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The Financialisation of Real Estate Firm Investment Behaviour – Evidence from a Panel of Real Estate Developers in selected ASEAN economies

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The effects of financialisation on the investment behaviour of non-financial firms have become the subject matter of some recent studies. Another strand of the literature focuses on the implications of sector-specific (particularly the housing sector) financialisation. This study combines these two strands of literature by estimating the impact of financialisation on the investment behaviour of a panel of real estate firms in Malaysia, Thailand and the Philippines. The study extends the current knowledge of this subject area by enabling a more micro-level analysis of real estate firm behaviour that uses accounting data, while also drawing important observations about the similarities and differences in how real estate firms in various countries respond to financialisation. Our main findings can be summarised as follows. First, financialisation has a negative effect on the investment behaviour of real estate firms in Malaysia and the Philippines, but not Thailand. Second, past investment decisions, profitability and sales performance tend to reinforce current investment behaviour. Third, increased past leverage discourages investments. The negative impact of financialisation on investment in Malaysia and the Philippines could imply that more financialisation is associated with a tendency to reduce investments in construction activities in these countries. Some recommendations for policy are proposed.

Keywords

Financialisation, Real estate firms, Investment, ASEAN

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1. Introduction

The literature on financialisation has experienced substantial growth in the past decade (Norris and Lawson, 2023). Financialisation is a heterodox economic concept (Sotiropoulos and Hillig, 2020) and can take on various meanings. On the one hand, the term refers to a process of growth in the financial system; on the other hand, it could also mean a crucial stage in capitalism that started in 1980 (Sawyer, 2013). Although French et al. (2011) show scepticism about the usefulness and validity of the concept due to its vague underpinnings, there is, nevertheless, some degree of concreteness about its measurement, conceptualisation and implications in recent years. While similar to concepts such as financial liberalisation and globalisation, the differences of financialisation as a distinct process have been highlighted by Lapavitsas and Soydan (2022).

Financialisation is a process in which the financial sector gains more prominence over the real financial sector (Epstein, 2005, Foster, 2007). This contrasts with the traditional understanding that finance should exist only to provide support to the real financial sector (Fichtner, 2013). This process leads to business activities being organised more closely around financial objectives (Tori and Onaran, 2022). There are numerous implications of such developments. First, there would be wage stagnation and greater income inequality (Palley, 2007). Second, shareholder value maximisation becomes the norm with financialised economies having lower investment rates (Orhangazi, 2008). This tendency towards shareholder orientation is one key aspect of corporate financialisation where a rising share of firm profits are being distributed to shareholders in the form of dividend payments (Valeeva et al., 2023, Rabinovich and Reddy, 2024). Third, there is the greater use of financial derivatives (Wigan, 2009). Fourth, investment funds play increasingly more important roles in the international financial system (Granier, 2018). Financialisation is *variegated* due to the dissimilar processes and effects that occur in the different sectors and economies (Aalbers, 2017).

Following the theoretical developments of the concept, the empirical literature on financialisation can be grouped into macroeconomic studies (macro literature) of a specific country or group of countries (Krippner, 2005; Karwowski et al., 2020; Akcay et al., 2022), or studies of sectorial behaviour in which the implications of financialisation on specific industries are drawn out (Dewilde and Decker, 2016; Wijburg and Aalbers, 2017; Archer and Cole, 2021; Hui, 2025). Within the first group are studies that implement an econometric analysis of firm investment behaviour (Orhangazi, 2008; Davis, 2018; Tori and Onaran, 2018, 2020, 2022). However, these studies, while useful, do not pay much attention to the behaviour of specific sectors in the economy. Meanwhile, in the second group, there are few micro-analyses of real estate firm behaviour in response to financialisation with the use of accounting data, despite the existence and accessibility of such datasets.

According to Wijburg and Aalbers (2017), financialisation can affect the housing sector by re-purposing housing development as a profit-making process, with the participation of institutional investors providing funding to the real estate firms. Consequently, developers become more reluctant to build houses (Archer and Cole, 2021). Another effect is the increase in prices of housing services (Lima et al., 2020). At the heart of the matter are the transmission channels that move financial capital to housing developers. These channels are not only increasingly dominated by investors who expect more profit, but the number and amount of such channels have also multiplied rapidly over the years, thus reducing access to affordable housing (Norris and Lawson, 2023).

In light of these issues, a study of the type and extent of financialisation on the behaviour of real estate firms is timely. In this paper, we scrutinise how financialisation affects the investment behaviour of real estate developers in a panel of firms from three emerging economies, namely, Malaysia, Thailand and the Philippines. Thus, we combine the macro literature on financialisation (Orhangazi, 2008; Davis, 2018; Tori and Onaran, 2018, 2020, 2022) with a sectorial approach to financialisation (Dewilde and Decker, 2016; Wijburg and Aalbers, 2017; Archer and Cole, 2021). The initial focus of the study is on real estate firms in the Association of Southeast Asian Nations (ASEAN) region since there are no studies that cover this area despite the relevance of our line of inquiry. The ASEAN region was the epicentre of the Asian Financial Crisis and also affected by the Global Financial Crisis (GFC). Similar to Archer and Cole (2021), this study asks whether real estate firms could be exhibiting a recovery response to the crisis or simply responding to the process of financialisation. Furthermore, there remains a lack of understanding on the temporal and geographic aspects of financialisation which could be further explored in a cross-country comparative analysis (O'Callaghan and McGuirk, 2021). However, due to data limitations, this study focuses on only three ASEAN economies.

Our contributions to the literature are twofold. First, firm-level studies that focus on how financialisation affects investment behaviour in the real estate sector are rare. There has yet to be any detailed assessment of housing sector financialisation in such markets that uses firm-level accounting data other than Archer and Cole (2021) for the housing sector in the United Kingdom (UK). Hence, the study extends the current knowledge of this subject area by providing a more micro-level analysis of real estate firm behaviour with the use of accounting data. Second, this type of analysis makes it possible to draw important observations about the similarities and differences in how real estate firms in various countries respond to financialisation.

We obtain our data from the Worldscope database accessed through the Refinitiv-LSEG app, which gives us a rich set of accounting data that involve firms in the housing sector in Malaysia, Thailand and the Philippines, which cover over a decade of observations. Adopting the empirical framework for firm

investment behaviour in Tori and Onaran (2022), we estimate the impact of financial payments (proxy for financialisation) on the investment behaviour of housing developers in these economies. Our main findings can be summarised as follows. First, financialisation has a negative effect on the investment behaviour of real estate firms in Malaysia and the Philippines, but not Thailand. Second, past investment decisions, profitability and sales performance tend to reinforce current investment behaviour. Third, increased past leverage discourages investments. The negative impact of financialisation on investment in Malaysia and the Philippines could imply that more financialisation is associated with a tendency to reduce investments in construction activities in these countries. However, financialisation seems to have encouraged more investment in firms based in Thailand. We argue that this is not due to institutional aspects (i.e., degree of financial development in the country), but rather, sector specific competition dynamics. Real estate firms in Thailand have less profitability and a less concentrated industry which subsequently encourage more business competition. Maintaining a steady stream of dividend payouts and investments requires efforts to remain relevant to shareholders while keeping creditors at bay. However, it is also possible that these firms have not found alternative ways of generating financial revenue. Due to the paucity of data on financial incomes, we are unable to confirm this argument. Nonetheless, this provides an avenue for future research.

The paper is organised as follows. The next section discusses the literature from which the study draws upon. Following this, the methodology and data sources are discussed. The subsequent section presents the results and discussion of the findings before the conclusions are made.

