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Thrift-growth nexus for the regional comprehensive economic partnership countries

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Abstract

Purpose — This study examines the relationship between savings and economic growth, accounting for the mediating role of financial development across the selected Regional Comprehensive Economic Partnership (RCEP) countries.

Methods — Using a panel data set spanning 1986 to 2022, the long-run interaction among the variables is investigated with panel cointegration methods that account for cross-sectional dependence. Moreover, the associated long-run elasticities were estimated using the augmented mean group estimation method. The causal nexus was examined for each country in the sample.

Findings — In addition to the presence of a long-run relationship, the findings revealed that both thrifts and growth have a positive influence on each other in the long run. In addition, bidirectional causality tends to exist between thrifts and growth.

Implication — Since the findings disclose the validity of two mainstream macroeconomic views, policymakers should rely on developing economic policies aiming at fostering thrift and economic growth, which may include support of institutional quality and financial deepening in those economies.

Originality — The originality and added value of the study stem from the development of a new perspective, particularly in the examination of causal relationships. Furthermore, this is one of the primary efforts focused on the RCEP bloc, which has significant potential in terms of trade, finance, thrifts, and economic size in the contemporary world economy.

Keywords — Economic growth, panel data, RCEP countries, thrifts.

Introduction

In the realm of macroeconomics and development economics, the interplay between thrift and economic growth is considered a conventional subject. The theoretical underpinnings of this phenomenon encompass two pivotal macroeconomic perspectives: the Classical and the Keynesian. The savings-led growth hypothesis, also known as the Classical view, argues that thrift is the primary driver of economic growth. Hence, higher thrifts lead to higher short-run growth. However, as diminishing marginal returns to the accumulable factors of production set in, the long-run growth rate of income per worker will slow. It is also postulated that, with analogous savings rates, population growth, and technology, economies with low income per worker would grow faster than those with initially higher income or capital per worker. The flip side of the coin argues

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that, rather than thrifts, income and aggregate demand are the power horses of the overall economy. Based on the Keynesian view, savings could be enhanced by boosting disposable income, which is then allocated between consumption and thrift. Thus, it is essential to implement expansionary monetary and fiscal policies to stimulate aggregate demand.

Apart from the foregoing theoretical discussions, the topic is also notable for developmental aspects. For developing economies, one of the primary long-run objectives is to combat income disparities with developed economies. One possible solution to overcome this issue is to accelerate capital accumulation. In this regard, thrifts should not only be encouraged but also directed toward productive investments to stimulate effective demand. Thus, the necessity for the mediating role of the financial sector arises. In an efficiently functioning financial system, thrifts can be rapidly directed to feasible investment projects.

On the other hand, income growth might lead to greater thrift. In this setting, a well-functioning financial system can channel the excessive amount of income into the thrifts by means of various financial instruments. Besides the economic policies, either in favour of growth or in favour of savings, policymakers should account for the essentiality of the institutional regulations (in terms of financial inclusion and financial development) in achieving developmental goals.

Except today, some major Asian economies, most of the developing and less-developed nations have failed to narrow the income disparities with the industrialised countries. Thus, Asian economies have become the leading economies in terms of global trade and production hubs. In this regard, the fifteen Southeast Asian and Pacific countries (ten of which are members of ASEAN) signed the "Regional Comprehensive Economic Partnership" (RCEP) agreement on 15 November 2020, forming the largest free trade zone beyond the World Trade Organisation (WTO). It should be highlighted that the RCEP agreement covers almost 30% of the world population and accounts for 30% of the global GDP (Flach et al., 2021). To this end, Figure 1 presents the dynamics of real gross domestic savings and real GDP for the selected RCEP economies, which are also incorporated into the empirical analysis.[1] Accordingly, both variables tend to decline in the Asian countries of the sample due to the adverse severe effects associated with the emergence of the Asian financial turmoil in 1997. From then onwards, both variables are inclined to rise over the years, except for the global economic crisis, which emerged in the US economy in 2008, and the Covid-19 pandemic.

Source: Author calculation

Figure 1. Dynamics of Real Gross Domestic Product and Real Gross Domestic Savings
Note: Variables are expressed in natural logarithmic form.

[1] See Appendix 1 for the list of countries.

