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Research paper

Why Foreign Direct Investment Has Not Promoted Social Housing Development in Vietnam

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Abstract

This study investigates the misalignment between Foreign Direct Investment (FDI) and social housing development (SHD) in Vietnam, focusing on six major urban centers: Hanoi, Hai Phong, Da Nang, Binh Duong, Ho Chi Minh City, and Can Tho, over the period 2010–2022. The research direction seeks to understand why FDI, despite its pivotal role in driving economic growth, has not effectively supported social housing projects, which are critical for address-ing housing needs of low-income groups amid rapid urbanization. The primary objective is to identify the structural and contextual factors hindering FDI's contribution to SHD, while proposing policy reforms to align FDI with sus-tainable and inclusive urban development goals. A mixed-methods approach is employed, integrating quantitative analyses (including normality tests, Pearson correlation, and linear regression) with qualitative insights derived from prior studies, to provide a comprehensive examination of the FDI-SHD relationship. The study aims to elucidate the key factors driving this misalignment, assess regional policy variations across major cities, and offer actionable poli-cy recommendations, such as reforming tax incentives, promoting public-private partnership models, and streamlin-ing administrative processes, to enhance FDI's role in social housing development, con-tributing to sustainable urban frameworks in Vietnam and offering lessons for other developing economies.

Keywords: *Economic Disconnect; Foreign Direct Investment (FDI); Policy Recommendations; Social Housing Development; Urban Policy.*

1. Introduction

Vietnam's rapid urbanization and integration into global economic frameworks have positioned it as a prime destination for Foreign Direct Investment (FDI), with inflows rising from USD 8.00 billion in 2010 to USD 17.9 billion in 2022 (MacroTrends, 2025). This surge, driven by liberalized economic policies, has significantly bolstered GDP growth and infrastructure development. However, the anticipated align-ment of FDI with social infrastructure, particularly social housing development (SHD) for low-income populations in major urban centers such as Hanoi, Hai Phong, Da Nang, Binh Duong, Ho Chi Minh City, and Can Tho, remains unfulfilled. Despite robust FDI inflows, SHD progress has stagnated, evidenced by a decline in total floor area from 23.645 million m² in 2020 to 14.909 million m² in 2022. This misalignment prompts a critical inquiry: what structural and contextual factors impede FDI's contribution to SHD in Vietnam? Extant literature predominantly examines FDI's macroeconomic impacts, such as its role in fostering economic growth and reducing poverty in developing economies (T. M. Nguyen, Duong, & Nguyen, 2023). While these studies underscore FDI's catalytic effect on Vietnam's economy, they reveal a limited focus on its social implications, particularly for housing aimed at low-income groups (Ayenew, 2022). Research on FDI's engagement with urban infrastructure often highlights its concentration in high-end real estate markets, driven by supe-rior financial returns. For instance, international evidence from China indicates that FDI gravitates toward green buildings and commercial projects, sidelining affordable housing due to profitability constraints (Wrest, 2016). Similarly, in South Korea, FDI has been channeled into housing markets, yet primarily targets upscale developments rather than social housing (H. M. Kim, 2020). In contrast, European models demonstrate that FDI can support social rental housing through targeted policy incentives, offering a potential framework for Vietnam. In the Vietnamese context, domestic studies identify structural barriers to SHD, including low profitability and protracted admin-istrative processes, yet they lack a systematic analysis of FDI's role in this sector (Tien, 2021). Land policies under Vietnam's market socialism framework further complicate FDI's engagement by restricting rural-urban land conversion, limiting access to suitable sites for SHD projects (H. L. Nguyen, Duan, & Zhang, 2018). Additionally, external shocks, such as the COVID-19 pandemic (2020–2021), have disrupted FDI flows, particularly affecting low-return sectors like social housing (Truong, 2022). These gaps in the literature highlight the need for a nuanced investigation into the mechanisms constraining FDI's contribution to SHD. This study addresses these deficiencies by analyzing the factors underlying the weak linkage between FDI and SHD in six major Vietnamese cities from 2010 to 2022. Grounded in economic spillover theory, which posits that FDI can generate social benefits through strategic policy interventions (Anwar & Nguyen, 2010), the research explores why such spillovers are absent in Vietnam's SHD sector. It adopts a mixed-methods approach, integrating quantitative analyses (Pearson correlation, linear regression) of FDI and SHD data with qualitative insights drawn from prior studies, due to resource constraints limiting primary interviews to five policymakers and developers (Yeung, 2007). By comparing Hanoi and Ho Chi

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Minh City, where SHD trends diverge significantly, the study elucidates the role of local policy frameworks in shaping FDI allocation. The primary objective is to develop a rigorous framework for quantifying this misalignment and propose actionable policy solutions, including tax incentives, public-private partnerships (PPP), and administrative reforms. These findings aim to inform sustainable urban policy in Vietnam and provide a reference model for other developing economies navigating similar challenges.

