The Impact of Effective Supply Chain Practices, Real Estate Price and Government Budget on Economic Growth: The Case of Vietnam

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***Abstract* - In the context of global supply chain value, it has greatly contributed to the trade volumes, government budget utility, and promotion for economic growth. Vietnam has been as one of the fastest-growing economies in the Asian Pacific and the world with a robust 7 percent since economic reforms in 1986 till present. At the same time, the real estate market has been an enabler of economic activity by improving housing demands and enhancing economic performance. In particular, the real estate market has also been opened up for foreigners since 2015, who can buy or invest in a property in the country. This paper focuses on exploring the dynamic relationship between real estate prices, government budget, and economic growth in the case of an emerging economy. Using quarterly data covering in the period of Q1/2008 to Q4/2018 with approximately 44 observations and applying the Autoregressive Distribution Lagged (ARDL) approach, results reveal that, in both the short-run and long-run, economic growth is highly affected by fluctuations of the present, and past economic growth. Besides, there exists a long-run relationship between government budget and economic growth. Regarding real estate prices and their impact on economic growth, this study could not find any findings in this relationship in both the short and long run. The recommendations indicate that the trends of global supply value chains can strongly support economic growth in the long run.**

Keywords; *ARDL model, Real estate price, Budget, Supply chain practices*

1. Background

In recent years, value chains have further expanded in the quantity and quality by supporting a strong relationship between economies in the global. Businesses around the world have increasingly expanded in pursuit of margin promotion. Besides, the volume of intermediate goods and services has significantly increased a triple and strongly supported government budget, economic growth. As suggested in a study of [12] economic development in value chains is predominantly critical for developing and emerging countries as well as generates supplier businesses' performance, economic growth. Besides this, the implementation and execution of supply chain management have contributed a lot to the economic growth as it brings improvement in the business operations and performance from procurement of material to the proper disposal of products [14]. Due to its much contribution to economic growth, supply chain management has become one of the objects of great interest among scholars and researchers. This paper addresses the contribution of the practices of supply chain management to the country's economy especially considering the economy of Vietnam. The implementation and execution of supply chain management practices create net value, build a competitive infrastructure, leverage worldwide logistics, maintain demand according to the supply, and bring improvement in the firms' performance at national as well as the international level [3,33].

In the context of integration and economic development, real estate has been known as one of the most important sectors of the economy in the global in general and especially developing and emerging countries [13, 17]. Real estate is an enabler of economic activity by improving housing demands, infrastructure development, and a sector of solving employment, job creation [17]. Regarding the contribution of real estate to the economy, approximately 11 percent of GDP is contributed by the real estate sector.

In the case of Vietnam, it is evident that Vietnam with the business and industrial organizations implementing and executing efficient supply chain management strategies and practices has been one of the fastest-growing economies in the Asian Pacific and the world with a robust 7 percent since the economic reforms in 1986 till present. According to the General Statistics Office, in 2017 and 2018, Vietnam continued to improve her high growth at 7.08 percent, and 7.02 percent. It is due to adequate and efficient supply chain management activities that Vietnam is expected to maintain its stellar growth in the upcoming years [19]. Within the supply chain, the business organizations in Vietnam are inter-linked and are also in collaboration with the organizations outside the country [22]. This collaboration, within the supply chain, provides in time, adequate, and efficient information and promotes fast, sustainable, innovation-based, and eco-friendly production, operational procedures, and logistics [16]. Vietnam has also been a major supplier country in the global value chains for Samsung, Lotte, and LG.