2. Literature Review

The empirical literature on financialisation can be organised into two groups. The first concerns macroeconomic studies, or macro literature (Krippner, 2005; Karwowski et al., 2020; Akcay et al., 2022), Within this group are studies that use econometric models of firm investment behaviour (Orhangazi, 2008; Davis, 2018; Tori and Onaran, 2018, 2020, 2022). In the second group, there are numerous studies on the financialisation of the housing sector or sectorial studies (Dewilde and Decker, 2016; Wijburg and Aalbers, 2017; Archer and Cole, 2021; Hui, 2025).

In the macro literature group, we cite Orhangazi (2008), Cordonnier and Van de Velde (2015), Davis (2018) and Tori and Onaran (2018, 2020,2022) as some of the key works in this area over the last few decades. Essentially, increased financialisation tends to reduce the desire of firms to invest. These studies come at a time when investment share in profits were falling while dividend share in profits were moving in the opposite direction (UNCTAD, 2016, Tori and Onaran, 2022). In these studies, the driver of financialisation is similar to that

covered in Archer and Cole (2021); namely, financial expenses (interest and dividend payout) while also including financial incomes (interest and dividend incomes).

Notably, Orhangazi (2008) finds that financialisation (proxied by payments to financial markets) has a statistically significant and negative effect on the investment behaviour of firms in the United States (US). Davis (2018) undertakes a comparative study of a different sample of US firms, with financialisation proxied by the degree of orientation to shareholder value. The research shows that a greater orientation to shareholder value reduces firm investment rates. Tori and Onaran (2018, 2020, 2022) examine the effects of financialisation on non-financial firm behaviour in the UK, European and developing and emerging economies respectively. All three studies reported a significant effect of financial income and payments in crowding out physical investments. Moreover, the degree of impact of financialisation greatly depends on the institutional characteristics of the countries where the firms actually operate.

The sectorial studies discuss the financialisation effects on the housing sector. Dewilde and Decker (2016) empirically show that more financialised regimes also experience greater deterioration in housing affordability with the use of econometric frameworks. Hui (2024) finds evidence of cointegration between financialisation and the share of low-cost housing, with intensifying financialisation as the underlying cause for the shift of developers towards building more expensive houses in Malaysia. The negative association between financialisation and affordability can be better understood in the context of supply and demand dynamics. In an exploratory analysis of the financial statements of UK housing developers, there is a tendency to build fewer houses with more financialisation, as the developers are preoccupied with the possibility of leveraging more profitable financial investments (Archer and Cole, 2021). Lima et al. (2020) show that the increase in homelessness and unaffordability in the private rental housing market of Ireland is related to financialisation. Professional investment funds have taken over the management of rental housing and are demanding more returns on investments. This has led to increases in rental rates and less access to housing services.

In the literature cited so far, it is important to highlight the drivers of financialisation. Particularly, in the ‘sectorial studies’ literature, Dewilde and Decker (2016) and Hui (2024) use aggregate indicators of financialisation, namely the share of mortgage debt in the gross domestic product (GDP) and share of credit to the real estate sector in the GDP. These indicators capture a specific channel or type of financialisation driven by financial institution debt. In Archer and Cole (2021), the main drivers of financialisation among the UK housing developers are increased interest payment, dividend payout, and share buybacks as evidenced from firm-level accounting data. Meanwhile, the financialisation of the Irish rental market originated from the emergence of REITs especially after the GFC in 2008. The ownership of housing services by

profit-driven investors has led to increases in the price of such services. Within the macro literature (Orhangazi, 2008; Davis, 2018; Tori and Onaran, 2018, 2020, 2022), the focus is on highlighting that ownership of firms by profit-driven shareholders means that financial incomes and expenses become more prominent than the income and expenses from production.

The macro literature focuses on non-financial firms in general but do not provide insights into the behaviour of firms in a specific sector. On the other hand, the sectorial studies provide ample evidence on the effects of financialisation on the housing sector. However, these studies do not make use of the extensive accessibility of accounting data of real estate firms which could be subjected to a more systematic type of analysis. Hence, it is possible to bring these two groups of the literature together. In this paper, drawing upon the accounting data of real estate firms in three emerging economies namely Malaysia, Thailand and the Philippines, and applying various econometric analyses provide some critical insights. This research is a contribution to the literature at two levels.

First, firm-level studies that focus on how financialisation affects investment behaviour in the real estate sector are rare other than Archer and Cole (2021). Hence, this study extends the current knowledge of this subject area by providing a more micro-level analysis of real estate firm behaviour by utilising accounting data. Second, this type of analysis makes it possible to draw important observations about the similarities and differences in how real estate firms in various countries respond to financialisation. Given the variegated nature of financialisation (Lapavitsas and Soydan, 2022), it is possible to tell an interesting sectorial story of financialisation.

3. Data and Methodology

3.1 Data

Our sample is sourced from the Worldscope database. This database contains rich firm-level accounting data that cover the variables needed in the study. The sample initially encompassed accounting data for real estate developers in Malaysia, Thailand, Indonesia and the Philippines. Indonesia was subsequently removed from the sample due to insufficient observations. In the end, we downloaded a panel data of 32 firms for Malaysia, 30 firms for the Philippines and 52 firms for Thailand that span the years of 2006-2023. There is insufficient data to conveniently break down the firms into real estate sub-sectors such as housing, commercial or retail real estate. Moreover, the firms are small to medium sized enterprises with most of the business interests focused in their respective country of origin.

Further examination of the sample uncovered large numbers of missing observations for several cross-section and time units, which left us with a very unbalanced panel structure. Due to the complications with an unbalanced panel data structure, it would be more straightforward to use balance panel data (Baltagi, 2005). Hence, some observations (cross-section or time series units) had to be discarded. On the one hand, if we emphasise the inclusion of as many years as possible in the sample, the ideal period of coverage would be 2011-2023 with the cross-section units covering 24 firms for Malaysia, 35 firms for Thailand and 16 firms for the Philippines (Sample I). In contrast, if we prioritised having as many cross-section (firm) observations as possible, the most ideal period of coverage that would maximise data capture would be from 2012 to 2023, which would leave us with 25 firms for Malaysia, 37 firms for Thailand and 19 firms for the Philippines (Sample II). Since there was no clear-cut algorithm to pick either of the two possible sample types, we have deployed both samples in the analysis. Moreover, using both samples for analysis would be advantageous for robustness.

3.2 Methodology

The general specification is:

$$\left(\frac{I}{K}\right)_{i,t} = \beta_0 + \beta_1\left(\frac{I}{K}\right)_{i,t-1} + \beta_2\left(\frac{S}{K}\right)_{i,t-1} + \beta_3\left(\frac{OI}{K}\right)_{i,t-1} + \beta_4\left(\frac{DIVP}{K}\right)_{i,t-1} + \beta_5\left(\frac{TD}{TA}\right)_{i,t-1} + \in_{i,t} \quad (1)$$

The model used in this study is based on Orhangazi (2008) and Tori and Onaran (2022), who adopt the post-Keynesian view of firms where firm investments are irreversible and path-dependent (Kalecki, 1954, Aretis et al., 2012). This path-dependence means that past investment decisions would have some impact on current investment behaviour and the inclusion of a lagged investment to capital ratio can reflect this phenomenon.

The unit of analysis is individual firms with subscripts i and t representing the variables of firm i at time t. Thus, it would be possible to fit a panel data into this framework for estimation and analysis. I denotes additions to capital stock (investment), K represents capital stock, S is net sales, OI is operating profit and $DIVP$ is cash dividends paid. TD and TA denote total debt and total assets respectively and the ratio represents the leverage of firm i at time t. While our model is motivated by Tori and Onaran (2022), there are points of departure as well. First, we utilise original variables rather than their logarithmic form since some of our data have negative values. Second, we do not add interest expenses to $DIVP$ due to the lack of such data. Moreover, we also do not include the variables that capture dividends and interest income received, and other accounting variables that might affect investment behaviour for the same reason.

