy and fiscal governance is key to sustainable regional economic growth.

ABSTRAK

Penelitian ini mengkaji pengaruh pembangunan perumahan terhadap pertumbuhan ekonomi provinsi di Indonesia, dengan mempertimbangkan peran desentralisasi fiskal. Data panel dari 34 provinsi periode 2015–2024 dianalisis menggunakan pendekatan System Generalized Method of Moments untuk mengatasi dinamika pertumbuhan dan potensi endogenitas. Pertumbuhan ekonomi diukur melalui laju PDRB riil, pembangunan perumahan melalui persentase rumah tangga yang menempati hunian layak, dan desentralisasi fiskal melalui rasio pendapatan daerah terhadap total pendapatan. Hasil menunjukkan bahwa kualitas perumahan berkontribusi positif terhadap kinerja ekonomi regional sebagai bagian dari modal fisik yang mendukung produktivitas. Desentralisasi fiskal juga berpengaruh positif dengan memberikan fleksibilitas kebijakan bagi pemerintah daerah. Namun, interaksi keduanya menghasilkan dampak yang melemah, mengindikasikan bahwa tanpa koordinasi kelembagaan yang efektif, otonomi fiskal dapat mengurangi efektivitas belanja perumahan. Sinkronisasi kebijakan perumahan dan tata kelola fiskal menjadi kunci pertumbuhan ekonomi daerah yang berkelanjutan.

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INTRODUCTION

Adequate housing is understood not only as an indicator of social welfare, but also as a crucial foundation for long-term economic growth. The global development agenda consistently places housing quality as a key element in promoting inclusive growth and sustainable urbanization [1]. This view aligns with development economics literature, which emphasizes the close linkage of the housing sector to macroeconomic dynamics, both through increasing aggregate demand and through enhancing productivity and human capital [2].

In many developing countries, housing investment has become part of economic development strategies to stimulate domestic economic activity, create jobs, and reduce wealth inequality. The housing sector is extensively linked to the construction industry, building materials manufacturing, financial services, and urban services, thus acting as a driver of short-term growth [3]. In the long run, improvements in housing quality improve health, reduce overcrowding, and create household stability, ultimately boosting labor productivity and human capital accumulation [4]. Thus, housing serves as social infrastructure that sustainably supports regional economic performance.

Empirical evidence also shows that housing conditions and neighborhoods influence individual and regional economic opportunities. Better neighborhoods are associated with higher labor force participation, better educational attainment, and intergenerational social mobility [5]. Within the framework of spatial imbalances, housing supply constraints and affordability can hinder interregional labor mobility and distort the distribution of economic activity [6]. Persistent housing market distortions can even reduce national output due to the spatial misallocation of labor and capital [7]. Furthermore, variations in housing conditions across regions are closely related to regional wage and productivity differences [8]. Other literature also warns that housing sector expansion not driven by strong policies and institutions can trigger price bubbles and increase economic volatility [9]. Overall, these findings confirm that housing is a structural determinant of economic growth, not simply a social welfare issue.

However, the economic impact of housing improvements is not uniform across regions. Fiscal federalism theory emphasizes that local governments' fiscal decentralization determines their ability to provide public goods and supporting infrastructure that enhance the benefits of social investment [10]. In a decentralized governance system, regions with greater fiscal autonomy tend to be better able to convert social investments including housing into sustainable economic growth. Conversely, regions with limited fiscal decentralization often face constraints in financing complementary infrastructure and maintaining good governance, resulting in lower economic returns from housing improvements [11].

Several empirical studies support the argument that fiscal decentralization has a conditional growth effect. Rodríguez, show that fiscal decentralization can widen regional growth disparities when regional fiscal and institutional capacities are unequal. Similar findings are provided by Hung & Thanh and Jin & Rider, who emphasize that the effect of fiscal decentralization on growth is highly dependent on the quality of governance and fiscal decentralization of local governments. Evidence from Europe also suggests that differences in the degree of fiscal decentralization are closely related to variations in growth performance across countries [12]. In Asia, research in China and Thailand indicates that subnational fiscal autonomy influences the effectiveness of public investment and regional development outcomes [13].

There is also a growing body of literature specifically linking fiscal decentralization to the housing sector. Studies show that fiscal authority and policies at the local level influence access to adequate housing, particularly through land policies, financing, and urban infrastructure provision [14]. These findings confirm that the effectiveness of housing policies is highly dependent on the fiscal and institutional capacity of subnational governments.