IJSCM, ISSN: 2050-7399 (Online), 2051-3771 (Print)

In Vietnam, the implementation and execution of efficient supply chain management have considerably added to the performance of different areas of the economy such as industrial organizations, engineering sector, logistics, procurement, financial institutions, communication network, and information technology, etc. The collaboration with the suppliers helps in the procurement of quality material to be used in the production of superior quality-based goods and services that guarantee the achievement of higher economic growth [21]. The collaboration among nodes of the supply chain enables them to share the required information through a sound communication network and up-to-date quality-based technology [23]. This information is utilized by supply chain nodes to enhance the production of innovative higher quality goods and services to meet the requirements of competitive national and international markets [9]. The proper and fast communication network, integrated infrastructure, logistics, integration of different products and operational procedures, and marketing channels within the supply chain lead to higher economic growth. The more effective the implantation and execution of supply chain management practices, the higher is the country's economic growth [7].

The real estate market in Vietnam has officially been opened for foreigners since 2015. Specifically, a foreigner can buy or invest in a property in Vietnam. According to CBRE Vietnam, housing, and real estate prices in Vietnam are considered very affordable compared to other places in the region such as Thailand, Singapore, and Malaysia. A profit yield of rental apartments in a hot location in major cities in Vietnam can be easily received by approximately 8 percent instead of about 2-2.5 percent in Thailand or Singapore. Besides, according to the Vietnam government, who is investing in approximately $38 billion per year for infrastructure projects in transport, power, irrigation, water, and education, healthcare? This plan is a plus factor for the real estate market and its profit. In particular, cities as Hanoi, Ho Chi Minh City would be expected to be quickly developing with other economic hubs.

According to these analyses, the aim of this research is expected to examine the relationship between real estate price, and government budget on economic growth in the case of Vietnam in the context of global value chains. Besides, this paper remarkably tests the contribution by the implementation and execution of efficient supply chain management practices to a country's economic growth. In this research, we will analyze according to the advanced method using the Autoregressive Distributed Lagged (ARDL) Model. The data will cover in the period from 1994 to 2010.

The remainder of this research will be followed as: Section 2 depicts the literature review. Data collection and Methodology will be present in Section 3 while Section 4 is for results and discussion. Section 5 will conclude.

2. Hypotheses development

It is predominantly critical for developing and emerging countries, and it generates supplier businesses' performance, economic growth [18]. Using data from 350 senior executives in Bangladesh, [6] suggest that supplier's business capability could be critical to four types of upgrading such as reliability, discriminant validity and convergent validity. The efficient practices of supply chain management establish sound relations between business organizations and their suppliers. The association with suppliers, as argued by [30], gives awareness about the up-dated quality of raw material, enables the particular nodes within the supply chain to upgrade the reliability, durability, and authenticity of material used for the production. In this way, the particular suppliers within the supply chain bring development in the production of goods and thus enhance the rate of economic growth [24].

In their studies, [5] supported the point that the efficient implementation of the practices of a supply chain in an economy ensures the achievement of growth at a higher rate as brings sustainability and improvement in the performance of business organizations. The practices of supply chain management are undertaken to create competitive relationships among supply chain nodes for gaining competitive advantages [15]. The relationships with the stakeholders create awareness of the shifts in the market, customers' demands, advertisement process, and technology. The efficient practices of supply chain management lead to up-to-date technology, innovation-based material procurement, innovative production of goods and services, in time delivery of products, and satisfaction of customers' requirements. The growth in the competitive advantages through efficient practices of supply chain management ensures the achievement of higher economic growth [26].

As shown by [4] using a sample data in the United States of America by conducting instrumental variables and quarterly data covering from 1955 through 1992, [4] suggested the budget deficits exist in the federal level in the US over this period. A piece of interesting evidence is shown that government budget deficits can reduce the economic growth rate over time. Further, using a panel smooth transition regression method to analyze a sample of developed, and developing economies, government size can positively promote productivity and output growth in the economy through the mechanism of good government. In contrast, government size can harm output growth above the threshold level of government size. Further, [11] indicate that global value chains do not support for manufacturing industry green growth in the case of China, and this effect is not optimistic.