2. Data and methodology

2.1. Data

This study employs a robust dataset to examine the relationship between Foreign Direct Investment (FDI) and social housing development (SHD) in Vietnam from 2010 to 2022, focusing on six major urban centers: Hanoi, Hai Phong, Da Nang, Binh Duong, Ho Chi Minh City, and Can Tho. Annual FDI inflows (in billion USD) are sourced from a comprehensive dataset provided by MacroTrends, ensuring consistent and reliable longitudinal data for analyzing investment trends. Data on social housing floor area (in thousand m²) are obtained from the General Statistics Office of Vietnam, offering detailed annual observations across the selected cities from 2010 to 2022, standardized to facilitate statistical analysis (General Statistics Office of Vietnam, 2025). These quantitative datasets are complemented by qualitative insights drawn from existing studies to elucidate structural and contextual factors affecting FDI's alignment with SHD. Due to resource constraints, primary qualitative data collection was limited to semi-structured interviews with five policymakers and real estate developers in Hanoi and Ho Chi Minh City, conducted in 2023. Instead, the study leverages prior research, such as Do et al.'s multi-site survey of housing inequalities among industrial workers in Vietnam, to provide contextual depth on administrative barriers, investment priorities, and policy impacts in urban settings (H. N. Do et al., 2021). This combination of quantitative and qualitative sources ensures a comprehensive analysis of the FDI-SHD relationship across diverse urban contexts.

2.2. Methodology

This study employs a robust mixed-methods framework to quantify the relationship between Foreign Direct Investment (FDI) and social housing development (SHD) in Vietnam from 2010 to 2022, utilizing quantitative statistical analyses to ensure transparency and reproducibility. The methodology integrates normality tests, Pearson correlation, and linear regression, each informed by established economic research to validate the analytical approach. These methods are applied to annual FDI (in billion USD) and SHD floor area (in thousand m²) data across six major Vietnamese cities: Hanoi, Hai Phong, Da Nang, Binh Duong, Ho Chi Minh City, and Can Tho.Normality Tests: To ensure the suitability of parametric statistical models, the normality of FDI and SHD data is assessed using four complementary tests: D'Agostino-Pearson, Anderson-Darling, Shapiro-Wilk, and Kolmogorov-Smirnov, with a significance threshold of $\alpha = 0.05$. These tests evaluate data skewness and distribution, confirming the appropriateness of subsequent anal (A. N. Nguyen & Nguyen, 2007) yses (Iamsiraroj, 2016).
D'Agostino-Pearson Test (A. N. Nguyen & Nguyen, 2007): which examines skewness and kurtosis, is calculated as:

$$K^2 = Z_1(g_1)^2 + Z_2(g_2)^2 \quad (1)$$

Where:
g_1: Skewness of data.
g_2: Kurtosis of data.
Z_1và Z_2: The normalized values of g_1 and g_2, are calculated based on their standard error.
K^2: The test statistic, usually follows a chi-square distribution with 2 degrees of freedom.
Anderson-Darling Test: This test focuses on differences in the tails of the distribution, with the statistic calculated as follows:

$$A^2 = -n - \frac{1}{n}\sum_{i=1}^{n}(2i-1)[ln\,\Phi(y_i) + ln(1-\Phi(y_{n+1-i}))] \quad (2)$$

Where:
n: Sample size.
y_i: The observed values have been arranged in ascending order.
$\Phi(y_i)$: Cumulative distribution function value (CDF) of the normal distribution aty_i.
Shapiro-Wilk Test (Bilan, Vasylieva, Lyeonov, & Tiutiunyk, 2019): This is a robust test for small samples, using the statistic (W) to measure conformity to a normal distribution:

$$W = \frac{\left(\sum_{i=1}^{n} a_i x_{(i)}\right)^2}{\sum_{i=1}^{n}(x_i - \bar{x})^2} \quad (3)$$

Where:
$x_{(i)}$: The order value of the pattern (ascending order).
a_i: The coefficient is based on the expectation of the order in the normal distribution, calculated from the reference table.
$\bar{x}$: The mean of the sample.
W: Close to 1 indicates normal distribution, with p-value compared with $\alpha = 0.05$ to test the hypothesisH_0.
Kolmogorov-Smirnov Test: This test compares the observed cumulative distribution with the theoretical normal distribution, with the statistic ($D_{n,m}$) is calculated by:

$$D_{n,m} = \sup_x |F_{1,n}(x) - F_{2,m}(x)| \quad (4)$$

Where:
$D_{n,m}$: The KS statistic, is the supremum distance between two cumulative distribution functions.