Indonesia provides a relevant context for examining the conditional relationship between housing quality, fiscal decentralization, and economic growth. Since decentralization reforms, provincial governments have gained broader authority in budgeting and development planning, including in the housing sector.

However, this decentralization has also been accompanied by significant disparities in fiscal decentralization across provinces. This disparity is evident in the fiscal structure itself: at the provincial level, Locally-Generated Revenue (PAD) contributed only around 55 percent of total regional revenue on average over 2023–2024, while dependence on transfers from the central government still exceeded 75 percent, indicating that most provinces remain heavily reliant on central fiscal transfers to finance regional development. Ginting, show that differences in regional fiscal and administrative capabilities contribute to persistent disparities in regional economic performance. Lewis, emphasizes that the fiscal and institutional capacity of local governments are key factors in determining development success in the era of decentralization.

Provinces with higher Locally-Generated Revenue ratios have greater fiscal space to finance supporting infrastructure, such as transportation, sanitation, utilities, and urban services. This infrastructure strengthens the productive impact of housing improvements. Conversely, regions that rely heavily on transfers from the central government tend to face limitations in translating housing improvements into broader and more sustainable economic benefits [15]. This situation suggests that the relationship between housing and economic growth in Indonesia is likely mediated by regional fiscal decentralization.

Given this gap in the literature, the novelty of this study lies in the integration of housing quality, fiscal decentralization, and regional economic growth within a single dynamic panel analysis framework. Unlike previous research that generally focuses on housing spending or construction activity, this study uses the proportion of households with adequate housing as an indicator of structural welfare, thus better reflecting improvements in living standards and long-term productive capacity. By positioning fiscal decentralization as a moderating variable, this study connects the literature on housing and economic growth with classical fiscal federalism theory [16], and confirms that the economic impact of social infrastructure is conditional on regional fiscal and institutional strength.

Accordingly, this study aims to examine the effect of housing quality on provincial economic growth in Indonesia during the period 2015–2024 and assess the moderating role of fiscal decentralization in this relationship. The results are expected to enrich the empirical evidence on the contextual effects of growth in decentralized developing economies, while also providing policy implications for accelerating housing development and strengthening regional fiscal decentralization to promote more inclusive and sustainable regional economic growth.

Theoretical Background

Theoretical Foundations of Fiscal Decentralization

Within the theoretical framework of public economics, fiscal decentralization has long been debated as a policy instrument with the potential to enhance allocative efficiency in the public sector [17]. Musgrave, through the decentralization theorem, asserts that public goods provision by sub-national governments tends to be more efficient than centralized provision, given their informational advantages regarding local preferences and their greater accountability to local constituents [18]. Complements this argument through the three-branch framework, which assigns the allocation function for locally specific goods to sub-national governments, while reserving distribution and macroeconomic stabilization for the central government [19]. Weingast, further advances this literature by introducing the concept of market-preserving federalism, in which inter-jurisdictional fiscal competition serves as a disciplinary mechanism that incentivizes local governments to adopt growth-conducive policies.

Despite these normative arguments, critical perspectives have been advanced by scholars who caution against the uncritical promotion of decentralization. Independently identify conditions under which decentralization may exacerbate inefficiency and impede economic growth particularly when local institutional capacity is inadequate, when vertical fiscal imbalances persist between expenditure responsibilities and revenue capacity, or when decentralization produces unresolved negative inter-jurisdictional externalities. These critiques serve as an important reminder that the growth-promoting potential

of fiscal decentralization is highly contingent upon the quality of institutional design and implementation capacity, rather than being an automatic outcome of the structural reform itself [20].

Transmission Mechanisms from Decentralization to Economic Growth

The theoretical literature identifies four principal mechanisms through which fiscal decentralization influences economic growth. The first operates through the allocative efficiency channel, wherein the proximity of local governments to their constituents enables more targeted and responsive public expenditure, thereby improving local factor productivity and stimulating regional economic growth [21]. The second mechanism operates through the jurisdictional competition channel, as elaborated by [22], whereby inter-regional competition for investment and residents creates competitive pressure that fosters sustained policy innovation and continuous improvement in public service delivery.