According to [8] on a study in advanced economies of OECD to analyze the short, and long-term effects of government spending components on economic growth. Using the OLG approach, growth is considered by capital accumulation and productivity rises supported by public spending, results indicate that economic growth in politico-economic equilibrium may be significantly unchanged because of a tradeoff of social security exchanges and the mechanism of crowing out of public spending. [1] further indicate in the case of China by using the GVAR model. In which, China has a target of undervaluation to support her trading with other trading partners. This policy is therefore supporting exports and reducing imports for the Chinese economy in the both short and long run.

The analysis of the performance of the business organizations in the economy of Vietnam shed light on the fact that the efficient practices of supply chain management impart contributing effects on the economic growth as they assist to raise the productivity and marketing for the goods in national as well as international market places. According to [3], the sound communication system and transportation system in the supply chain makes the import of quality and economic material possible that adds to the quality of production and serves as a source of economic growth. Through an effective communication network, an increase in marketing channels, and fast as well as eco-friendly logistics, efficient supply chain management practices also promote to inland marketing of products and the exports of the products to different countries [2]. Due to the efficient supply chain management practices, the facility of imports helps to bring improvement in the technology and raise the quality of products, while the facility of exports helps to raise the level of marketing for the inland products [26]. The increase in the innovation of technology, and thereby the increase in the quality of products serve the satisfaction of customers' requirements. The satisfaction of customers' needs and the increase in productivity and its marketing contribute to the country's economic growth [20].

As suggested in [10] on a study in 284 cities in China in the period from 1994 to 2010 by using the dynamic analysis according to the GMM method. The relationship between real estate investment and income has been focused on. Greater investment in real estate has positively contributed a greater economic growth in the short term, and a negative impact for the long term. [25] further suggests that the Chinese government should decrease government expenditure and change its policies tending to new trends in economic development to boost greater economic performance. Besides, [29] indicate that housing price has a negative long-run impact on economic growth in the case of China according to a study on 32 provinces in the between 1999 and 2005 in China. Therefore, [28] suggest that housing policy in China may not be effective in less developed provinces and it could lead to the misallocation of government related to fiscal policy.

3. Methodology

To explore the effects between real estate, government budget on economic growth in the context of global value chains nowadays, the study strives to investigate the causal relationship of real estate price, efficient supply chain practices and State budget collection on economic growth with a piece of evidence from Vietnam by employing a quarterly series data spanning from 2008 to 2018 using the Autoregressive Distributed Lagged (ARDL) Model. Three studied variables were collected from the General Statistics Office (GSO) of Vietnam and CB Richard Ellis Vietnam which include: Gross Domestic Product (compared to 2010 price in billion VND), efficient supply chain practices are measured as the time taken by supplier divided by total time allowed to supplier, State budget collection (compared to 2010 price in billion VND), and Grade A office rental (USD/meter square/month). For stability of time series, the logarithm of rations is considered in the form of:

$$rGDP_t = ln\frac{GDP_t}{GDP_{t-1}};\quad rSBC_t = ln\frac{SBC_t}{SBC_{t-1}};\quad rRES_t = ln\frac{RES_t}{RES_{t-1}};\ rESCP_t = ln\frac{ESCP_t}{ESCP_{t-1}} \qquad (1)$$

Table 1. Original variable measurements in the Study

Dependent Variables	Abbreviation	Source
Gross Domestic Product (billion VND)	GDP	GSO
Independent Variables		
Government budget (billion VND)	SBC	GSO
Efficient supply chain practices	ESCP	WDI
Real estate (USD/meter square/month)	RES	CBRE

The influence of real estate price, supply chain practices and government budget collection on economic growth has not been investigated in a wide range of empirical studies all around the world. The equation of the ARDL model considered in the study is as follows:

$$D(rGDP_t) = \acute{\alpha} + \sum\acute{\alpha}_i D(rGDP_{t-1}) + \sum\beta_i D(rSBC_{t-1}) + \sum\phi_i D(rRES_{t-1}) + \sum\varphi_i D(rESCP_{t-1}) + \mu_t \qquad (2)$$