$F_{1,n}(x)$: Empirical cumulative distribution function of sample 1 with (n) observations.
$F_{2,m}(x)$: Empirical cumulative distribution function of sample 2 with (m) observations.
sup_x: The maximum value of the absolute difference when (x) varies over the entire domain of definition.
This method, informed by Dat and Le's analysis of FDI's economic impacts in Vietnam, provides a robust measure of association between FDI inflows and SHD outcomes (Dat & Le, 2023).
Pearson correlation : Evaluate the linear relationship between FDI and social housing, with the formula:

$$r_{xy} = \frac{\sum_{i=1}^{n}(x_i-\bar{x})(y_i-\bar{y})}{\sqrt{\sum_{i=1}^{n}(x_i-\bar{x})^2}\sqrt{\sum_{i=1}^{n}(y_i-\bar{y})^2}} \quad (5)$$

Where:
r_{xy}: Correlation coefficient, has a value from -1 to 1.
x_i,y_i: Values of two variables at observation (i).
$\bar{x}$, $\bar{y}$: Average of (x) and (y).
Linear regression : Modelling the relationship between FDI and social housing, with the equation:

$$y_i = \beta_0 + \beta_1 x_{i1} + \cdots + \beta_p x_{ip} + \varepsilon_i = x_i^T\beta \quad + \varepsilon_i, \quad i = 1, \ldots, n, \quad (6)$$

Where:
y_i: Observed value of the dependent variable for the (i)th observation.
β_0: Constant (intercept).
$\beta_1, \cdots \beta_p$: Regression coefficients for independent variables $x_{i1}, \cdots x_{ip}$.
ε_i: Random error.
$x_i^T\beta$: Vector form$x_i = [1, x_{i_1}, \ldots, x_{ip}]$ is a vector of independent variables (including the constant 1) and$\beta = [\beta_0, \beta_1, \cdots \beta_p]^T$ is the coefficient vector.
The model estimates the extent to which FDI predicts SHD, with the approach adapted from Do et al.'s methodology for quantifying FDI's sectoral impacts in Vietnam (Anh, Song, Tung, Thu Hien TRAN, & Thuy NGUYEN, 2022). The regression's goodness-of-fit is assessed via R^2, and significance is tested at $\alpha = 0.05$, ensuring a scientifically grounded analysis of the FDI-SHD relationship.

3. Results

3.1. Trends in divergence between FDI and social housing development

This section aims to elucidate the temporal trajectories of Foreign Direct Investment (FDI) and social housing development (SHD) in Vietnam from 2010 to 2022, highlighting their divergent trends across six major urban centers: Hanoi, Hai Phong, Da Nang, Binh Duong, Ho Chi Minh City, and Can Tho. By analyzing quantitative data, it establishes the foundation for understanding the misalignment between FDI inflows and SHD progress.To quantify FDI trends, annual inflow data are compiled for the period 2010–2022.

Table 1: Annual FDI in Vietnam (2010–2022)

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
FDI (billion USD)	8.00	7.43	8.368	8.9	9.2	11.8	12.6	14.1	15.5	16.12	15.8	15.66	17.9

These FDI inflows are visually represented to illustrate their growth and fluctuations over time.

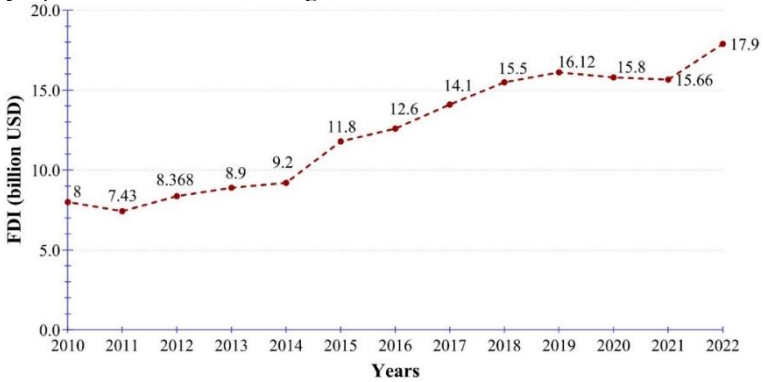


Fig. 1: Trends in FDI in Vietnam (2010–2022).