Building on prior theoretical debates, empirical research offers mixed results, supporting either the Classical or Keynesian view. Owing to differences in samples and methods, no consistent relationship has been established. The empirical studies that are in favour of the Classical approach suggest that savings precede economic growth. Recent empirical studies by Tang and Tan (2017), Nguyen and Nguyen (2017), Patra et al. (2017), and Chakraborty (2023) have provided evidence in support of the savings-led growth hypothesis. Conversely, the argument that economic growth precedes the accumulation of thrifts, known as the Keynesian view, has also garnered substantial support among scholars. The compelling evidence presented in the studies by Anoruo and Ahmad (2001), Agrawal (2001), Baharumshah et al. (2003) and more recently, Van Wyk and Kapingura (2021) and Brueckner et al. (2023) substantiates this assertion. Apart from the studies that delve into the Classical or Keynesian approach individually, the empirical corpus also provides a range of evidence. In this context, some empirical studies have concluded the validity of both methods (Adeleke, 2014; Jouini, 2016; Singh, 2010; Šubová et al., 2024). Strikingly, some empirical studies have declared no relationship or even a negative relationship (Chigozie & Omolade, 2021; Hundie, 2014; Joshi et al., 2019).

Despite the lack of direct research on the RCEP countries, there is a glut of studies that focus on individual RCEP countries or groups of Asian countries covered by the RCEP agreement. For instance, Tang and Chua (2012) and Tang (2015) confirmed the existence of a reciprocal feedback mechanism for the Malaysian economy. In contrast, Lean and Song (2009) reached the same conclusion for the Chinese economy, and their findings acknowledged the growth-inducing effects of thrift and investment. In a similar vein, Liu and Ma (2022) verified the Classical view for East and South Asian countries by utilising panel data analysis across a large group of countries from 1960 to 2021. It should also be noted that some studies have declared no causal link between thrifts and economic growth. Accordingly, Tang (2009) reported the insensitivity of the causal nexus to the selection of the technique, whether parametric or nonparametric. The findings, based on an analysis of quarterly time-series data spanning 1991: Q1 to 2006: Q3, indicated that the two variables are independent of each other. Analogously, Sothan (2014) derived no correlation between thrifts and growth for Cambodia.

On the other hand, the empirical literature also includes cross-country studies involving some Asian countries that are part of the RCEP agreement to date. However, the discoveries in those studies do not reveal a uniform tendency due to issues with the sample, data span, and methodology. For instance, Agrawal (2001) investigated the direction of the nexus for seven Asian countries, and, except for Malaysia, the Keynesian hypothesis is vindicated for the rest of the sample. In the latest evidence, Athukorala and Suanin (2024) have declared the validity of the Keynesian view for a group of Asian economies. Baharumshah et al. (2003) scrutinised the factors influencing thrifts across Asian countries and found that thrifts and growth are uncorrelated, except in Singapore, where thrifts precede growth. Tang and Ch'ng (2012) examined the association between thrift and growth across the five ASEAN founding economies from 1970 to 2010. The findings revealed a causal nexus between thrifts and economic growth, suggesting that the Classical view holds for those ASEAN economies. In recent research, Tang and Tan (2017) examined the interaction between thrifts and growth across seven East Asian economies and documented the existence of bidirectional causality between the tandems. Despite the plethora of empirical studies that specifically address the savings-growth nexus across a wide array of Asian countries, both individually and in terms of groupings, no empirical research has been undertaken that directly focuses on the RCEP countries. Accordingly, the present study aims to fill this gap and contribute to the existing empirical corpus by deploying novel panel time-series methods to address the nexus between thrifts and growth. The following section will rigorously discuss the empirical strategy.

Methods

This paper is founded on the approach proposed by Odhiambo (2008) to expose the dynamic interaction between real gross domestic savings and real GDP by accounting for the following linear equations:

$$Y_{it}=\gamma_{0i}+\gamma_{1i}S_{it}+M2_{it}+\varepsilon_{it} \quad (1)$$
$$S_{it}=\gamma_{0i}+\gamma_{1i}Y_{it}+M2_{it}+\varepsilon_{it} \quad (2)$$

Where Y_{it} denotes real GDP, Sit denotes real gross domestic savings, and M2it denotes financial depth, proxied by the real broad money supply. Finally, ε_{it} represents the conventional disturbance term, where superscripts i and t denote the country and time periods, respectively. Due to the limited availability of suitable data, empirical analysis is conducted for the selected RCEP countries using an annual panel data set from 1986 to 2022. All the data regarding the variables above were procured from the World Bank every year[2]. Except for the broad money supply, the rest of the variables are expressed in current US$. It should also be noted that all the variables were deflated by using the consumer price index.