Where D is the difference operator; ά, β, ϕ, φ are the regression coefficients, and μ is the residual. The residual has a simultaneous correlation but does not correlate with its lags and every independent variable. So there are both lags of independent and dependent variables on the right side of the regression equation (2). The ARDL model estimation procedure includes the following steps: Firstly, the stationary of the time series $rGDP_t$, $rRES_t$, $rSBC_{t,\ rESCPt}$ are verified. Secondly, the optimal lag for the ARDL model has been selected thanks to Hannan-Quinn's criteria. Based on this choice, the optimal ARDL model is estimated. Thirdly, the optimal ARDL model estimation is back tested:

+ Ramsey RESET test is carried out to test whether the model is well specified or not;
+ Cumulative sum of residuals (CUSUM: Cumulative Sum of Recursive Residuals) and Cumulative sum of the square of residuals are implemented for the stability test of the ARDL model.
+ Lagrange Multiplier test (abbreviated as LM test) is for autocorrelation of the ARDL model. For long-term relationships among real estate prices and State budget collection on economic growth, Bound Test is involved.

4. Results

A stationary time series is significant to a regression analysis based on the time series since the non-stationary time series cannot preserve useful information or characteristics. The time series $rRES_t$ are not stationary, while $rGDP_t$ and rESCPt are stationary and maybe is stationary. The result of the ADF test is presented with lag 4 suggested by Newey-West, including trend and intercept in the test equation. Tables 2 and 3, respectively, present ADF tests for time series at a level and the first difference.

Table 2. ADF test results for time series at the level at 5% significance

Null Hypothesis	t-Statistic	Prob.	Conclusion
$rGDP_t$ has a unit root	-5,092042	0.0010	Station
$rSBC_t$ has a unit root	-3.389210	0.0679	Non-station
$rESCP_t$ has a unit root	-5.325410	0.0012	Station
$rRES_t$ has a unit root	-1.239053	0.8876	Non-station

Table 3. ADF test results for data at the first difference at 5% significance

Null Hypothesis	t-Statistic	Prob.	Conclusion
D(rSBCt) has a unit root	-4.983062	0.0014	Station
D(rRESt) has a unit root	-4.46048	0.0488	Station

The unit root test with the first difference and the results show that rGDPt and rESCPt are stationary at a level and the other two data series stationary at the first difference at a 5% significance level. For convenience, the first difference of all variables is taken into the model.

Table 4. Descriptive statistics

Items	RGDP	RSBC	RRES	RESCP
Mean	0.025897	0.033577	-0.006690	0.021474
Median	0.121567	-0.014913	-0.011173	0.145121
Maximum	0.316899	0.561379	0.154151	0.995461
Minimum	-0.506617	-0.359186	-0.03716	0.121457
Std. Dev.	0.285916	0.255871	0.046096	0.214754
Skewness	-0.861852	0.380669	1.939580	0.743652
Kurtosis	2.217461	2.049846	7.298460	2.314512
Jarque-Bera	6.420478	2.656016	60.06497	5.325674
Probability	0.040347	0.265005	0.000000	0.025437
Sum	1.113554	1.443821	-0.287682	1.326541
Sum Sq. Dev.	3.433412	2.749733	0.089242	3.485476
Observations	43	43	43	43

Table 4 presents data description including 43 observations of each variable after transformation (3.1) for the situation of Vietnam over the quarter to quarter from 2008 to 2018.

In this study, the top 9 lags and selects the recommended model according to the Hannan-Quin criterion. The image depicting Hannan-Quin's criterion value for the best 20 models, including the best model. Thanks to this Hannan-Quin information criterion, the best ARDL selected is that ARDL (9, 9, and 9).