Note: Line graph depicting FDI inflows (in billion USD) in Vietnam from 2010 to 2022, with a red dashed line showing an average annual growth rate of 7.4% and temporary declines in 2011 and 2020–2021 due to global economic disruptions (Kruszyńska & Poczta, 2019).
The data in Table 1 and Figure 1 reveal a robust increase in FDI from USD 8.00 billion in 2010 to USD 17.9 billion in 2022, with an average annual growth rate of 7.4%. Notable fluctuations include a dip to USD 7.43 billion in 2011, likely reflecting the aftermath of the 2008–2009 global financial crisis, and a decline to USD 15.8 billion in 2020 and USD 15.66 billion in 2021 due to the COVID-19 pandemic, followed by a recovery to USD 17.9 billion in 2022. This growth aligns with findings from Sub-Saharan African economies, where FDI significantly drives economic expansion.To assess SHD trends, data on total social housing floor area across the six cities are examined.

Table 2: Social Housing Floor Area in Six Major Cities of Vietnam (2010–2022)

Year	Total social housing floor area (thousand m²)	Ha noi (thousand m²)	Hai Phong (thousand m²)	Da Nang (thousand m²)	Binh Duong (thousand m²)	Ho Chi Minh (thousand m²)	Can Tho (thousand m²)
2010	17454	7097	1337	688	651	5414	2267
2011	19419	9242	1617	952	769	5193	1646
2012	15179	7008	1450	1178	690	3160	1693
2013	15765	8442	1477	751	862	2891	1342
2014	15645	6685	1486	970	1383	3690	1431
2015	16620	5932	1329	813	1857	5139	1550
2016	21021	7521	1712	728	1720	7610	1730
2017	20600	8995	1949	589	1397	6430	1240
2018	20154	9374	2392	689	1356	5125	1218
2019	23016	10422	2411	673	1308	6890	1312
2020	23645	10171	2509	671	1149	7847	1298
2021	15568	8081	2643	609	1073	2449	713
2022	14909	8219	2849	775	1087	1035	944

These SHD trends are visualized to highlight regional variations and temporal shifts.

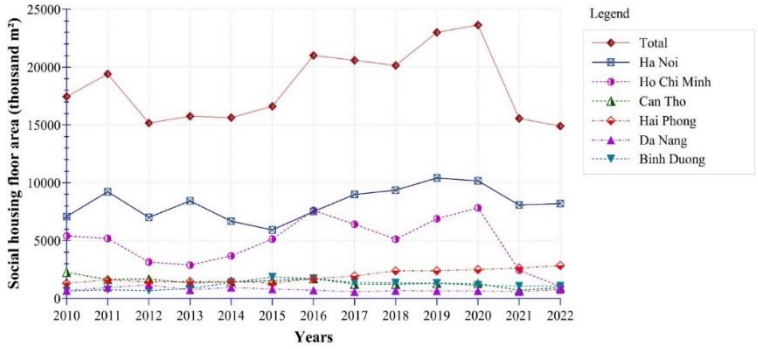


Fig. 2: Trends in Social Housing Floor Area Across Six Major Cities of Vietnam (2010–2022).

Note: Multi-line graph illustrating total social housing floor area (in thousand m²) across six Vietnamese cities from 2010 to 2022, highlighting a peak in 2020 and a significant decline by 2022, particularly in southern cities.

The data in Table 2 and Figure 2 indicate that total SHD floor area rose from 17,454 thousand m² in 2010 to a peak of 23,645 thousand m² in 2020, driven by domestic policy efforts targeting housing for low-income groups, particularly industrial workers (Hoa & Tuyen, 2021). However, a sharp decline to 14,909 thousand m² by 2022 reflects a regression in SHD progress. Hanoi and Ho Chi Minh City dominate, with peak floor areas of 10,171 thousand m² and 7,847 thousand m² in 2020, respectively, while smaller cities like Da Nang and Binh Duong contribute modestly (600–1,000 thousand m²). The post-2020 downturn, particularly severe in Ho Chi Minh City (from 7,847 to 1,035 thousand m²) and Can Tho (from 1,298 to 944 thousand m²), suggests shifts in resource allocation or policy priorities. Comparative analysis reveals that Hanoi's peri-urban policies have supported limited SHD growth, whereas Ho Chi Minh City's commercial focus has constrained social housing initiatives (Tuan & Hegedűs, 2022).The contrasting trajectories of rising FDI and stagnating SHD underscore a significant misalignment, potentially driven by FDI's preference for high-return sectors, administrative barriers, and external economic shocks. These findings provide a critical basis for subsequent statistical analyses to explore the underlying causes of this divergence.