Given the baseline model specifications, the projection of the current study scrutinises the validity of the following hypotheses:

H_1: Real gross domestic savings positively influence real GDP in the RCEP countries.

H_2: Real GDP positively influences real gross domestic savings in the RCEP countries.

In accordance with the foregoing main hypotheses of the present study, the expected signs in estimating the elasticities for real gross domestic savings and real GDP are positive. On the other hand, the anticipated proxy for financial depth is expected to be positive, thereby aligning with the observations of McKinnon (1973) and Shaw (1973). This is because economic development has been shown to stimulate growth by accelerating thrifts through enhanced efficiency in financial intermediation services (Odhiambo, 2008).

The empirical treatment commences with cointegration analyses, which reveal the dynamic interactions among the variables of interest. Anchored on the error-correction mechanism (ECM), Westerlund (2007) suggests the following data-generating process:

$$y_{it}=\varphi_{1i}+\varphi_{2i}t+z_{it} \quad (3)$$

Where φ_{1i}, $\varphi_{2i}t$ represent the deterministic terms, while z_{it} shows the stochastic component of equation 1. To construct the group and panel test statistics, Westerlund (2007) derives the following error-correction representation:

$$\Delta y_{it}=\delta_i^{'}d_t+\alpha_i y_{it-1}+\theta_i^{'}x_{it-1}+\sum_{j=1}^{p_i}\alpha_{ij}\Delta y_{it-j}+\sum_{j=0}^{p_i}\gamma_{ij}\Delta x_{it-j}+e_{it} \quad (4)$$

Where d_t denotes the deterministic components, which are embedded in the vector of parameters (δ_i'). Moreover, β_i is the error-correction term, and p_i denotes the lag length, which is allowed to vary across the individual units. By the estimation of equation 4 for each unit, the following group mean test statistics are obtained (Westerlund, 2007):

$$G_\tau=N^{-1}\sum_{i=1}^{N}\frac{\hat{\alpha}_i}{\sigma(\hat{\alpha}_i)} \text{ and } G_\alpha=N^{-1}\sum_{i=1}^{N}\frac{T\hat{\alpha}_i}{\hat{\alpha}_i(1)} \quad (5)$$

Where σ shows the standard error of the error-correction term, in a similar vein, Westerlund (2007) calculates the panel test statistics in the following form:

$$P_\tau=\frac{\hat{\alpha}}{\sigma(\hat{\alpha})} \text{ and } P_\alpha=T\hat{\alpha} \quad (6)$$

Even though Westerlund (2007)'s ECM-based test works efficiently under the existence of CD and slope heterogeneity, it requires variables to be integrated at the same order. In this regard, Westerlund (2008) develops the Durbin-Hausman (DH) type test, which is feasible to the extent that independent variables are integrated at different orders, while the dependent variable must contain a unit root. Anchored on the common factor approach for cross-sectional dependency, Westerlund (2008) suggests a pair of statistics regarding the homogeneity and heterogeneity of the autoregressive component (Φ_i), which is obtained by using the common factor

[2] (World Bank, 2023). World Development Indicators. https://databank.worldbank.org/source/world-development-indicators (accessed 20.10.2024). See Appendix 2 for the definitions and sources of data used in this paper.

for the disturbance term. To this end, for the homogeneity and heterogeneity of the autoregressive parameter, Westerlund (2008) develops the following two types of DH test statistics:

$$DH_g=\sum_{i=1}^{n}\widehat{S}_i\left(\widetilde{\emptyset}_i-\widehat{\emptyset}_i\right)^2\sum_{t=2}^{T}\hat{e}_{it-1}^2 \text{ and } DH_p=\sum_{i=1}^{n}\widehat{S}_n\left(\widetilde{\emptyset}-\widehat{\emptyset}\right)^2\sum_{i=1}^{n}\sum_{t=2}^{T}\hat{e}_{it-1}^2 \quad (7)$$

Where DH_g denotes the group-mean DH statistics, while DH_p denotes the panel statistics, respectively.