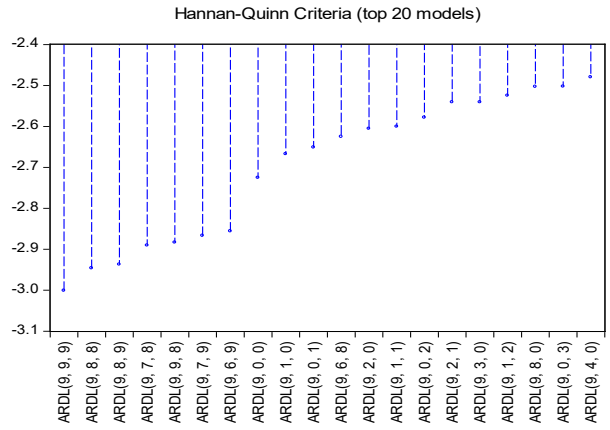

Figure 1. Hann-Quin's Criteria for the 20 Best Models

ARDL (9, 9, and 9) is estimated as in the following Table 5.

Table 5. Results of ARDL (9, 9, 9) model estimation

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
D(RGDP(-1))	-2.118908	0.302173	-7.012228	0.0060
D(RGDP(-2))	-3.720382	0.757537	-4.911156	0.0162
D(RG	-	1.361247	-	0.0243

DP(-3))	5.749842		4.223951	
D(RG DP(-4))	-7.261684	2.030341	-3.576584	0.0374
D(RG DP(-5))	-8.592019	2.617294	-3.282788	0.0463
D(RG DP(-6))	-8.934405	2.792669	-3.199236	0.0494
D(RG DP(-7))	-7.000580	2.287329	-3.060591	0.0550
D(RG DP(-8))	-4.495160	1.621512	-2.772203	0.0694
D(RG DP(-9))	-1.913033	0.750139	-2.550237	0.0839
D(RS BC)	0.095986	0.186452	0.514804	0.6422
D(RS BC(-1))	0.468376	0.350734	1.335418	0.2740
D(RS BC(-2))	0.857927	0.498056	1.722550	0.1834
D(RS BC(-3))	1.307339	0.640942	2.039717	0.1341
D(RS BC(-4))	1.090883	0.553889	1.969499	0.1435
D(RS BC(-5))	0.898154	0.536953	1.672686	0.1930
D(RS BC(-6))	0.312396	0.343756	0.908771	0.4305
D(RS BC(-7))	-0.176856	0.371874	-0.475581	0.6669
D(RS BC(-8))	0.017564	0.251594	0.069810	0.9487
(RSB C(-9))	-0.204484	0.305312	-0.669753	0.5510
D(RE SCP)	1.254132	1.284652	0.976243	0.2514
D(RE SCP(-1))	-0.985412	1.325478	-0.743439	0.3254
D(RE SCP(-2))	-0.325418	0.958647	-0.339456	0.3652
D(RE SCP(-3))	3.325412	2.365874	1.405574	0.5423
D(RE SCP(-4))	1.325987	2.364157	0.560871	0.6632
D(RE SCP(-5))	-0.362541	2.985241	-0.121444	0.3685
D(RE SCP(-6))	-0.325641	1.985476	-0.164012	0.3254
D(RE SCP(-7))	4.325641	2.325413	1.860160	0.0421
D(RE SCP(-8))	4.325625	2.032543	2.128184	0.0124
D(RE SCP(-9))	1.625418	2.365247	0.687109	0.3292
D(RR ES)	1.833524	1.294618	1.416266	0.2517
D(RR ES(-1))	-0.952834	1.001117	-0.951770	0.4114
D(RR ES(-2))	-0.201947	0.940821	-0.214650	0.8438
D(RR ES(-3))	3.304160	2.144327	1.540884	0.2210
D(RR ES(-4))	1.554572	2.137384	0.727325	0.5196
D(RR ES(-5))	-0.679091	2.188890	-0.310244	0.7767
D(RR ES(-6))	-0.639437	1.747448	-0.365926	0.7387
D(RR ES(-7))	4.678747	2.759273	1.695645	0.1885
D(RR ES(-8))	4.594627	2.081911	2.206928	0.1144
D(RR ES(-9))	1.655369	2.069576	0.799859	0.4823
C	-0.030589	0.018432	-1.659615	0.1956
LM test for the residual of the ARDL model				
F-statistic = 10.87383				
Prob. F(1,2) = 0.0810				

According to the results in Table 5, the p-value of the F-statistic is larger than 0.05 so the null hypothesis is not rejected at a 5% significance level. In other words, there is no autocorrelation between variables in the model ARDL (9, 9, and 9).