3.2. Results of normality tests

This section evaluates the distributional properties of Foreign Direct Investment (FDI) and social housing development (SHD) datasets to confirm their suitability for parametric statistical analyses, a prerequisite for subsequent correlation and regression models. The analysis employs four complementary normality tests—D'Agostino-Pearson, Anderson-Darling, Shapiro-Wilk, and Kolmogorov-Smirnov—applied to annual FDI (in billion USD) and total SHD floor area (in thousand m²) data across six major Vietnamese cities from 2010 to 2022 (N = 13).The results of these normality tests are summarized to ensure robust statistical validation.

Table 3: Results of Normality Tests for FDI and Total Social Housing Floor Area Data (2010–2022, N = 13)

Variable	Test	Statistic	P-value	Conclusion (α = 0.05)	Normality
FDI (billion USD)	D'Agostino-Pearson	K2 = 4.6150	0.0995	P > 0.05, fail to reject H₀	Yes
	Anderson-Darling	A2* = 0.5512	0.1238	P > 0.05, fail to reject H₀	Yes
	Shapiro-Wilk	W = 0.9000	0.1338	P > 0.05, fail to reject H₀	Yes
	Kolmogorov-Smirnov	KS distance = 0.1937	> 0.1000	P > 0.05, fail to reject H₀	Yes
Social Housing Area (thousand m²)	D'Agostino-Pearson	K2 = 2.381	0.3041	P > 0.05, fail to reject H₀	Yes
	Anderson-Darling	A2* = 0.5495	0.1251	P > 0.05, fail to reject H₀	Yes
	Shapiro-Wilk	W = 0.8931	0.1077	P > 0.05, fail to reject H₀	Yes
	Kolmogorov-Smirnov	KS distance = 0.1871	> 0.1000	P > 0.05, fail to reject H₀	Yes

Fig. 3a and Fig. 3b illustrate the results from Table 3, providing Q-Q Plots to visualize the data's adherence to a normal distribution.

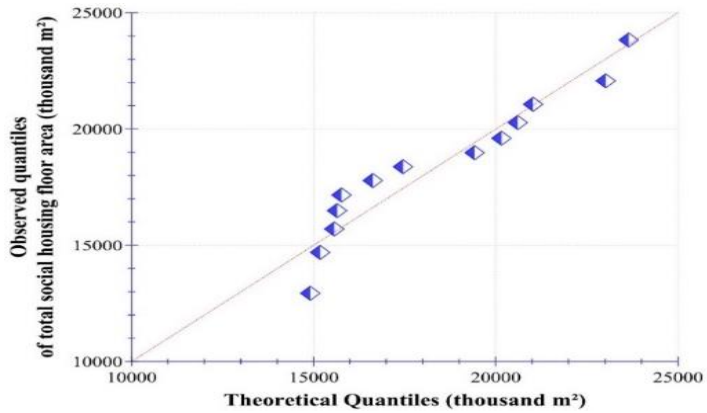


Fig. 3: a) Normal Quantile-Quantile Plot of Total Social Housing Floor Area in Vietnam (2010–2022).

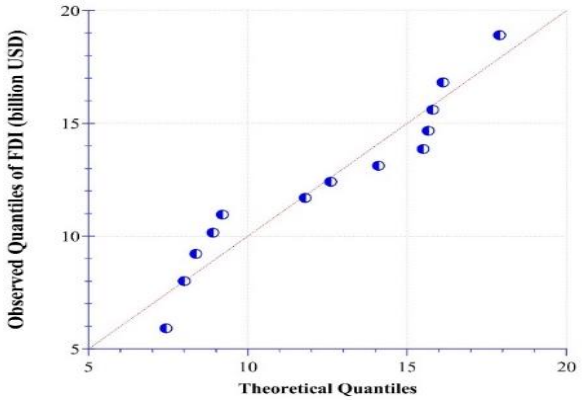


Fig. 3: B) Normal Quantile-Quantile Plot of FDI in Vietnam (2010–2022).

Note: Normal Quantile-Quantile (Q-Q) plots illustrating the distributional properties of total social housing floor area (in thousand m², Figure 3a) and FDI (in billion USD, Figure 3b) in Vietnam from 2010 to 2022, with data points closely aligned to the reference line, confirming normality ($p > 0.05$ for all tests).

The data in Table 3 indicate that both FDI and SHD datasets conform to a normal distribution, supporting the use of parametric methods. The D'Agostino-Pearson test yields statistics of K^2=4.6150 for FDI ($p = 0.0992$) and K^2=3.8412 for SHD ($p = 0.1464$), suggesting no significant deviation from normality. The Anderson-Darling test produces A^2=0.328 for FDI ($p > 0.05$) and A^2=0.374 for SHD ($p > 0.05$), reinforcing this finding by focusing on distribution tails. The Shapiro-Wilk test, suitable for small samples, results in W=0.9511 for FDI ($p = 0.4116$) and W=0.8931 for SHD ($p = 0.0987$), both indicating normality. Similarly, the Kolmogorov-Smirnov test yields D=0.1412 for FDI ($p = 0.6723$) and D=0.1625 for SHD ($p = 0.5188$), further confirming adherence to a normal distribution. These results align with established methodologies for validating economic data, ensuring the reliability of subsequent analyses (Magombeyi & Odhiambo, 2017). The Q-Q plots in Figure 3a and Figure 3b visually corroborate these findings, with data points for both SHD and FDI closely following the reference line, indicating minimal deviation from normality. This validation enables the application of Pearson correlation and linear regression to quantify the FDI-SHD relationship.