The third mechanism relates to the enhancement of local government accountability as a consequence of political and fiscal decentralization. Empirically demonstrate that decentralization is negatively correlated with corruption, as proximity between fiscal decision-makers and the affected communities generates stronger incentives for good governance, which in turn positively influences the investment climate and expenditure efficiency [23]. The fourth mechanism, commonly referred to as policy experimentation, rests on the argument of [19] that a decentralized system enables multiple jurisdictions to simultaneously experiment with diverse policy approaches, thereby generating collective learning and facilitating the diffusion of effective policy innovations ultimately contributing to more dynamic long-run economic growth.

The Housing Backlog Challenge in Indonesia and Its Implications

Among the most pressing development challenges confronting Indonesia in the post-decentralization era is the housing deficit commonly referred to as the housing backlog. Data from the Ministry of Public Works and Public Housing (PUPR) indicate that the housing ownership backlog reached approximately 12.75 million units in 2019, concentrated primarily among low-income communities in rapidly urbanizing areas, positioning Indonesia as one of the countries with the largest housing deficits in Southeast Asia [24]. Identify a persistent policy paradox whereby the accelerating rate of new household formation consistently outpaces formal housing supply capacity, causing the backlog to accumulate rather than diminish [25] Further reveal that the price-to-income ratio in Indonesia's major cities ranges from 8 to 12 far exceeding the internationally recommended affordability threshold of 3 to 4 indicating that formal housing has effectively become unaffordable for the majority of lower- and lower-middle-income households.

In response to this chronic housing challenge, the Indonesian government launched the One Million Houses Programme (Program Satu Juta Rumah) in 2015 [26] Evaluate the programme and find that, while it successfully exceeded its quantitative target by delivering over 904,758 units in its inaugural year, the majority of constructed units failed to reach the most vulnerable low-income households due to barriers in housing finance access and the spatial mismatch between construction locations and employment centers. Complement this finding by demonstrating that the concentration of new housing in peri-urban areas, without proportionate investment in transport infrastructure and social facilities, has given rise to a dormitory town phenomenon that paradoxically increases commuting costs and reduces urban labor productivity revealing a significant trade-off between quantitative housing targets and settlement quality, and underscoring the necessity of integrating housing policy with spatial planning and infrastructure development [27].

RESEARCH METHODOLOGY

This study employs a dynamic panel data approach covering 34 provinces in Indonesia over the period 2015–2024. The dataset consists of a balanced panel with 34 cross-sectional units and 10 annual observations, resulting in a total of 340 province-year observations. The data are obtained from official publications of

Statistics Indonesia (Badan Pusat Statistik/BPS) and relevant government sources. The selection of the provincial level is based on the relevance of fiscal decentralization in Indonesia, where provincial governments have authority in regional budgeting and development planning [28].

The dependent variable is regional economic growth, measured by the annual growth rate of real Gross Regional Domestic Product (GRDP) at constant prices (ADHK) at the provincial level. This measure reflects changes in regional economic performance from year to year. The dynamic specification incorporates the lagged dependent variable to account for persistence in regional economic growth [29].

The main explanatory variable is housing quality, measured by the percentage of households occupying adequate housing. Housing quality represents an important dimension of living conditions and social infrastructure that may affect household stability, health, labor productivity, and regional economic performance [30].

Fiscal decentralization (FD) is included as the moderating variable and is measured by the ratio of locally generated revenue (Pendapatan Asli Daerah/PAD) to total regional revenue. This indicator represents the degree of regional fiscal capacity and autonomy in financing public expenditure and development programs. The interaction term between housing quality and fiscal decentralization is included to examine whether fiscal decentralization changes the relationship between housing quality and regional economic growth [31].

Two additional variables, gross fixed capital formation (GFCF) and the Human Development Index (HDI), are included as control variables. GFCF represents investment in fixed assets and captures the contribution of physical capital accumulation to regional economic activity. HDI captures the human-capital and socioeconomic dimension of regional development through indicators related to health, education, and living standards. The inclusion of these control variables helps reduce omitted-variable bias by accounting for other structural factors that may influence regional economic growth.