Table 6. Model specification test

Items	Value	do	Probability
t-statistic	1.635765	2	0.135
F-statistic	1.49032	(1, 2)	0.235

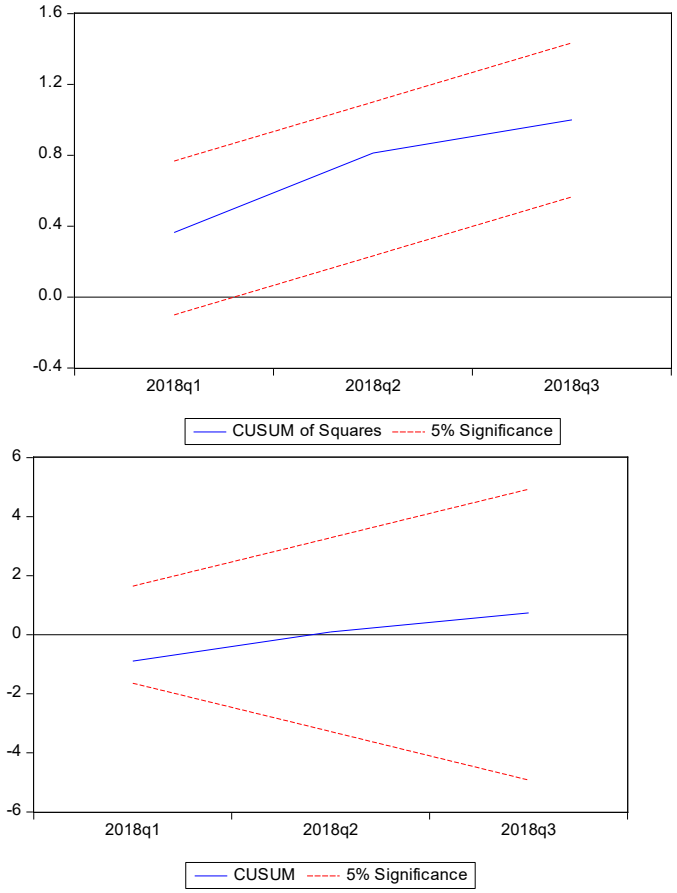

Figure 2. The cumulative sum of recursive residuals of the ARDL model at a 5% significance level

To go further to investigate the long-run relationship among the above-considered variables, we use the co-integration test thanks to the Bound test.

Table 7. Test of a long-run relationship between the variables

Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	k
F-statistic	5.168516	2
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	3.17	4.14
5%	3.79	4.85

According to Table 7, the test statistic value is larger than every critical Value Bounds at significance levels of 10% and 5%. Therefore, there exists a long-run relationship between real estate prices and State budget collection on economic growth. That long-run from is presented in Table 8.