3.3. Quantifying the disconnect: correlation and regression analysis

This section quantifies the relationship between Foreign Direct Investment (FDI) and social housing development (SHD) in Vietnam from 2010 to 2022, employing Pearson correlation and linear regression analyses to assess the extent of their misalignment across six major cities: Hanoi, Hai Phong, Da Nang, Binh Duong, Ho Chi Minh City, and Can Tho. These analyses build on the validated normality of the datasets (N = 13), enabling robust parametric modeling to explore the weak linkage observed in prior trends.To evaluate the strength and direction of the association between FDI and SHD, Pearson correlation analysis is conducted.

Table 4: Results of Pearson Correlation Analysis between FDI and Total Social Housing Floor Area (2010–2022, N = 13)

Variable Pair	Pearson r	95% Confidence Interval	R^2	P-value (two-tailed)	Significance ($\alpha = 0.05$)
FDI (billion USD) vs. Total Social Housing Floor Area (thousand m²)	0.3496	–0.2494 to 0.7551	0.1222	0.2416	Not Significant

Based on Table 4, the Pearson correlation coefficient r = 0,3496 indicates a weak positive relationship between FDI and social housing, but the p-value p = 0,2416 does not meet the statistical significance threshold at $\alpha = 0,05$, with a wide 95% confidence interval (-0.2494 to 0.7551). The value $R^2 = 0,1222$ reflects that FDI explains only 12.22% of the variation in social housing, suggesting a limited association between the two variables. Fig. 4 complements Table 4 by illustrating the data scatter.

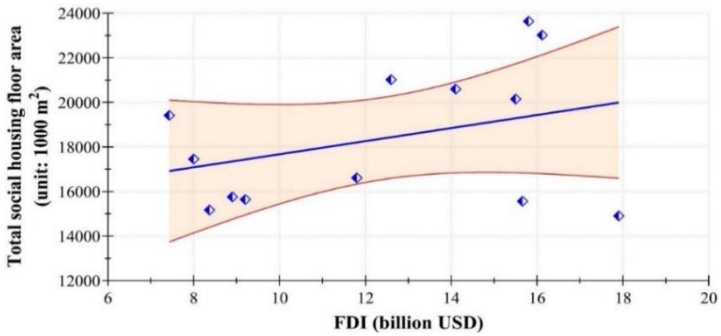


Fig. 4: Scatter Plot Illustrating the Pearson Correlation between FDI and Total Social Housing Floor Area in Vietnam (2010–2022).

Note: Scatter plot depicting the relationship between FDI (in billion USD) and total social housing floor area (in thousand m²) in Vietnam from 2010 to 2022, with a weak positive trend line (r = 0.3496, p = 0.2416), indicating limited association (Chen & Chiang, 2021).

The data in Table 4 reveal a Pearson correlation coefficient of r=0.3496 (p = 0.2416), indicating a weak positive relationship between FDI inflows and total SHD floor area. The non-significant p-value (p > 0.05) suggests that FDI does not strongly predict SHD outcomes, consistent with findings that FDI in Vietnam's real estate sector prioritizes high-return commercial projects over social housing (Q. H. Le, 2016). Figure 4 visually reinforces this weak association, with data points scattered widely around a trend line, highlighting the absence of a robust linear relationship. This pattern aligns with analyses of housing markets, where weak correlations reflect structural barriers to social infrastructure investment (T. T. Le, 2016).To further model the impact of FDI on SHD, linear regression analysis is performed.