Variable	Operational Definitions	Source
GRDP	The annual growth rate of real Gross Regional Domestic Product (GRDP) at constant prices (ADHK) at the provincial level. This reflects regional economic performance from year to year.	Central Statistics Agency
HOUSE	The percentage of households with adequate housing in each province reflects the quality of social infrastructure that supports health, household stability, and labor productivity.	Central Statistics Agency
FD	The ratio of Regional Original Income (PAD) to total regional revenue. This is used as an indicator of the level of fiscal autonomy and financing capacity of local governments.	Central Statistics Agency
GFCF	Gross Fixed Capital Formation is a proxy for physical investment at the provincial level, reflecting long-term increases in production capacity.	Central Statistics Agency
HDI	The Human Development Index represents the quality of human capital through the dimensions of health, education, and standard of living.	Central Statistics Agency

Source: Data processed, 2026

To address potential simultaneity and endogeneity bias (particularly due to the presence of a lag in the dependent variable and the possibility of a bidirectional relationship between economic growth and housing development) this study uses the two-step System Generalized Method of Moments (System GMM) estimator developed by Arellano, M. and Bond (1991). Instrument validity was tested using the Sargan test, while the presence of residual autocorrelation was assessed using the AR(1) and AR(2) tests. This approach allows for

consistent and efficient estimation in a panel context with a relatively short time dimension and a larger number of cross-sectional units.

The empirical model estimated in this study is formulated as follows:

$$lnGRDP_{it} = \alpha + \beta_1 lnGRDP_{i,t-1} + \beta_2 lnHOUSE_{c,it} + \beta_3 lnFD_{c,it} + \beta_4 (HOUSEc, it\ X\ FD_{c,it}) + \beta_5 lnGFCF_{it} + \beta_6 lnHDI_{it} + \varepsilon_{it} \quad (1)$$

where i = 1….N and t = 1…..T, GRDP is the gross domestic regional product, HOUSE is the habitable house, FD is the fiscal decentralization, HOUSE X FD is the interaction variable, GFCF is the gross fixed capital formation, HDI is human development index, εit is the stochastic term.

RESULT AND DISCUSSION

Descriptive Statistics

Before presenting the results of the dynamic panel regression with the moderating effect, this section provides descriptive statistics for all variables included in the empirical model. The variables consist of regional economic growth (GRDP), housing quality (HOUSE), fiscal decentralization (FD), gross fixed capital formation (GFCF), and the human development index (HDI). The descriptive statistics include the mean, standard deviation, minimum, and maximum values, as presented in Table 2.

Variable	Mean	Std. Dev.	Min	Max
GRDP	4.6355	3.704765	-15.74	22.94
HOUSE	72.78565	19.40554	26.16	99.49
FD	39.87797	37.94458	2.66	656.17
GCFC	10.81126	1.150081	8.52	13.6
HDI	71.00762	4.095268	57.25	83.08

Source: Data processed, 2026

The descriptive statistics show that regional economic growth (GRDP) has a mean value of 4.64%, with a standard deviation of 3.70 percentage points. The minimum value is -15.74%, while the maximum value is 22.94%. This relatively wide range indicates substantial variation in regional economic growth across the observed provinces and periods (Krugman, 1991).

Fiscal decentralization (FD) has a mean value of 39.88%, with a standard deviation of 37.94 percentage points. The minimum value is 2.66%, while the maximum reaches 656.17%. The relatively large dispersion suggests substantial variation in fiscal decentralization across regions and observation periods.

Meanwhile, the fiscal decentralization (FD) variable showed an average value of 39.88 with a very high standard deviation of 37.94, and an extreme maximum value of 656.17. This pattern indicates highly uneven fiscal decentralization across provinces. These extreme values reflect the concentration of fiscal resources and economic activity in certain regions, while most other regions have much more limited fiscal space. This situation reinforces the argument that regional capacity to finance development, including the housing sector, varies widely.

The gross fixed capital formation (GCFC) variable has an average value of 10.81 with a relatively small standard deviation of 1.15. This narrower range of values compared to other variables indicates that physical investment across regions is relatively stable. However, the differences still reflect variations in regional investment capacity, which could potentially influence long-term economic growth dynamics.

The Human Development Index (HDI) has an average value of 71.01 with a standard deviation of 4.10, with a range of values between 57.25 and 83.08. Although the variation is not as large as that of economic growth or fiscal decentralization, this difference still indicates disparities in the quality of human development between provinces, particularly in the dimensions of health, education, and living standards.

Overall, these descriptive statistics confirm the existence of structural heterogeneity across regions in Indonesia, across the economic dimension, fiscal decentralization, investment, and human development. The high variation in several key variables, particularly economic growth and fiscal decentralization, suggests that the relationship between housing quality and economic growth is likely not homogeneous. Therefore, an empirical approach capable of capturing differences in regional characteristics and the dynamics of intertemporal adjustment is needed.