Table 8. Long-run relationship among the variables

Cointegrating Form				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
D(RGDP(-1), 2)	47.667104	13.566185	3.513671	0.0391
D(RGDP(-2), 2)	43.946723	12.938087	3.396694	0.0426
D(RGDP(-3), 2)	38.196881	11.722311	3.258477	0.0472
D(RGDP(-4), 2)	30.935197	9.849082	3.140922	0.0516
D(RGDP(-5), 2)	22.343178	7.339259	3.044337	0.0557
D(RGDP(-6), 2)	13.408773	4.602504	2.913365	0.0618
D(RGDP(-7), 2)	6.408193	2.356375	2.719513	0.0726
D(RGDP(-8), 2)	1.913033	0.750139	2.550237	0.0839
D(RSBC, 2)	0.095986	0.186452	0.514804	0.6422
D(RSBC(-1), 2)	-0.857927	0.498056	-1.722550	0.1834
D(RSBC(-2), 2)	-1.307339	0.640942	-2.039717	0.1341
D(RSBC(-3), 2)	-1.090883	0.553889	-1.969499	0.1435
D(RSBC(-4), 2)	-0.898154	0.536953	-1.672686	0.1930
D(RSBC(-5), 2)	-0.312396	0.343756	-0.908771	0.4305
D(RSBC(-6), 2)	0.176856	0.371874	0.475581	0.6669
D(RSBC(-7), 2)	-0.017564	0.251594	-0.069810	0.9487
D(RSBC(-8), 2)	0.204484	0.305312	0.669753	0.5510
D(RESCP, 2)	3.214521	1.214354	2.647103	0.0124
D(RESCP(-1), 2)	0.025146	0.021457	1.171925	0.0354
D(RESCP(-2), 2)	4.251485	1.326584	3.204837	0.0012
D(RESCP(-3), 2)	5.326541	2.325416	2.290576	0.0234
D(RESCP(-4), 2)	0.121475	0.021475	5.656577	0.0000
D(RESCP(-5), 2)	5.325614	2.354163	2.262211	0.0011
D(RESCP(-6), 2)	0.325618	0.354161	0.919407	0.8952
D(RESCP(-7), 2)	2.325413	1.325642	1.754178	0.0412
D(RESCP(-8), 2)	3.325416	2.369856	1.403214	0.6521
D(RRES, 2)	1.833524	1.294618	1.416266	0.2517
D(RRES(-1), 2)	0.201947	0.940821	0.214650	0.8438
D(RRES(-2), 2)	-3.304160	2.144327	-1.540884	0.2210
D(RRES(-3), 2)	-1.554572	2.137384	-0.727325	0.5196
D(RRES(-4), 2)	0.679091	2.188890	0.310244	0.7767
D(RRES(-5), 2)	0.639437	1.747448	0.365926	0.7387
D(RRES(-6), 2)	-4.678747	2.759273	-1.695645	0.1885
D(RRES(-7), 2)	-4.594627	2.081911	-2.206928	0.1144
D(RRES(-8), 2)	-1.655369	2.069576	-0.799859	0.4823
CointEq(-1)	-0.786013	13.744967	-3.694881	0.0344
Cointeq = D(RGDP) - (0.0919*D(RSBC) + 0.2983*D(RRES) - 0.0006)				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RSBC)	0.091901	0.043575	2.109038	0.1255
D(RESCP)	0.125142	0.021451	5.833854	0.0002
D(RRES)	0.298265	0.101447	2.940120	0.0605*
C	-0.000602	0.000296	-2.031770	0.1351

The equation that represents the long-run equilibrium relationship among the variables is as follows:

$$D(RGDPt) = 0.091901*D(RSBCt) + 0.125142*D(RESCP) + 0.298265*D(RRESt) - 0.000602 + ut \quad \textbf{(3)}$$

Regarding the estimation results, our analysis shows the relationship of real estate price and government budget collection on economic growth – in the case of Vietnam in the trends of global supply value chains, we have the result in the short run in the following Table 9.

Table 9. Short-run impacts of the variables on economic growth

Variable	**Regression Coefficient**	**Prob.***
D(RGDP(-1))	-2.118908	0.0060***
D(RGDP(-2))	-3.720382	0.0162**
D(RGDP(-3))	-5.749842	0.0243**
D(RGDP(-4))	-7.261684	0.0374**
D(RGDP(-5))	-8.592019	0.0463**
D(RGDP(-6))	-8.934405	0.0494**