The proposed indicator for financialisation in Equation (1) is *DIVP/K*. This is the ratio of dividend payments to capital stock. One aspect of financialisation can be seen in terms of its effects on the corporate sector. There is the tendency to increase the share of profits that is distributed to shareholders (Valeeva et al., 2023). As a system of governance, the greater role accorded to managers to carry out their responsibilities in a manner that is favourable to shareholders underpins the principle of shareholder value orientation (Rabinovich and Reddy, 2024). As Tori and Onaran (2022) state, the inclusion of sales to capital and operating profit to capital ratios is to capture the effects of capacity utilisation and internal funds availability, respectively.

We expect β_1 to be positive due to the path dependency argument (Kalecki, 1954, Aretis et al., 2012) mentioned earlier in the section. Meanwhile β_2 and β_3 are likely to be positive due to the forward-looking nature of investment decisions in the light of uncertainty. In this regard, the desire of firms to invest greatly depends on expected future profits, which are in turn influenced by current sales and profit performance. Based on the literature, *DIVP/K* is our indicator for the extent of financialisation, particularly outward financialisation and captures the effects of shareholder value orientation. However, data limitation renders our inability to cover other aspects of financialisation such as share buybacks (see Ren et al. (2024) for instance). The theory that underlies financialisation suggested by the cited literature so far, points to the likelihood that β_4 could be negative, since a greater commitment to paying dividends would be costly to the firm because potential sources of internal funds are being reduced. However, there is less certainty about the possible sign taken by β_5. Details of how the model estimation is addressed are provided in the results section.

4. Results

The summary statistics for Sample I is reported in Tables 1-4. Although these are the results from Sample I, Sample II summary statistics (not reported, but available on request) produced similar types of results. We analyse the sample in various ways. First, we combine the observations for all three countries (Table 1). Next, we disaggregate the panel observations into the respective countries, namely Malaysia (Table 2), Thailand (Table 3) and the Philippines (Table 4). It can be observed that all three countries have similar investment rates. However, real estate firms in Thailand have the lowest profitability rate and highest dividend payment rate and leverage ratio. These differences are important for explaining the varying effects of financialisation on firm investment behaviour. Moreover, the investment rates among real estate firms in Malaysia and the Philippines seem to exhibit very clear trends of decline (Figure 1b and 3b) but this is not the case for real estate firms in Thailand where there is initially a shallow decline that has been subsequently reversed in recent years (Figure 2b). Of note, the dividend payout rate in Thailand is quite flat and

consistent over the years (Figure 2a). The dividend payout rate in Malaysia and the Philippines initially decreased but has increased sharply in recent years (Figure 1a and 3a).

Table 1 Summary Statistics (combined sample I)

Variables	Minimum	Maximum	Mean	Standard Deviation
I/K	-0.1483	1.0763	0.0313	0.0671
S/K	-11.6124	7.2664	0.4339	0.6526
OI/K	-3.2659	0.4237	0.0440	0.1284
DIVP/K	-6.5647	0.4345	0.0103	0.2123
TD/TA	0.0000	0.7305	0.3287	0.1656

***Sources*:** author's calculations and Datastream

Table 2 Summary Statistics (Malaysia sample I)

Variables	Minimum	Maximum	Mean	Standard Deviation
I/K	0.0001	0.4855	0.0295	0.0576
S/K	0.0165	1.9564	0.3896	0.3024
OI/K	-0.0722	0.4237	0.0530	0.0592
DIVP/K	0.0000	0.1433	0.0174	0.0220
TD/TA	0.0000	0.7247	0.2983	0.1239

***Sources*:** author's calculations and Datastream

Table 3 Summary Statistics (Thailand sample I)

Variables	Minimum	Maximum	Mean	Standard Deviation
I/K	0.0000	1.0763	0.0319	0.0782
S/K	0.0084	7.2664	0.5711	0.6919
OI/K	-3.2659	0.3570	0.0358	0.1757
DIVP/K	0.0000	0.4345	0.0193	0.0304
TD/TA	0.0000	0.7305	0.3581	0.1885

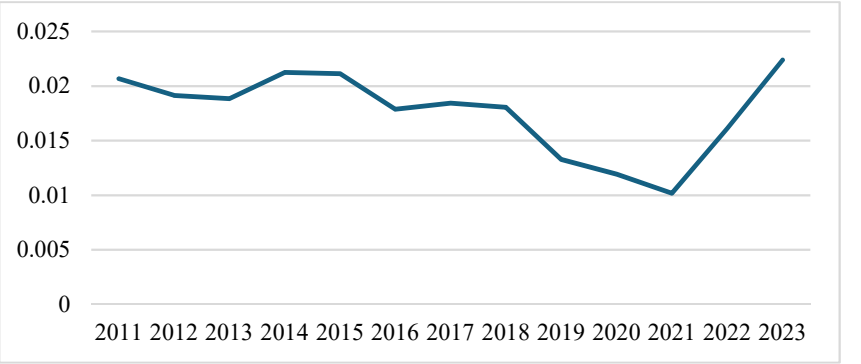
***Sources*:** author's calculations and Datastream

Table 4 Summary Statistics (Philippines sample I)

Variables	Minimum	Maximum	Mean	Standard Deviation
I/K	-0.1483	0.3068	0.0327	0.0527
S/K	-11.6124	1.5218	0.2003	0.8408
OI/K	-0.5105	0.2092	0.0486	0.0656
DIVP/K	-6.5647	0.0924	-0.0202	0.4562
TD/TA	0.0000	0.6059	0.3100	0.1564

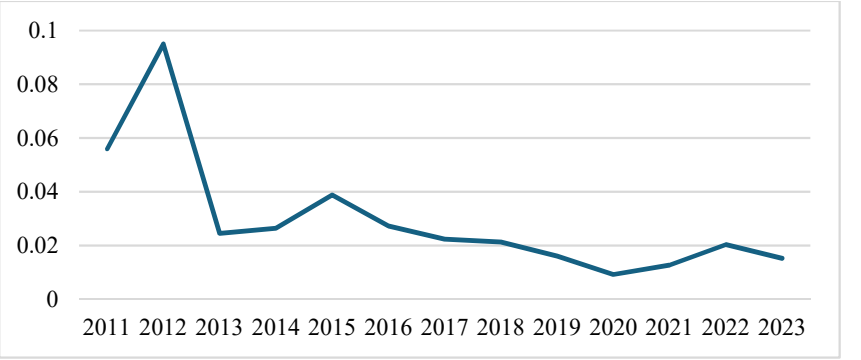
***Sources*:** author's calculation and Datastream

Figure 1a DIVP/K Trends - Malaysia



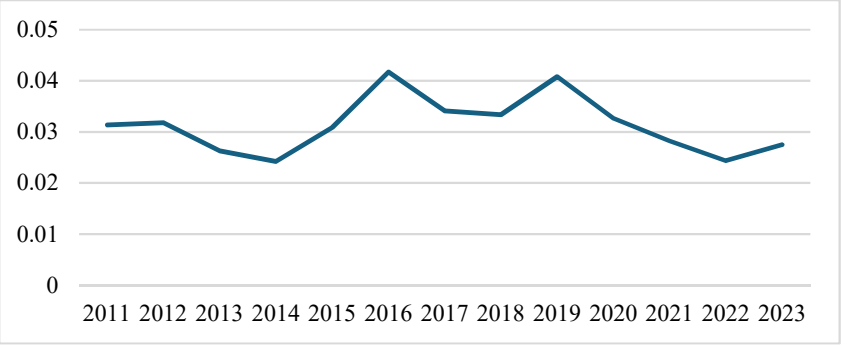
***Source*:** Worldscope, author's calculations based on sample I for each country