Of investigate parameter elasticity, the present paper utilises the Augmented Mean Group (AMG) estimator. Eberhardt and Teal (2010) constructed a two-step estimator, which handles CD by accounting for the standard dynamic process. Moreover, this estimator produces efficient results in small-sample settings. Eberhardt and Teal (2010) derive the AMG estimator by utilising the following two equations:

$$\text{AMG (i) } \Delta y_{it}=b'\Delta x_{it}+\sum_{t=2}^{T}c_tD_t+e_{it} \Rightarrow \hat{c}_t\equiv\hat{\mu}_t^{\bullet} \quad (8)$$

$$\text{AMG (ii) } y_{it}=\alpha_i+b_i'x_{it}+c_it+d_i\hat{\mu}_t^{\bullet}+e_{it} \quad (9)$$

Equation 8 represents the first step for the AMG estimator, which points out the first-differenced pooled regression by including the time dummies ($\hat{\mu}_t^{\bullet}$). Equation 9 represents the second step, in which deterministic trends for each cross-sectional unit are included in the regression. By the estimation of each equation, the following AMG estimator can be derived for each cross-sectional unit:

$$\widehat{b_{AMG}}=N^{-1}\sum_{i=1}^{N}\hat{b}_i \quad (10)$$

The present study proposes a novel approach to causality analysis that differs from the empirical approaches suggested thus far. In this regard, Juodis et al. (2021) proposed a strategy that yields efficient outcomes even in the presence of CD, despite the potential for homogeneity or heterogeneity in panel data. In addition, this test has a power advantage for large N and small T cases (Xiao et al., 2023). By establishing a linear restriction on causation parameters, examination of the null hypothesis is done by the pooled least-squares estimator Juodis et al. (2021):

$$\hat{\beta}=\left(\sum_{i=1}^{N}X_i'M_{Z_i}X_i\right)^{-1}\left(\sum_{i=1}^{N}X_i'M_{Z_i}y_i\right) \quad (11)$$

Where $M_{Z_i}=I_T-Z_i\left(Z_i'Z_i\right)^{-1}Z_i'$. Since this estimator suffers from Nickell bias, Juodis et al. (2021) introduced the following bias-corrected version of the Wald test (Xiao et al., 2023):

$$\widehat{W}_{HPJ}=NT\tilde{\beta}'\left(\hat{J}^{-1}\hat{V}\hat{J}^{-1}\right)^{-1}\tilde{\beta} \quad (12)$$

Where $\hat{J}=\frac{1}{NT}\sum_{i=1}^{N}X_i'M_{Z_i}X_i$ and $\tilde{\beta}$ is the estimator that wipes out the Nickell bias under the homogeneity restriction. In accordance with the foregoing methodological presentation, the following section provides the empirical findings on the nexus between thrifts and economic growth, incorporating the baseline model specifications.

Results and Discussion

Before a more detailed empirical investigation, descriptive statistics for the variables employed in the study are reported in Table 1. The mean and median values of each variable are closely aligned, suggesting that the estimation of the coefficients may result in more reliable outcomes. Meanwhile, the series of financial depth displays greater variability than those of real GDP and real gross domestic savings, reflecting differences in their maximum and minimum values. Since the mean exceeds the median, the skewness statistic is positive. Panel B is devoted to the computation of the correlation matrix. Evidently, a high degree of correlation is observed between real gross domestic savings and real GDP across the sample. Moreover, the broad money supply is highly correlated with real GDP.

Table 1. Summary Statistics and Correlation Matrix

Panel A: Summary Statistics			
Variables	Y	S	M2
Observations	370	370	370
Mean	22.302	21.130	25.376
Median	22.080	20.980	24.640
Standard Deviation	1.341	1.421	3.512
Minimum	19.449	18.551	19.764
Maximum	25.649	24.882	31.588
Skewness	0.477	0.480	0.305
Panel B: Correlation Matrix			
Variables	Y	S	M2
Y	1.000		
S	0.975	1.000	
M2	0.725	0.688	1.000

Note: Computation of the summary statistics for all variables is conducted in their natural logarithms.