D(RGDP(-7))	-7.000580	0.0550*
D(RGDP(-8))	-4.495160	0.0694*
D(RGDP(-9))	-1.913033	0.0839*
D(RSBC)	0.095986	0.6422
D(RSBC(-1))	0.468376	0.2740
D(RSBC(-2))	0.857927	0.1834
D(RSBC(-3))	1.307339	0.1341
D(RSBC(-4))	1.090883	0.1435
D(RSBC(-5))	0.898154	0.1930
D(RSBC(-6))	0.312396	0.4305
D(RSBC(-7))	-0.176856	0.6669
D(RSBC(-8))	0.017564	0.9487
D(RSBC(-9))	-0.204484	0.5510
D(RESCP)	1.933524	0.0417
D(RESCP(-1))	-0.752834	0.6114
D(RESCP(-2))	-0.101947	0.4438
D(RESCP(-3))	2.104160	0.0210
D(RESCP(-4))	2.454572	0.0196
D(RESCP(-5))	0.619091	0.6767
D(RESCP(-6))	-0.685437	0.4387
D(RESCP(-7))	3.254747	0.0214
D(RESCP(-8))	3.214627	0.0325
D(RESCP(-9))	1.625413	0.0432
D(RRES)	1.833524	0.2517
D(RRES(-1))	-0.952834	0.4114
D(RRES(-2))	-0.201947	0.8438
D(RRES(-3))	3.304160	0.2210
D(RRES(-4))	1.554572	0.5196
D(RRES(-5))	-0.679091	0.7767
D(RRES(-6))	-0.639437	0.7387
D(RRES(-7))	4.678747	0.1885
D(RRES(-8))	4.594627	0.1144
D(RRES(-9))	1.655369	0.4823
C	-0.030589	0.1956

Note: the number in ( ) is the probability value of the test of estimated coefficients' significance.

*, **, and *** indicate significance level of 10%, 5% and 1%

In the short run, we cannot find any findings regarding how real estate prices and government budgets affect economic growth. It is explained that in the short run, changes in real estate, and government budget cannot immediately impact on economic growth.

5. Discussion and conclusion

The long-run equilibrium relationship among the variables is as in equation (2), in which, a 10 billion VND increase in state budget collection will increase GDP in average by 0.9 billion VND, while a 1 USD/meter square/month increase grade A office rental will increase GDP in average by 0.298 billion VND in the long-run. At the same time, state budget collection may increase the GDP, but insignificant. This finding is not consistent with [29] in the case of China. Besides, [10] further discussed the Chinese economy and suggests that decrease in government expenditure and change its policies tend to build new trends in economic development to boost a greater economic performance. Therefore, the trends of global supply value chains can strongly support economic growth in the long run.

The results have revealed that there is a positive association between the efficiency of the practices of supply chain management and the country's economic growth. The results are in line with the studies Genovese, [7] who has already examined that the effective and efficient implementation and execution of the practices of supply chain management put considerably positive influences on the rate of economic growth. This paper has evolved the theoretical work by showing the mutual relationship between efficient supply chain management and the country's economic growth. It has also empirically contributed to the economy by suggesting the economists measure the growth of the economy with the effectiveness of supply chain management practices. It has given a way of progress to an economy.

In the context of global supply chain value, it has greatly contributed to the trade volumes, government budget utility, and promotion for economic growth. This paper investigates the impact of real estate price and government budget collection on the economic growth of Vietnam between 2008 and 2018. The empirical reveals that in the short run, there is no a directional relationship running from real estate price as well as government budget collection to economic growth, but existence a strong impact of economic growth in the previous years on the next year. Results even show that there is a co-integration among variables in the long run, with a positive impact of both real estate price and government budget collection on economic growth. In long run, economic growth in the previous years has an impact on economic growth in the current year, but no impact on real estate price and government budget.

The study has been conducted to show the influences of supply chain management practices on the rate of economic growth. The study examines that if the practices of supply chain management have been implemented and executed efficiently in an economy they push the rate of economic growth upward. The study proves that the practices of supply chain management are positively associated with the supply chain. If the supply chain management practices are poor or weekly implemented, they impart the bad influences on the rate of economic growth because they cause a lack of quality of products and services, decrease in their quantity and marketing. The effective implementation and execution of supply

chain management practices contribute to the performance of different areas of the economy.

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