Figure 1b: I/K Trends – Malaysia



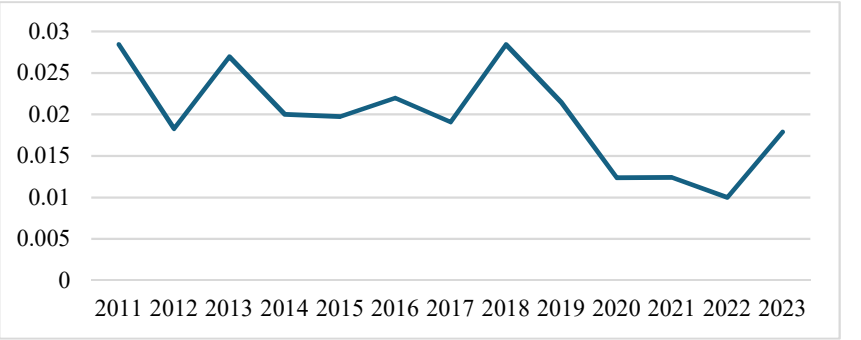
***Source*:** Worldscope, author's calculations based on Sample I for each country

Figure 2a DIVP/K Trends - Thailand



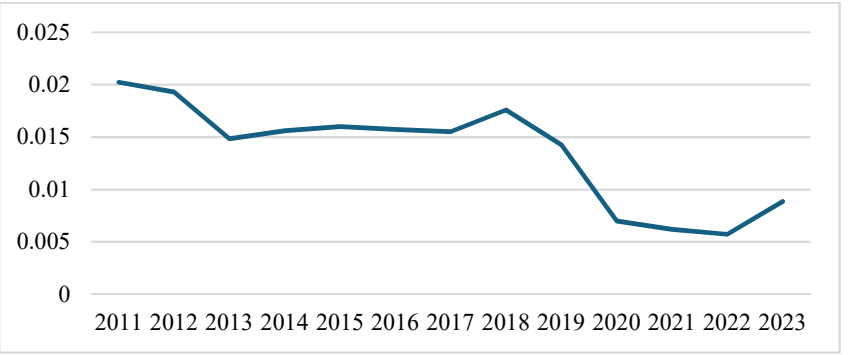
***Source*:** Worldscope, author's calculations based on Sample I for each country

Figure 2b I/K Trends – Thailand



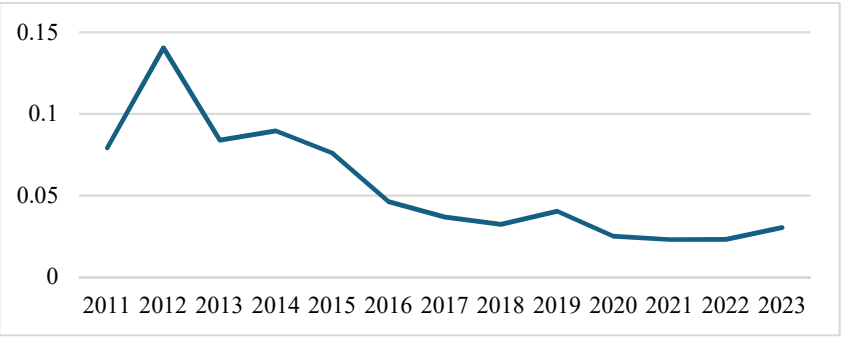
***Source*:** Worldscope, author's calculations based on Sample I for each country

Figure 3a DIVP/K Trends - Philippines



***Source*:** Worldscope, author's calculations based on sample I for each country

Figure 3b I/K Trends – Philippines



***Source*:** Worldscope, author's calculations based on Sample I for each country

Our panel data have more cross-section than time series units (N>T). For a relatively short time period in our sample, there is the tendency to conclude that the sample is non-stationary due to the low power of the tests (Karlsson and Löthgren, 2000). Nonetheless, data for real estate firms in the 3 countries are still tested for stationarity by using a battery of standard panel unit root tests. Since the power of the test is low, evidence of stationarity is suggested if there is at least one test that rejects the null of unit root. The results are reported in Table 5. The evidence suggests that all of the variables are likely to be stationary, hence the variables can be specified in levels.

Table 5 Panel Unit Root Tests for the Variables Used in Equation (1)

Variables	Malaysia	Thailand	Philippines
I/K	LLC: -34.34***	LLC: -5.89***	LLC: -12.86***
	IPS: -13.75***	IPS: -4.02***	IPS: -6.93***
	ADF-F:155.43***	ADF-F: 124.22***	ADF-F: 94.88***
	PP-F: 165.46***	PP-F: 203.34***	PP-F: 113.38***
S/K	LLC: -4.50***	LLC: -16.53***	LLC: -121.00***
	IPS: -2.48***	IPS: -4.54***	IPS: -37.52***
	ADF-F: 78.16***	ADF-F: 111.14***	ADF-F: 71.89***
	PP-F: 77.31***	PP-F: 161.73***	PP-F: 43.27***
OI/K	LLC: -5.97***	LLC: -3.41***	LLC: -16.55***
	IPS: -2.73***	IPS: -2.51***	IPS: -8.56***
	ADF-F: 83.11***	ADF-F: 101.96***	ADF-F: 83.61***
	PP-F: 112.71***	PP-F: 169.55***	PP-F: 54.72***
DIVP/K	LLC: -3.72***	LLC: -3.88***	LLC: -154.02***
	IPS: -1.89***	IPS: -3.13***	IPS: -45.52***
	ADF-F: 78.67**	ADF-F: 92.14***	ADF-F: 63.04***
	PP-F: 117.78***	PP-F: 163.86***	PP-F: 45.90***
TD/TA	LLC: -3.79***	LLC: -1.08	LLC: -7.55***
	IPS: -1.65**	IPS: -0.65	IPS: -4.86***
	ADF-F: 63.25**	ADF-F: 70.21	ADF-F: 83.21***
	PP-F: 73.49**	PP-F: 117.68***	PP-F: 100.96***

***Notes*:** Sample covers 2011-2023. For each variable, the test equation adopts an intercept, under the assumption that individual cross-section units are independent. There is insufficient time period to conduct tests with cross-sectional dependence. The null hypothesis of the test is that the series being tested has a unit root. A rejection of the null implies that there is no unit root and the series is stationary. LLC is the test statistic for Levin, Lin and Chu (2002). IPS is the test statistic for Im, Pesaran and Shin (2003). ADF-F and PP-F are the test statistics for Fisher-ADF and Fisher PP (Maddala and Wu, 1999). *** and ** indicate statistical significance at 1% and 5% respectively.

Equation (1) is estimated by using the difference General Method of Moments (GMM) estimator (Arellano and Bond, 1991) similarly used by Tori and Onaran (2022) due to the ideal characteristics of this estimator (Roodman, 2009). This is an instrumental variable estimation approach with lagged right-hand side variables as the chosen instruments. The estimated equation is tested for the presence of serial correlation and the Hansen-Sargan test is used to examine the

appropriateness of the chosen instruments. This estimation procedure is first applied to both Samples I and II for real estate firms in all three countries (Table 6). Subsequently, the same procedure was used on Samples I and II for real estate firms disaggregated according to the respective countries (Table 7 for Malaysia, Table 8 for Thailand, and Table 9 for the Philippines).

Table 6 Estimation Results, Combined Samples I and II, Dependent Variable (I/K)

	I	VIF (I)	II	VIF (II)
$(I/K)_{t-1}$	0.1344*** (0.0009)	11.38	0.2747*** (0.0031)	2.24
$(S/K)_{t-1}$	0.0067*** (0.0002)	12.83	0.0492*** (0.0013)	3.34
$(OI/K)_{t-1}$	n.a.	n.a.	0.1630*** (0.0024)	3.17
$(DIVP/K)_{t-1}$	-0.0027*** (0.0006)	6.13	0.5572*** (0.0291)	1.44
$(TD/TA)_{t-1}$	-0.3039*** (0.0019)	2.07	-0.0292*** (0.0043)	1.82
p-value (J-statistic)	0.50	n.a.	0.37	n.a.
p-value (AR1)	0.06	n.a.	0.01	n.a.
p-value (AR2)	0.99	n.a.	0.78	n.a.
Sample size	750		729	
-No. of firms	75		81	
-Time period covered	2011-2023		2012-2023	

***Notes*:** J-statistic is the Sargan-Hansen test of overidentifying restrictions. The Arellano-Bond serial correlation test of the existence of first (AR1) and second (AR2) order serial correlation. The p-value for AR1 suggests the existence of serial correlation while the p-value for AR2 suggests that there is no serial correlation. This is the expected results if the disturbance terms are uncorrelated in levels. ***, ** and * denote statistical significance at 1%, 5% and 10% respectively.