It is conventional wisdom to begin the analysis by testing for the slope homogeneity and CD to identify the dynamic interplay across variables. Given that the countries in the sample have recently formed an integration agreement under the RCEP, which aims to expand trade volumes across the signatories, it is plausible that shocks (financial, commercial, etc.) in any country may affect the rest of the integration bloc. Accordingly, the CD tests developed by Pesaran (2004) and Pesaran (2007) were applied, with the respective results presented in the preceding section of Table 2. Apart from the initial test, the remaining tests consistently indicate the presence of cross-country dependence, rejecting the null of independence across all specifications. The results of the homogeneity tests, shown beneath the CD tests, rely on the procedure of Pesaran and Yamagata (2008) and provide strong evidence against slope homogeneity across units for each baseline specification.

Table 2. Cross-Sectional Dependency and Slope Homogeneity Tests

	A-Cross-Sectional Dependency Tests	
	Y	S
CD Test	0.543	-0.757
CD_{LM} Test	11.697*	9.155*
LM Test	155.963*	131.853*
$LM_{adj.}$ Test	15.421*	13.915*
	B-Homogeneity Tests	
	Y	S
$\tilde{\Delta}$ Test	15.926*	18.680*
$\tilde{\Delta}_{adj.}$ Test	16.863*	19.780*

Notes: * indicates the significance level at 1%.

Exploration of cointegration among non-stationary series requires pre-testing to identify the presence of a unit root, so that further estimation may yield spurious results. Table 3 reports the outcomes associated with various types of tests. The outcomes from the test introduced by Im et al. (2003) (hereafter, IPS) produce estimates that are consistent with those of other tests, to the extent that all series become stationary after first differencing. However, in the presence of CD IPS (2003), the test may not generate reliable results. Thus, we employed the so-called second-generation unit root tests at both levels and in first differences of the series. The estimates of both tests reveal analogous results. In this respect, the results of the bootstrap-IPS test indicate that the series are non-stationary at their levels (Smith et al., 2004). This outcome is also verified using the CIPS test proposed by Pesaran (2007). Hence, the results of the CIPS test clearly indicate that the series are integrated of order I (1).

Table 3. Panel Unit Root Tests

	IPS	BootstrapIPS	CIPS	Decision
Y	-0.808	-2.281	-2.465	
ΔY	-10.477*	-4.452*	-4.691*	I(1)
S	-0.773	-2.514	-2.544	
ΔS	-10.149*	-4.564*	-4.529*	I(1)
M2	-0.489	-2.007	-2.415	
ΔM2	-10.719*	-4.717*	-4.818*	I(1)

Notes: * indicates the significance level at 1%.

Having manifested that I (1) process is valid for all series, the long-run interaction among the variables is examined by conducting the panel cointegration tests. The above section of Table 4 presents the results of the panel ECM test, which reports four types of test statistics depending on whether heterogeneity of present. The results warrant that all the test statistics can indicate the existence of cointegration with respect to baseline specification in which real GDP is chosen as the dependent variable. A similar outcome is achieved when real gross domestic savings are selected as the dependent variable. To this end, except for G_{tau} statistics, the rest of the test statistics are inclined to accept the cointegration at a 10% significance level. The section below of Table 4 is dedicated to the results of the DH test. The results of each type of test statistic clearly indicate the existence of a cointegration nexus among the variables of interest for each specification.

Table 4. Panel Cointegration Tests

A. Panel ECM Cointegration Test				
Test Statistics	Y	Cointegration	S	Cointegration
G_{tau}	-5.034**	Yes	-4.554**	Yes
G_{alpha}	-7.321**	Yes	-5.838***	Yes
P_{tau}	-4.290**	Yes	-3.687***	Yes
P_{alpha}	-6.634**	Yes	-4.605***	Yes
B. Panel Durbin-Hausman Cointegration Test				
Test Statistics	Y	Cointegration	S	Cointegration
DH-group	-1.261***	Yes	-1.451***	Yes
DH-panel	-1.879**	Yes	-1.390***	Yes

Notes: ** and *** indicate significant levels of 5% and 10%, respectively.

After determining the presence of cointegration, the next stage is of estimate the parameter elasticities. To this end, the AMG estimator was employed, and the findings are presented in Table 5. As the real GDP becomes a dependent variable, the results firmly endorse the validity of the hypothesis that thrifts drive growth, and this tendency is consistently demonstrated across the entire sample. In this context, the coefficients of real gross domestic savings are positive throughout the countries in the sample. In a similar vein, the panel test statistic is positive to the extent that 1% rise in real gross domestic savings upswings real GDP by 0.751.