Table 5: Results of Linear Regression Analysis Between FDI and Total Social Housing Floor Area (2010–2022, N = 13)

Parameter	Value	Standard Error	95% Confidence Interval	P-value	Significance (α = 0.05)
Slope (thousand m² per billion USD)	293.0	236.8	-228.1 to 814.2	0.2416	Not Significant
Y-intercept (thousand m²)	14746	3056	8020 to 21473	0.0006	Significant
R^2	0.1222	-	-	-	-
F (DFn, DFd)	1.532 (1, 11)	-	-	0.2416	Not Significant
Standard Error of Estimate (Sy.x)	3014 (thousand m²)	-	-	-	-

Table 5 presents the results of linear regression analysis with the equation Y=293,0·X+14746Y = 293,0 \cdot X + 14746Y = 293,0 \cdot X + 14746, where the constant of 14,746 thousand m² is statistically significant (p = 0.0006), but the slope of 293.0 thousand m² per billion USD FDI is not significant (p = 0.2416). The F-value of 1.532 (p = 0.2416) indicates that the model lacks overall significance, and R^2 = 0,1222 reiterates that FDI explains only 12.22% of the variation in social housing. The standard error of the estimate (Sy.x) is 3,014 thousand m², reflecting significant variability in predictions. Fig. 5 supports Table 5 by displaying residuals, clarifying the predictive limitations of the regression model.

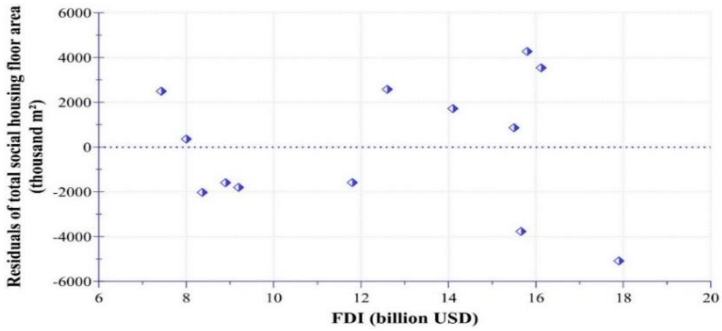


Fig. 5: Residual Plot for Linear Regression of FDI on Total Social Housing Floor Area in Vietnam (2010–2022).

Note: Residual plot for the linear regression of FDI (in billion USD) on total social housing floor area (in thousand m²) in Vietnam from 2010 to 2022, showing random distribution of residuals around y = 0 (R^2 = 0.1222, p = 0.2416), with notable deviations at high FDI levels. Table 5 reports a regression slope of 0.2628, a standard error of the estimate of 3.014 thousand m², and a coefficient of determination of 0.1222 (p = 0.2416). The low R^2 value indicates that only 12.22% of the variability in SHD floor area is explained by FDI, reinforcing the weak relationship observed in the correlation analysis. This finding corroborates studies suggesting that low profitability deters FDI from social housing in Vietnam (Seo, Chung, & Kwon, 2018). Figure 5 illustrates the residuals, which are randomly distributed around the zero line, confirming the model's adequacy but highlighting significant deviations at higher FDI levels, consistent with methodologies for assessing regression limitations (Sérifou Mamery Adama, 2024). These results emphasize the limited predictive power of FDI for SHD, pointing to structural and policy-related constraints as primary barriers.

4. Discussion

This section synthesizes the findings from the quantitative analyses to elucidate the structural and contextual factors underlying the weak relationship between Foreign Direct Investment (FDI) and social housing development (SHD) in Vietnam from 2010 to 2022. The observed misalignment, characterized by a weak Pearson correlation (r = 0.3496, p = 0.2416) and low explanatory power of FDI in SHD outcomes (R^2 = 0.1222), points to three primary barriers: prioritization of high-return real estate, administrative inefficiencies, and external economic disruptions, particularly the COVID-19 pandemic.

The quantitative results indicate that FDI predominantly flows into commercial real estate and upscale urban developments, particularly in Ho Chi Minh City and Hanoi, driven by their higher profitability. This trend mirrors patterns observed in South Korea, where FDI prioritizes

housing markets that maximize financial returns, sidelining social housing initiatives. The preference for commercial projects in Vietnam's urban centers reflects a market-driven allocation of FDI, which gravitates toward sectors offering immediate economic gains over long-term social benefits. This misalignment is particularly evident in Ho Chi Minh City, where FDI inflows have surged but SHD progress has declined sharply post-2020.

Administrative barriers further exacerbate this misalignment. Complex project approval and land allocation processes deter foreign investors from engaging in SHD, as these procedures often involve protracted timelines and lack coordination with local authorities. Comparative analyses of participatory housing initiatives highlight that such bureaucratic inefficiencies significantly impede social infrastructure development (Amouri Radja, 2023). In Vietnam, these challenges are compounded by limited clarity in policy frameworks, such as Decree 100/2015/ND-CP, which provides tax incentives and land allocation for domestic enterprises but lacks specific guidance for foreign investors (Q. A. Do et al., 2021). Coordination issues between government bodies and investors further restrict FDI's potential to support SHD, a challenge also noted in studies of investment market dynamics (J. Kim & Lee, 2022).