All results were tested for multicollinearity. As a rule of thumb, we remove the explanatory variables from the model if the uncentered variance inflation factor (VIF) exceeds 20[1]. The Hansen-Sargan test for all of the specifications suggests that the chosen instrumental variables are appropriate, with little evidence of serial correlation in the disturbance terms. Where the VIF exceeds 20 for a particular explanatory variable, multicollinearity is detected and that variable would be dropped from the model. Theoretically, it would be interesting to include other firm-related financial attributes such as market capitalisation as

[1] For centered VIF, multicollinearity is high if the value exceeds 10. However, for uncentered VIF, higher values are tolerable (Groß, 2003)

explanatory variables. However, this endeavour is hampered by the lack of observations for many of the real estate firms in our sample.

Table 7 Estimation Results, Malaysia Samples I and II, Dependent Variable (I/K)

	I	VIF (I)	II	VIF (II)
$(I/K)_{t-1}$	0.2492*** (0.0012)	1.41	0.5665*** (0.0021)	5.49
$(S/K)_{t-1}$	0.0368*** (0.0020)	1.53	-0.0011 (0.0013)	2.85
$(OI/K)_{t-1}$	n.a.	n.a.	n.a.	n.a.
$(DIVP/K)_{t-1}$	-0.0835*** (0.0294)	1.11	-0.1786*** (0.0118)	1.62
$(TD/TA)_{t-1}$	-0.0515*** (0.0027)	1.46	-0.1526*** (0.0079)	2.85
p-value (J-statistic)	0.42	n.a.	0.50	n.a.
p-value (AR1)	0.03	n.a.	0.03	n.a.
p-value (AR2)	0.96	n.a.	n.a.	n.a.
Sample size	240		225	
-No. of firms	24		25	
-Time period covered	2011-2023		2012-2023	

Table 8 Estimation Results, Thailand Sample I and II, Dependent Variable (I/K)

	I	VIF (I)	II	VIF (II)
$(I/K)_{t-1}$	0.0866*** (0.0000)	1.26	0.2110*** (0.0003)	8.63
$(S/K)_{t-1}$	n.a.	n.a.	n.a.	n.a.
$(OI/K)_{t-1}$	n.a.	n.a.	0.0790*** (0.0000)	5.61
$(DIVP/K)_{t-1}$	0.4552*** (0.0019)	1.38	0.5192*** (0.0038)	5.47
$(TD/TA)_{t-1}$	-0.1933*** (0.0003)	1.18	-0.1233*** (0.0007)	6.68
p-value (J-statistic)	0.46	n.a.	0.56	n.a.
p-value (AR1)	0.07	n.a.	0.02	n.a.
p-value (AR2)	0.83	n.a.	0.97	n.a.
Sample size	350		333	
-No. of firms	35		37	
-Time period covered	2011-2023		2012-2023	

In the aggregated sample (Table 5), lagged investment, operating profit and sales rates have a positive and statistically significant effect on investment rate of real estate firms. The leverage ratio (TD/TA) has a negative and significant impact on firm investment rate. However, the coefficient for financialisation ($DIVP/K$) does not show a consistent sign or magnitude. If the sample is disaggregated into the respective countries, the reason for this becomes evident. In the case of real estate firms in Malaysia (Table 6) and the Philippines (Table 8), the results are similar to those of the aggregated sample except that financialisation now exhibits a negative and significant influence on the investment rate.

In contrast, while the qualitative and quantitative effects of the other explanatory variables on investment rate are similar to the results in the aggregated sample, financialisation seems to be positively associated with the investment rate for firms in Thailand (Table 7). Thus, the inconsistency of the sign on the financialisation coefficient in the aggregated sample (Table 5) could be attributed to the influence of the Thai real estate firms. To confirm this argument, we aggregate the data and re-estimate Equation (1) again but without including the firms from Thailand. The results, reported in Table 9, confirm our hypothesis.

Table 9 Estimation Results, Philippines Samples I and II, Dependent Variable (I/K)

	I	VIF (I)	II	VIF (II)
$(I/K)_{t-1}$	0.3711*** (0.0078)	11.43	0.4451*** (0.0113)	2.99
$(S/K)_{t-1}$	n.a.	n.a.	n.a.	n.a.
$(OI/K)_{t-1}$	n.a.	n.a.	0.1475*** (0.0183)	1.57
$(DIVP/K)_{t-1}$	-0.0133*** (0.0007)	18.13	-0.3326*** (0.0291)	2.53
$(TD/TA)_{t-1}$	-0.1022*** (0.0080)	12.30	-0.0705*** (0.0114)	1.98
p-value (J-statistic)	0.55	n.a.	0.56	n.a.
p-value (AR1)	0.06	n.a.	n.a.	n.a.
p-value (AR2)	0.40	n.a.	n.a.	n.a.
Sample size	160		171	
-No. of firms	16		19	
-Time period covered	2011-2023		2012-2023	

To summarise our key findings, financialisation has a negative effect on investment behaviour of real estate firms in Malaysia and the Philippines, but not Thailand. Second, past investment decisions, profitability and sales

performance tend to reinforce current investment behaviour. Third, higher past leverage discourages investments. The negative impact of financialisation on investment in Malaysia and the Philippines implies that more financialisation is associated with a decrease in housing supply.

Table 10 Estimation Results, Combined Samples I and II (excl Thailand), Dependent Variable (I/K)

	I	VIF (I)	II	VIF (II)
$(I/K)_{t-1}$	0.2754*** (0.0014)	5.83	0.5594*** (0.0002)	1.59
$(S/K)_{t-1}$	0.1031*** (0.0013)	14.30	n.a.	n.a.
$(OI/K)_{t-1}$	-0.1261*** (0.0076)	8.05	0.1465*** (0.0006)	1.35
$(DIVP/K)_{t-1}$	-0.1935*** (0.0017)	12.34	-0.2265*** (0.0010)	1.27
$(TD/TA)_{t-1}$	0.0038** (0.0016)	2.35	n.a.	n.a.
p-value (J-statistic)	0.40	n.a.	0.44	n.a.
p-value (AR1)	0.01	n.a.	0.02	n.a.
p-value (AR2)	0.34	n.a.	0.64	n.a.
Sample size	400		396	
-No. of firms	40		44	
-Time period covered	2011-2023		2012-2023	