Meanwhile, the impact of broad money on real GDP is insignificant and exhibits sporadic tendencies across the sample. Accordingly, rises in broad money supply promote economic growth only in Singapore and the Republic of Korea. In contrast, negative interplay exists between these tandems of variables in Indonesia, Malaysia, and Thailand.

The following segment presents the estimation results, with real gross domestic savings as the dependent variable. The results clearly support the validity of the income-led savings hypothesis across the sample. To this end, the panel test statistics are positive, indicating that a 1% rise in real GDP is associated with a 1.131 increase in real gross domestic savings. Nonetheless, the most prominent effect of income on thrifts was observed in Singapore, where 1a % rise in income causes a 1.311% upswing in thrifts1.311. However, the weakest effect of income on thrifts was observed in Japan, where a 1% rise in income promotes thrifts by 0.695. On the other hand, the results also show that financial depth positively influences the thrift's overall performance. According to the panel test statistics, 1% rise in M2 triggers a real gross domestic savings of 0.100.

Table 5. Augmented Mean Group Estimation Results

Dependent Variable: Y	Variables			
	S (Coef.)	S (t-stat)	M2 (Coef.)	M2 (t-stat)
Australia	0.752	(0.042)**	0.038	(0.049)**
China	0.938	(0.045)**	-0.033	(0.032)**
Indonesia	0.767	(0.032)**	-0.145	(0.049)**
Japan	0.950	(0.093)*	-0.069	(0.143)
Republic of Korea	0.918	(0.036)**	0.082	(0.012)**
Malaysia	0.578	(0.030)**	-0.109	(0.028)**
New Zealand	0.750	(0.058)*	-0.029	(0.045)*
Philippines	0.479	(0.076)*	-0.131	(0.088)
Singapore	0.729	(0.022)**	0.191	(0.020)**
Thailand	0.649	(0.016)**	-0.078	(0.015)**
Panel	0.751	(0.049)**	-0.028	(0.033)**
Wald χ^2 274.98[0.000]*				
RMSE 0.0539				
Dependent Variable: S	Variables			
	S (Coef.)	S (t-stat)	M2 (Coef.)	M2 (t-stat)
Australia	1.096	(0.066)*	0.147	(0.040)**
China	1.030	(0.031)**	0.125	(0.021)**
Indonesia	1.236	(0.040)**	0.261	(0.019)**
Japan	0.695	(0.067)*	0.138	(0.073)*
Republic of Korea	1.110	(0.059)*	0.029	(0.020)**
Malaysia	0.785	(0.116)*	0.237	(0.084)*
New Zealand	1.098	(0.064)*	0.109	(0.050)**
Philippines	1.121	(0.103)	-0.079	(0.035)**
Singapore	1.311	(0.062)*	-0.038	(0.056)*
Thailand	1.158	(0.044)**	0.059	(0.027)***
Panel	1.131	(0.041)**	0.100	(0.038)*
Wald χ^2 758.51[0.000]*				
RMSE 0.0787				

Notes: ***, **, and * indicate significant levels at 1%, 5%, and 10%, respectively. The standard errors are indicated within parentheses, while the p-values of the Wald test are appended in brackets.

Table 6. Panel Granger Non-Causality Test

Direction	Test Statistics	Decision on H_0
S→Y	10.882**	Rejected
M2→Y	2.845	Accepted
Y→S	7.473***	Rejected
M2→S	12.785**	Rejected
Y→M2	0.751	Accepted
S→M2	8.220**	Rejected

Note: ** and *** indicate significance levels of 5% and 10%, respectively.

Having attested to the presence of long-run interaction, our empirical treatment concludes with a panel Granger non-causality test proposed by Juodis et al. (2021). In line with the results from the long-run parameter estimations, the panel Granger non-causality test supports bidirectional feedback between thrifts and growth (Table 6). In this respect, the null hypothesis of the impact of real gross domestic savings on real GDP is rejected at 5% significance level. In contrast, the null hypothesis that real GDP does not cause real gross domestic savings is rejected at the 10% significance level. It should also be noted that there is a bidirectional relationship between financial development and thrift. In this context, the null hypotheses of which neither variable causes the other are rejected at 5% significance level. However, the results show no significant causal nexus between financial development and growth, as the null hypotheses for each case were not rejected at any significance level.