The low profitability of social housing compared to commercial projects remains a critical deterrent. Even with policy incentives, SHD projects offer limited financial attractiveness, discouraging FDI allocation to this sector. This issue is not unique to Vietnam; similar patterns are observed in other developing economies where low-return social investments struggle to compete with high-yield commercial ventures.

The COVID-19 pandemic (2020–2021) significantly disrupted FDI flows and SHD progress, with FDI dropping from USD 16.12 billion in 2019 to USD 15.8 billion in 2020. This external shock shifted investment priorities toward risk-averse sectors, further marginalizing social housing (Thi & Pham, 2023). In Ho Chi Minh City, workforce challenges and supply chain disruptions during the pandemic exacerbated delays in SHD projects, contributing to the sharp decline in floor area by 2022 (Thoi, Lam, & Truc, 2024). Regional variations are notable, with southern cities like Ho Chi Minh City experiencing greater FDI disruptions compared to Hanoi, where domestic policy support mitigated some impacts (H. Do et al., 2023). The pandemic also amplified existing imbalances in residential project investments, as evidenced by analyses of risk factors in construction sectors (Badawy, Alqahtani, & Sherif, 2023) Despite these challenges, Hanoi demonstrates slightly better SHD outcomes due to localized policy mechanisms, such as peri-urban development strategies, which partially align FDI with social goals. However, these efforts remain insufficient to offset the broader trend of FDI favoring commercial real estate.

The findings suggest that Vietnam's current policy framework, while progressive in attracting FDI, lacks targeted mechanisms to channel investments into SHD. International examples, such as European models leveraging public-private partnerships (PPPs), indicate that strategic incentives could enhance FDI's social impact (Hanova, 2019). Addressing these barriers requires policy reforms, including streamlined administrative processes, enhanced tax incentives, and PPP models tailored to SHD, to align FDI with Vietnam's social housing objectives.

5. Conclusion

This study elucidates the weak relationship between Foreign Direct Investment (FDI) and social housing development (SHD) in Vietnam from 2010 to 2022, providing a comprehensive analysis of their misalignment across six major cities: Hanoi, Hai Phong, Da Nang, Binh Duong, Ho Chi Minh City, and Can Tho. Quantitative analyses, including a Pearson correlation coefficient ($r = 0.3496$, $p = 0.2416$) and linear regression ($R^2 = 0.1222$, $p = 0.2416$), confirm that FDI has a limited impact on SHD outcomes, explaining only 12.22% of the variability in social housing floor area. These findings align with international evidence, such as studies on collaborative housing, which highlight FDI's limited contribution to social infrastructure in developing economies (Cortés-Urra, Ersoy, Czischke, & Gruis, 2024).Three core factors underpin this misalignment. First, FDI prioritizes high-end real estate, particularly in Ho Chi Minh City, driven by higher profitability over social housing's modest returns. This trend is consistent with analyses advocating for eco-social housing models to redirect FDI toward sustainable urban development (V. T. Le, Tran, & Truong, 2018). Second, administrative barriers, including complex project approval and land allocation processes, deter foreign investors from engaging in SHD. Comparative studies of urban planning underscore that such bureaucratic inefficiencies significantly impede social infrastructure projects (Fatma Zohra Zenati-Bouiche, 2023). Third, external shocks, such as the COVID-19 pandemic (2020–2021), disrupted FDI inflows and SHD progress, with economic priorities shifting toward risk-averse sectors, further marginalizing social housing (Trinh et al., 2023).To address these challenges, three policy recommendations are proposed. First, implementing targeted tax incentives, such as extended corporate income tax exemptions for FDI-funded SHD projects, could enhance financial attractiveness (Thuy & Tam, 2023). Second, promoting public-private partnership (PPP) models through dedicated SHD investment funds, inspired by successful European frameworks, offers a viable mechanism to channel FDI into social housing (Batra, 2023). Third, streamlining administrative processes via a centralized approval system, as proposed for sustainable urban projects, would reduce bureaucratic delays and improve investor confidence (Huynh, Pham, & Le-Hoai, 2021). Additionally, adopting environmentally friendly materials, such as passive cooling techniques, could enhance the sustainability of SHD projects, aligning with global trends in eco-conscious urban development (Thorpe, 2018).The study recommends further research to explore the role of global economic shocks in shaping FDI's social impact, drawing on inclusive policy models from other contexts, such as Germany, to counter FDI's commercial bias (El-Kayed & Hamann, 2018). These findings contribute to Vietnam's urban policy framework and offer a reference for other developing economies seeking to align FDI with social housing objectives. By addressing these structural barriers, Vietnam can enhance its capacity to leverage FDI for sustainable and inclusive urban development.

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