5. Discussion

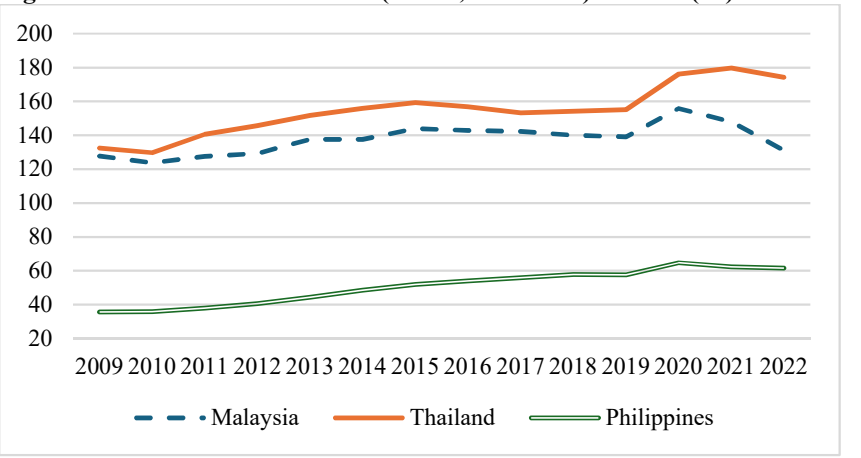
The finding that financialisation discourages firm investment is similar to that in Tori and Onaran (2018, 2020, 2022) who survey a wider range of firms in various industries around the world. Moreover, the finding also supports Orhangazi (2008) and Davis (2018) who examine how financialisation affects the investment behaviour of non-financial firms in the US. The negative impact of financialisation on real estate firm investment has another more sinister implication. Among the real estate firms in Malaysia and the Philippines which are involved in housing development, this could slow down capital accumulation as more profits are being channelled to pay shareholders instead. Hence, future housing construction could be affected, with further repercussions for the supply and affordability of housing services (Dewilde and Decker, 2016; Lima et al., 2020; Archer and Cole, 2021).

In the financialisation of building construction, dividend payments and other short-term financial incomes and expenses are prioritised over longer-term operational goals such as output and productivity increments (Froud et al., 2006, Aalbers, 2017). Furthermore, the tendency to withhold investments in physical capital is also a symptom of firms wanting to secure better gains and

opportunities through capital markets (Lazonick, 2014). Alternatively, firms involved in housing development could also resort to building higher-end houses that cater to higher income or net worth individuals where margins could be larger, thus enabling the maximisation of profits for shareholders (Hui, 2025).

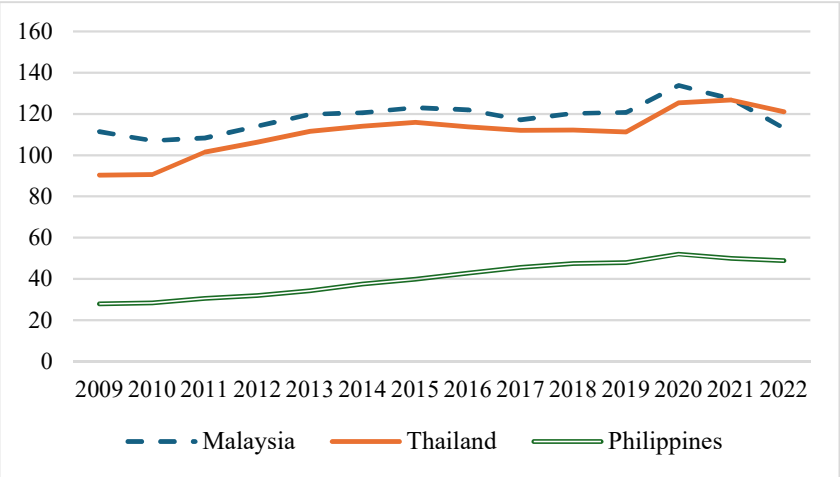
Figures 4 to 6 show some of the macro-indicators of financial development, which could proxy economy-wide financialisation trends. These indicators encompass the domestic credit to private sector by banks/GDP, stock market capitalisation/GDP and total private debt (including loans and securities)/GDP ratios. The figures indicate that domestic credit share in GDP (Figures 4 and 5) is declining in the post COVID-period in Malaysia. There are some signs that the same is being observed in Thailand albeit the decline is less pronounced. The Philippines is the least financialised economy with the level of financialisation rising steadily over the years. Commonly used financialisation indicators such as non-financial counterparties (NFCs) debt/GDP ratio (Karwowski et al., 2020) and household debt/GDP ratio (Akcay et al., 2022) are available only for Malaysia and Thailand (Figures 8 and 9) and reveal consistent trends as compared with the other diagrams. There seems to be more credit exposure to non-financial corporations than households in these 2 countries. It is difficult to tell whether the recent changes in Malaysia and Thailand are permanent or temporary. If the changes are temporary, we could see financialisation picking up again. In contrast, the stock market capitalisation shares in GDP and stock market total trades in GDP do not exhibit any signs of a decline in the importance of financial markets in all 3 countries (Figures 6 and 7). In fact, the dependence on financial markets in Thailand and the Philippines seems to be growing. Given that the macro-level financialisation spills over into the corporate sector, the rate of investments could see further declines in Malaysia and the Philippines.

Figure 4 Total Private Debts (Loans, Securities) in GDP (%)



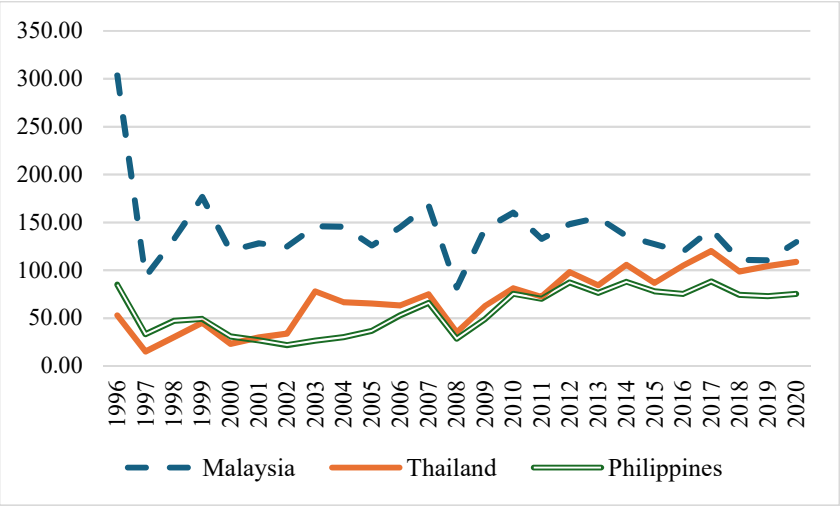
***Source*:** IMF

Figure 5 Total Domestic Credit by Banks to Private Sector in GDP (%)



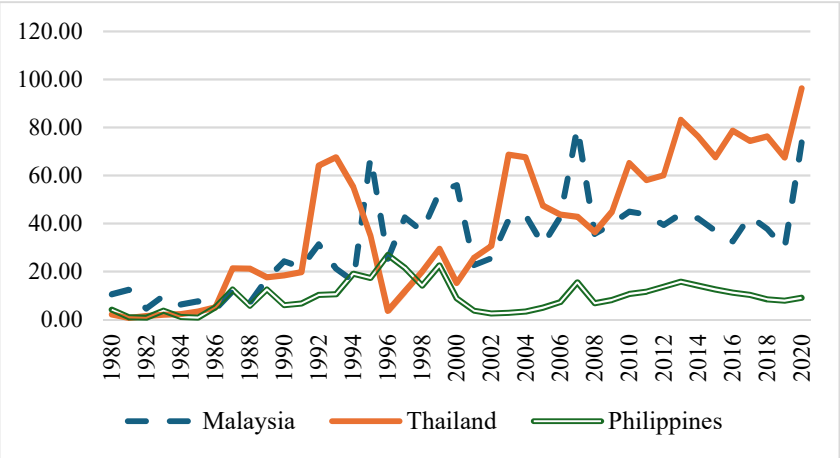
***Source*:** World Bank, author's calculations

Figure 6 Stock Market Capitalisation in GDP (%)