The discoveries in the preceding section attest to the cointegration relationship. The primary objective of this paper is to examine which perspective, Classical or Keynesian, prevails overall. In this respect, the AMG method was utilised, and the findings bolster the validity of both views. The feedback mechanism between thrifts and growth is also supported by the results of Juodis et al. (2021), which show that real gross domestic savings and real GDP are mutually causative. Even though the present paper focuses specifically on the RCEP countries, the findings presented here can be compared with empirical studies that focus on individual RCEP countries or groups of countries. The validity of both mainstream views and the existence of a bidirectional causal nexus align with Tang (2009), Lean and Song (2009), Singh (2010), Tang & Chua (2012), Adeleke (2014), Tang (2015), Jouini (2016), Tang and Tan (2017), Šubová et al. (2024).

It can be inferred that the effect of growth on thrifts is more pronounced as the long-run coefficient of elasticity for real GDP is higher than the coefficient of the real gross domestic savings. Accordingly, income-led policies are more efficient in the long run than savings-led policies. Nonetheless, thrifts are also positively influenced by developments in the financial system. Therefore, the success of the income-led policies is also closely tied to economic growth in most of those countries. Notably, most East and Southeast Asian countries have shifted their development and industrialisation strategies in recent decades. In fact, with the introduction of the export-oriented development strategy in the 1970s and 1980s, most of those countries recorded high output growth rates, which inevitably led to higher disposable personal income. Thus, this has contributed to the development of the financial sector by fostering thrift and increasing demand for financial instruments. In this respect, co-movement or a feedback mechanism between thrifts and growth exists in those countries. Under a well-functioning financial system, the mobilisation of the thrifts into efficient investment projects results in a higher capital accumulation process and ultimately higher economic growth in those countries.

Conclusion

This study examined the causal link between real gross domestic savings and real GDP, a topic of great importance in the terrain of macroeconomics and development economics. By considering the mediating role of financial development, empirical analyses were conducted on the selected countries of the RCEP agreement. Since most of the signatory parties of the RCEP agreement are the leading industrialised economies, empirical research on the nexus between thrifts and growth is both worthy and timely. Under the existence of a cointegration relationship, it is documented that both variables are positively interacting, besides the prevalence of bidirectional feedback. Theoretical considerations confirmed the validity of either the Classical or the Keynesian view for the RCEP countries.

Since the findings verified the validity of both approaches, economic policies can be in favour of saving or of growth-enhancing policies. As previously indicated, the effect of real GDP on real gross domestic savings is greater than the effect of the latter on the former. Therefore, demand-led policies can be more efficient than the policies that aim to stimulate thrift in the long run. In this respect, demand-led policies should be at the forefront of policymakers' minds. Hence, conducting the tools of either monetary policy or fiscal policy in an expansionary way would result in higher disposable personal income. Thus, it can facilitate the growth of thrifts under a well-functioning financial system. With the existence of various types of financial instruments, individuals or households can hold their thrifts in the financial system, enabling borrowers and investors to easily access suitable credit and loans to finance their investment projects. Therefore, policymakers should not rely solely on economic policies but also resort to institutional regulations, especially to improve the performance of the financial sector.

As discussed in the previous section, some structural policy changes might play a crucial role in explaining the mysterious growth rates of some Asian economies in the sample. Thereby, future research can be extended by considering the role of the structural changes in individual economies of the RCEP agreement. Moreover, future research can be improved by including the various determinants of thrift behaviour and economic growth. Accordingly, most of the countries in the sample are prominent global actors in terms of foreign direct investment, foreign trade, and

population, which are also key elements of growth and thrift in empirical literature. Finally, further empirical analyses can be upgraded by including the proxies of both conventional economic policies.

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Author contributions
Both authors contributed equally to the conception, design, analysis, and interpretation of the study, as well as to the drafting and revision of the manuscript. Both authors have read and approved the final version of the manuscript.

Use of AI tools declaration
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Conflict of interest
The authors declare no conflicts of interest.

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Appendices

Appendix 1. List of the Selected RCEP Countries

Australia, China, Indonesia
Japan, the Republic of Korea, Malaysia
New Zealand, Philippines, Singapore
Thailand

Appendix 2. List of Variables and Data Sources

Variables Definition Data Source
Real GDP (Y) Value in current $ deflated by CPI WDI
Real Gross Domestic Saving (S) Value in current $ deflated by CPI WDI
Real Broad Money Supply (M2) Value in current national currency deflated by CPI WDI