



Determinants of private sector growth in Vanuatu

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Determinants of private sector growth in Vanuatu

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Abstract



What factors should policy-makers be looking at in enhancing private sector growth in the uniquely located and characterised small island economies of the Pacific is the central question this study aims to unravel. The dispersed and other uniqueness of the region might lead one to wonder if these factors might be different from elsewhere. Using the case of Vanuatu, an ARDL model and data covering the 1983–2015 period, the study finds that in the short run the main drivers are public investment, real exchange rate, and structural reforms; and in the long run, the drivers are political stability, public investment, credit supply to the private sector, real exchange rate and structural reforms. Consistent with few studies done in the Pacific region, the high user cost of capital, natural disasters affecting economic performance, and uncertainties are important obstacles to domestic private investment growth in Vanuatu. Policies easing credit constraints, facilitating infrastructure development, offering investment incentives, reducing macroeconomic and political uncertainties, and developing structural reforms in the economy will spur private sector growth in Vanuatu.

Keywords: private sector growth, Vanuatu

1. Introduction

It would be hard, rather, extremely difficult to imagine an economy, small or large, developing or developed, achieving or aspiring to achieve sustainable economic growth and poverty reduction without the critical role of the private sector. Indeed, empirical evidence supports a stronger private-sector-led economic growth compared to public investment, attributing the rationale mainly to relative greater efficiency of the former (Coutinho and Gallo, 1991; Serven and Solimano, 1990; Bouton and Sumlinski, 2000; and Khan and Kumar, 2008). A dynamic private sector then would appear necessary for promoting inclusive growth resulting in positive and meaningful outcomes for formal employment, investment, and entrepreneurship, especially so for the climate-change affected, small, open, remote, vulnerable, growth- and poverty-challenged Pacific Island Countries (PICs).

Nonetheless, across the PICs, private sector growth has been anything but dynamic. For example, in the period 2012 to 2015, the average gross investment to GDP ranged from 28.2% to 26.4%. Elsewhere, in the middle-income countries, the World Bank income group which most PICs fall into, the average for the same period was 31.7% (World Bank, 2020). The foregoing then begs the question: what factors should policy-makers be looking at in enhancing private sector growth in the region. Given the aforementioned uniqueness of the region, one might also wonder if these factors might be different from elsewhere. We attempt to answer this question by looking at the case of Vanuatu as an initial test; we intend to do the same for other PICs as relevant data becomes available. In the case of Vanuatu, the average gross investment to GDP ratio in the 2012–2015 period was 25.5%, compared to 28.5% in other lower-middle-income countries that Vanuatu falls into.

A small manufacturing base, a narrow range of exports, and high dependence on imports for food, mineral fuels, capital goods, and transport machinery describe the overall macroeconomic setting of Vanuatu. Export includes primary products, copra, coconut oil, cocoa, kava, beef, fish, and timber. The country is heavily subsistence-oriented and the communally-owned land tenure system appears to discourage the development of private sector land-based activities (Jayaraman, 2004). With a population of 280,000, Vanuatu is placed in the middle per the size spectrum of the PICs, led by Papua New Guinea, Fiji, and Solomon Islands. Two-thirds of the population reside in rural areas engaging in subsistence farming and supplementary cash crop production.¹ The service sector makes up almost 60 per cent of the country's Gross Domestic Product (GDP) and is heavily concentrated in the two urban centres of Port Vila and Luganville. The services sector encompasses tourism, financial, retail trade, transport, real estate, telecommunication, government services, and professional services. The country has no exchange control regulations in place and offers special tax benefits to investors.

The study uses private gross fixed capital formation to GDP as the dependent variable, a number of explanatory variables² and an ARDL model to investigate the short- and long-term relationships over the 1983–2015 period. Result shows public investment, real exchange rate and structural reforms have a complementary effect on private investment in the short-run. In the long run, political stability associated with good investment climate, public investment, credit supply to the private sector, real exchange rate and macroeconomic environment associated with structural reforms support private investment growth, however the higher user cost of capital discourages private investment.

The rest of the study is organised as follows. Section 2 presents the data, variables, and methods used in this study. Section 3 presents the empirical results and discussion. Section 4 concludes with some policy implications.

2. Data, variables and methods

2.1. Data

We investigate the private sector growth in Vanuatu over the period 1983 to 2015 using private gross fixed capital formation as an indicator of private investment. The annual time-series data on this dependent variable is obtained from the World Bank database and Vanuatu National Statistics Office (VNSO) through the reports on Vanuatu National Accounts. The rest of the data relating to the independent variables was also obtained from VNSO, the country central bank (Reserve Bank of Vanuatu—RBV), World Bank, and IMF International Financial Statistics.

2.2 Variables

Dependent variable

Our dependent variable is domestic private investment (RDPI) defined as private gross fixed capital formation. This variable is widely used by several pieces of literature on private sector studies specifically for developing economies (Jayaraman, 1996; Jayaraman and Seruvatu, 2001; Ang, 2010; Frimpong and Marbuah, 2010).