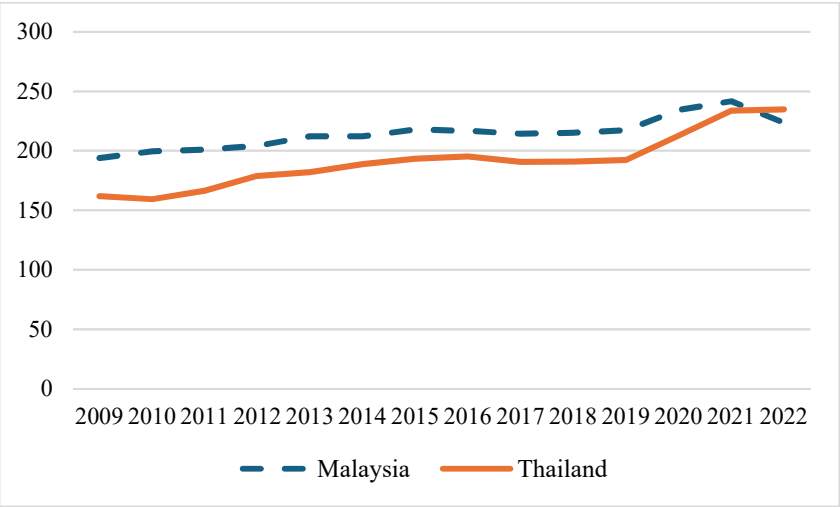
Source: World Bank Global Financial Development Database

Figure 7 Stock Market Total Value Traded in GDP (%)



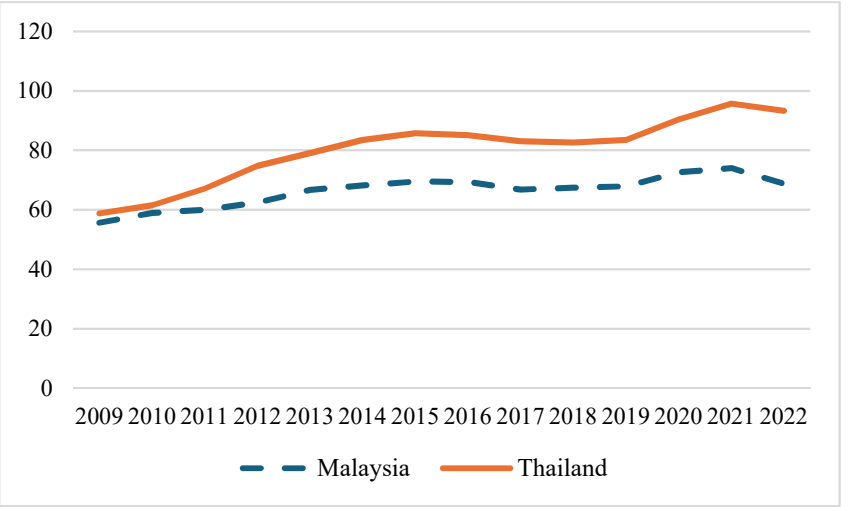
Source: World Bank Global Financial Development Database

Figure 8 Total NFC Debt in GDP (%)



***Source*:** BIS, author's calculations

Figure 9 Total Household Debt in GDP (%)



***Source*:** BIS, author's calculations

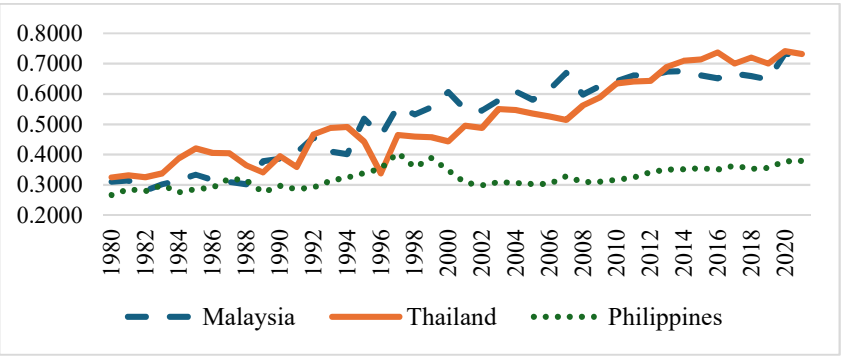
There are various possible sources of financialisation. Wang et al. (2025) point out that increased policy uncertainty leads to more corporate financialisation as firms retain more cash and reduce investments. Cao et al. (2021) support this finding but also add that transparent and supportive industrial policies also matter in curbing or reducing the rate of financialisation. Moreover, the impact of industrial policies on financialisation tends to be higher with higher financial capacity of the local governments and higher marketisation of the local economy. Thus, reversing the effects of financialisation calls for more transparency in policy making and implementation across the 3 countries in this study. However, Lapavitsas and Soydan (2022) suggest that financialisation in developing economies are dependent and *subordinate* to that of the developed economies, with a greater variety of different archetypes depending on how these developing economies are integrated with the world economy. This implies that the nature and dynamics of financialisation are far more complex than anticipated.

There are few studies on the financialisation of the countries covered in this study other than a recent report by the Khazanah Research Institute (Ismail et al., 2024) on Malaysia. One of the broad implications of this process as mentioned in the report include wage stagnation, increased inequality and indebtedness, and a focus on short-term profits among corporations. Özçelik et al. (2024) highlight that financialisation is responsible for the premature deindustrialisation of emerging markets and developing economies. Nonetheless, the impact of financialisation on economic growth varies and is intermediated by institutional quality and level of development, with the more

developed countries suffering negative effects. The effect experienced by the developing countries is either positive or not significant.

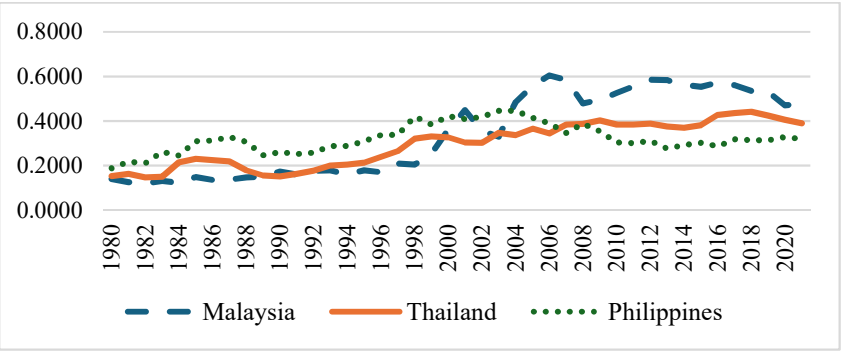
A question that emerges from the analysis is why does the qualitative relationship between dividend payout to shareholders and investment in physical capital differ in Thailand? This difference cannot be attributed to the level of financial development. In fact, Figures 10 to 12 show that Malaysia has the most developed financial system whereas the Philippines has the least developed financial system. The financial system of Thailand is more developed than that of the Philippines but nowhere as developed as the financial system in Malaysia. This view is sustained across various indicators of financial development. Thus, the notion that the institutional context matters in how financialisation trends affect investment behaviour is not supported here in contrast to the arguments of Tori and Onaran (2022).