Research Result

Table 3 presents the results of the dynamic panel regression estimation used to answer the research question regarding the effect of housing quality on regional economic growth, with fiscal decentralization as a moderating factor. Estimation was conducted using two approaches: the first-difference Generalized Method of Moments (GMM) and System GMM, to ensure consistency and robustness of the results.

Variable	First Difference GMM	System GMM
GRDP(-1)	0.0076293*** (0.0528138)	0.1277551*** (0.0491318)
HOUSE	0.1663789*** (0.0255357)	0.1207798*** (0.0211016)
FD	0.2557525*** (0.0563939)	0.2258005*** (0.0530571)
HOUSEXFD	-0.0025277*** (0.0005483)	- 0.0022072*** (0.0005308)
GCFC	4.142197 (3.025)	3.873099*** (1.488039)
HDI	0.0629504 (0.1471335)	-0.1946747 (0.1307609)
Observation	306	306
Instrument	42	42
Sargan test	0.3425	0.3850

Note: ***, **, and * denote significant at 1%, 5% and 10%, respectively. The number in parentheses shows standard errorLOCAL

The estimation results indicate that, in general, the main variables used in the model have a significant influence on regional economic growth, both in the first-difference GMM and System GMM estimations. Housing quality and regional fiscal decentralization variables show a significant relationship with economic growth, while the interaction term between the two is also significant, indicating a moderating effect. This finding supports the hypothesis that the impact of improved housing quality on economic growth is conditional on regional fiscal decentralization.

Regarding the control variables, the estimation results show that gross fixed capital formation (GCFC) is insignificant in the first-difference GMM model, while the human development index (HDI) is insignificant in both estimation approaches. The insignificance of these control variables indicates that, within the dynamic model framework, variation in regional economic growth is more strongly explained by the combination of housing quality, fiscal decentralization, and past growth dynamics than by these control factors.

Although both GMM approaches produce relatively consistent coefficient patterns, this study uses the System GMM estimation results as the primary model. This selection is based on the System GMM's higher Sargan test value, indicating greater instrument validity and the absence of over-identification problems. This approach aligns with the methodological recommendations put forward by Widarjono & Anto (2020), who emphasize that in dynamic panel estimation, models with higher Sargan test values reflect more reliable instrument specifications.

Order	Z	Prob > Z
AR (1)	-3.7006	0.0002
AR (2)	-1.222	0.2217

Source: Data Processed, 2026

The validity and consistency of the System GMM estimation are further supported by the Arellano–Bond serial correlation test presented in Table 4. The AR(1) test is statistically significant (Prob > Z = 0.0002), while the AR(2) test is statistically insignificant (Prob > Z = 0.2217). Since the probability value of the AR(2) test is greater than the 5% significance level, there is no evidence of second-order serial correlation in the residuals. This result supports the validity of the instruments used in the System GMM estimation and indicates that the estimated model satisfies the required specification conditions.

Discussion

The research results show that economic growth performance in the previous period plays a significant role in shaping economic performance in the following period. Regions with a strong economic base tend to be able to maintain their growth momentum, while regions with low economic performance risk experiencing relative stagnation without adequate structural interventions [32].

Theoretically, this finding is consistent with the neoclassical growth model developed by Solow (1956), which emphasizes that capital accumulation in the previous period determines production capacity in the following period. This finding is also consistent with recent empirical literature. Within the Schumpeterian growth framework, innovation occurs sequentially and builds on existing knowledge, creating persistent growth dynamics [33]. At the regional level, empirical evidence suggests a cross-temporal dependence in regional growth, where past performance contributes to current performance [34]. This consistent finding reinforces the interpretation that provincial economic growth in Indonesia is characterized by structural sustainability.

The research findings also indicate that improving housing quality contributes to strengthening regional economic growth during the 2015–2024 period. Improving access to adequate housing not only improves household welfare but also creates a more conducive environment for productive activities. From an endogenous growth perspective, investment in the housing sector also has extensive linkages with the construction, building materials, financial services, and trade sectors, thus creating spillover effects that strengthen broader economic activity [35].

The results of this study align with various empirical studies showing that the housing and infrastructure development sectors play a crucial role in the dynamics of regional economic growth. Cross-regional studies in China found that the expansion of the real estate sector and land-based financing schemes were associated with increased growth through investment and strengthening domestic demand [36]. This indicates that activity in the housing sector is not solely consumptive but also has a productive dimension in driving economic activity.