Figure 10 Financial Development Index – Malaysia, Thailand and Philippines



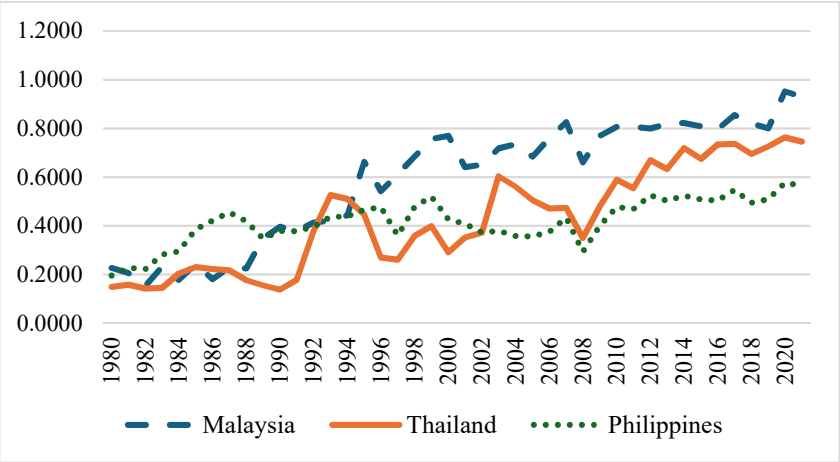
***Source*:** IMF, author's calculations

Figure 11 Financial Market Access – Malaysia, Thailand and Philippines



***Source*:** IMF, author's calculations

Figure 12 Financial Market Depth – Malaysia, Thailand and Philippines



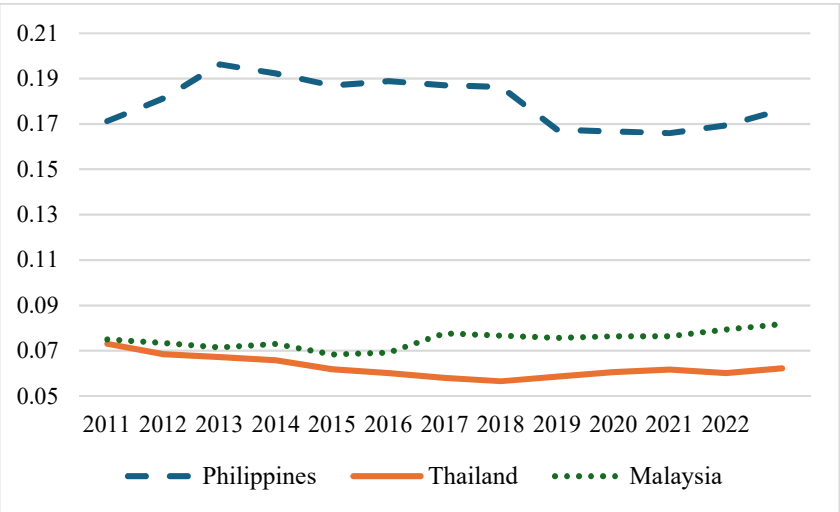
***Source*:** IMF, author's calculations

The answer lies somewhere in the corporate behaviour of firms. Observing the accounting data for firms in each individual country, the average investment and dividend payout rates are very similar in all of the countries across Samples I and II. However, the developers in Thailand clearly have the lowest mean operating profit rate, and the largest average leverage ratio and net sales rate. In a business environment characterised by relatively weak profitability and high indebtedness, the Thai real estate developers could be attempting to maintain their attractiveness to investors while keeping creditors at bay. Their paying of more dividends while maintaining a steady stream of investment and sales could reflect this behaviour. Due to the paucity of data on financial incomes, we are unable to confirm if real estate firms in Thailand are able to supplement their operating income with other sources of revenue. To the best of our knowledge, the existing literature does not provide exhaustive answers to how the profitability of firms affects their investment decisions. This aspect merits further investigation in future studies. Moreover, our calculations show that the GDP of the construction sector in 2023 is the largest for the Philippines, followed by Thailand and Malaysia, with the latter figures being very close at USD 1.7 billion and USD 1.3 billion respectively. In contrast, there are far more real estate firms in Thailand than in Malaysia and the Philippines. We assume that the market in Thailand is relatively more competitive, which could explain why profits are generally lower.

Using the data for Sample I, it is possible to construct an indicator of the degree of competition in the real estate sector in the countries. In this regard, we calculated the Herfindahl-Hirshman Index (HHI) (Roberts, 2014) by using firm total assets as a proxy for market share, and the results are shown in Figure 13.

Among the three real estate sectors, the industry in the Philippines has the highest concentration, followed by Malaysia and Thailand. Moreover, we also notice that while the industry in the Philippines and Thailand is becoming less concentrated over time, the industry concentration in Malaysia seems to be increasing. An interesting inquiry would concern how industry concentration could mitigate or increase the strength and nature of how financialisation affects investments.

Figure 13 Herfindahl-Hirschman Index (HHI) for Malaysia, Thailand and Philippines



Source: Datastream, author's calculations

There are various implications of the findings in this paper on investors. First, the focus on profits particularly in the short-term, could discourage investors from investing their money in the long-term. Instead of channelling funds for long-term investments, capital could be used in a more speculative manner which is detrimental to long-term investors. Second, there is potentially a greater shift in the structure of the economy towards a more service-oriented type of economy facilitated by de-industrialisation. Hence, institutional investors are likely to receive increased exposure to investments in the services sector. More concerning is that the rate of capital accumulation may slow down, thus undermining aggregate productivity growth for the entire economy.

6. Conclusion

The effects of the different types of financialisation and changes in the degree of financialisation have become important subject matters of a few recent studies. There are two groups of studies on the economic implications of the type and degree of financialisation. The first group is mainly characterised by econometric analyses of firm investment behaviour (Orhangazi, 2008; Davis, 2018; Tori and Onaran, 2018, 2020, 2022). The second group concerns the financialisation of the housing sector (Dewilde and Decker, 2016; Wijburg and Aalbers, 2017; Archer and Cole, 2021; Hui, 2025). This study combines these two strands of the literature. In this paper, we scrutinise one channel of financialisation; i.e., financial payments, and how this variable affects the investment behaviour of the real estate developers in a panel of firms from three emerging economies; namely, Malaysia, Thailand and the Philippines.

Firm-level studies that focus on how financialisation affects investment behaviour in the real estate sector are rare. There has yet to be any detailed assessment of housing sector financialisation in such markets that use firm-level accounting data other than Archer and Cole (2021) for the UK housing sector. Hence, the study extends the current knowledge of this subject area by providing a more micro-level analysis of real estate firm behaviour with accounting data. Secondly, this type of analysis makes it possible to draw important observations about the similarities and differences in how real estate firms in various countries respond to financialisation.

We draw our data from the Worldscope database accessed by using the Refinitiv-LSEG app, which provides us with a rich set of accounting data that include firms in the housing sector in Malaysia, Thailand and the Philippines with over a decade of observations. Adopting the empirical framework for firm investment behaviour of Tori and Onaran (2022), we estimate the impact of financial payments (proxy for financialisation) on the investment behaviour of housing developers in these economies. Our main findings can be summarised as follows. First, financialisation has a negative effect on investment behaviour of real estate firms in Malaysia and the Philippines, but not Thailand. Second, past investment decisions, profitability and sales performance tend to reinforce current investment behaviour. Third, increased past leverage discourages investments. The negative impact of financialisation on investment in Malaysia and the Philippines could imply that more financialisation is associated with a tendency to reduce construction activities. This might have serious implications especially when it affects housing construction. Fewer houses would lead to higher prices and a deterioration in affordability.

However, financialisation seems to have encouraged more investment in firms based in Thailand. We argue that this is not due to institutional aspects (i.e., degree of financial development in the country) but rather sector specific competition dynamics. Real estate firms in Thailand experience less

profitability and are less concentrated as an industry which subsequently encourages more business competition. Maintaining a steady stream of dividend payouts and investments constitute efforts to remain relevant to shareholders while keeping creditors at bay. However, it is also possible that these firms have not found alternative ways of generating financial revenue. Due to the paucity of data on financial incomes, we are unable to confirm this argument. Nonetheless, this provides an avenue for future research.

Alternatively, financialisation could be reversed in the manner suggested by Wijburg (2021). Theoretically, financialisation affects the real estate sector through numerous channels (Norris and Lawson, 2023). These channels reflect the volume of funds moving into the real estate developers via capital markets. In this regard, since these are profit-driven and investors are impatient when expecting payouts from their initial investments, profit could be extracted quickly from the firms, hence discouraging investment. As real estate investments are crucial activities to support economic growth, the reversal of financialisation could be an answer especially in the context of Malaysia and Thailand.

Disclosure statement

The authors report that there are no conflicts of interest to declare.

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