Additionally, this research findings indicate that fiscal decentralization plays a crucial role in driving regional economic growth. Delegating fiscal authority to regional governments provides greater flexibility for local authorities to tailor budget policies to the needs and characteristics of their respective regions [37]. With

this autonomy, regional governments can allocate resources more responsively for infrastructure development, improving the quality of public services, and creating a more conducive business climate.

From an economic mechanism perspective, housing quality can be understood as part of the socio-physical infrastructure that influences productivity by improving health, social stability and facilitating labor access to centers of economic activity [38]. Improved housing placement has the potential to strengthen production efficiency and create multiplier effects through linkages with the construction, building materials, financial services, and trade sectors. Therefore, the results of this study strengthen the argument that the housing sector has a broader impact on regional economic growth, not only on household welfare but also on macroregional performance [39].

However, the results of this study also show that when improvements in housing quality occur simultaneously with the expansion of fiscal decentralization, the impact on economic growth is not as strong as expected. This means that while housing quality and fiscal decentralization can individually drive growth, their combination does not always produce a reinforcing effect [40]. This condition can be understood through the concept of diminishing returns, which occurs when additional resource allocation to the same sector no longer produces a comparable increase in output after reaching a certain level [41]. In this context, the expansion of fiscal authority without integrated housing development planning can lead to less efficient budget use [42].

Referring to the New Institutional Economics perspective, which emphasizes that rules and governance are key to economic success, the effectiveness of public policy is highly dependent on the quality of regional institutions [43]. When regional fiscal capacity increases without the support of a robust planning, coordination, and oversight system, spending on physical sectors such as housing risks not producing optimal economic impact. Beraldo et al. (2012) strengthen this argument by showing that fiscal decentralization in a weak institutional environment tends to trigger inefficiencies in public spending. In Indonesia, Fatimah et al. (2024) highlighted that the unpreparedness of regional institutional capacity to balance autonomy and planning control often hampers the effectiveness of government intervention. This phenomenon is also evident in the study by Bahasoan et al. (2025), which asserts that fiscal autonomy does not automatically strengthen development performance if it is not supported by integrated policy coordination and planning between the central and regional governments. Therefore, the synergy between fiscal decentralization and housing development requires strengthening institutional quality, budget transparency, and policy integration to foster sustainable regional economic growth.

As a control variable, gross fixed capital formation (GFCF) demonstrates a strong role in driving regional economic growth, confirming that the accumulation of physical capital (infrastructure development, buildings, machinery, and production facilities) remains the primary driver of economic expansion. Investment in these productive assets expands production capacity, improves connectivity, and strengthens real sector activity, thus providing a direct boost to regional economic performance [44].

On the other hand, the human development index (HDI) has not shown a significant contribution to growth dynamics during the observation period. This is understandable because improvements in human quality generally produce more gradual and long-term impacts [45]. The benefits of investment in human capital are often only felt after a certain process of accumulation and structural transformation. Nevertheless, improving the quality of human resources remains a crucial foundation for economic development, as in the long term, regional competitiveness and productivity are largely determined by the quality of its people [46].

CONCLUSION

This study explores the role of affordable housing development and fiscal decentralization in driving provincial economic growth in Indonesia during the 2015–2024 period using a dynamic panel approach. Our findings indicate that housing development significantly contributes to regional economic growth. These

results confirm that housing is not merely a basic community need but also part of the accumulation of physical capital that can boost productivity, expand real sector activity and create multiplier effects for the regional economy.

At the same time, fiscal decentralization also plays a role in strengthening economic growth. Increased regional fiscal authority provides greater scope for provincial governments to design policies and allocate budgets according to the needs and characteristics of their respective regions. However, the most crucial finding of this study is the lack of alignment between housing development and the expansion of fiscal authority, the results do not automatically reinforce each other. The resulting positive impacts tend to weaken when the two are combined without proper coordination. Under certain conditions, the combination of the two is less than optimal without integrated planning, cross-level coordination and an effective management and oversight system.

These findings have several important policy implications. First, local governments need to ensure that affordable housing development programs are integrated with regional medium-term development plans, spatial planning policies and local economic development strategies. Second, strengthening fiscal decentralization must be accompanied by increased institutional capacity, budget transparency and accountability in public spending management so that greater authority truly produces productive economic impacts. Third, stronger coordination mechanisms are needed between the central and local governments, particularly in housing finance and land management, to ensure that fiscal policy and housing sector development are aligned. This way, the synergy between housing development and fiscal decentralization can be directed toward supporting inclusive and sustainable regional economic growth.

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