Independent variables

Based mainly on literature, the independent variables for this study include the following: real GDP (RGDP), user cost of capital defined as real interest rates (RIR), availability of credit defined as real bank credit to the private sector (RCRE), real public investment (RPUBI), real foreign direct investment (RFDI), and real exchange rate (RER) (Jorgenson, 1963; Bouton and Sumlinski, 2000; Jayaraman, 1996; Jayaraman and Seruvatu, 2001; Ang, 2010; Frimpong and Marbuah, 2010; Kolade, 2014; Jamaludin et al., 2015; and Batu, 2016). We also include macroeconomic stability (MAC_STAB), defined as a composite index of variation in the inflation rate, real GDP growth, and exchange rate following the study by Ang (2010). The political stability (POL_STAB) variable is specifically included in the model to supplement the impact of uncertainty on the investment climate. And finally, a dummy variable (D) indicating structural reform (2004–2008) was included to indicate the impact of periods of particular reform impacting on private sector activities.

Real GDP is selected to accommodate the neoclassical theory of flexible accelerator (Jorgenson, 1963). Investors' anticipations are proxied by one lag period of the real GDP growth rate as an indicator of aggregate demand conditions in the economy. Investors envision the future environment as a growth rate observed in the past, thus investors tend to invest if they see favourable economic growth. Likewise, the observed growth in private domestic investment in the past will also determine investors' willingness to invest and ascertain profitability in their investment plans. This variable is expected to have a positive coefficient.

The model also incorporates the real interest rate to capture the effective user cost of capital. A higher user cost of capital discourages private sector growth. A negative sign of the coefficient is expected. The availability of financing is proxied by the credit to the private sector. Increasing the availability of financing provides capital for private sector investment projects. This indicator is expected to have a positive impact on domestic private investment.

Public sector investment can constitute a complementary (crowding-in) effect on private sector growth through the provision of key infrastructures (transport, telecommunications, etc). However, public investment may also have a substitute (crowding-out) effect on private investment through competition for scarce resources (such as skilled labour, raw materials, etc). Therefore, the expected sign is ambiguous and can be either positive or negative.

The effect of Foreign Direct Investments (FDIs) could also be positive or negative. Similar to public investment, the increase in FDIs can have a complementary (crowding-in) effect where foreign firms bring in technologies, improved skills, and financial resources that support the growth of private domestic firms. On the other hand, the crowding-out effect can be seen in the competition of scarce resources and where the increase in the technological gap between two firms is not adequately transferred.

The real exchange rate can influence private investment as it is one of the main components that determine the real cost of imports. A (domestic) currency devaluation can have a negative impact via increases to the real cost of purchasing imported capital goods, thereby reducing the profitability of the private sector and causing private domestic investment to decline. On the other hand, currency devaluation can have a positive impact on sectors producing exportable goods. So, the effect of the real exchange rate is ambiguous and can be either negative or positive.

Macroeconomic stability is an important aspect of the investment climate of a country. Here a composite index of the volatility in real GDP growth, inflation, and real exchange rate movements is constructed to indicate the macroeconomic stability of the country. Higher-level macroeconomic stability is appropriate for investments creating a high level of certainty surrounding the return on investment projects. High volatility in the inflation rate, real GDP growth, and exchange rate increases the risk and profitability associated with the long-term investment project. Economic volatility can lead investors to seek profit opportunities in short-term portfolio investments, therefore may not contribute to long-term growth as per the accelerator model (Ang, 2010). Therefore, macroeconomic stability is likely to have a positive effect on domestic private investment.

Stability is not limited to macroeconomic indicators. This study also considers political stability which is a very important aspect influencing investment decisions. An increase in political stability (or associated events supporting stability) increases the certainty of investment projects. The changes in government decisions of the rule of the game create a high level of uncertainty and are an obstacle affecting the progress in investment projects and improvement of investment growth. Political stability has a positive effect on domestic private investment.

Structural reform is an important determinant of the actual and future profitability of private investment. Trade reforms, financial reforms, or specific sector reforms (such as increased competition in the banking sector, the aviation sector, and the communication sector) has a positive effect on domestic private investment. This openness increases competitiveness and provides access to new options (or engine) of growth. These factors provide favourable conditions for domestic (as well as FDIs) investment firms to invest. Structural reform has a positive effect on domestic private investment.

Methodology

Given that this study aims to incorporate several determinants, the empirical specification is derived using the neoclassical model. The ARDL model is presented as follows:

$$y_t = \beta_0 + \sum_{i=1}^p \beta_i y_{t-i} + \sum_{i=1}^{q_1} \delta_{1i} x_{1,t-i} + \dots + \sum_{i=1}^{q_8} \beta_{8,i} x_{8,t-i} + \gamma D_t + \epsilon_t, (1)$$

where $y = \ln RDPI$, $x_1 = \ln RGDP$, $x_2 = \ln RIR$, $x_3 = \ln RCRE$, $x_4 = \ln RPUBI$, $x_5 = \ln RFDI$, $x_6 = \ln RER$, $x_7 = \ln MAC_STAB$, $x_8 = \ln POL_STAB$, $D =$ dummy indicator of structure reform, and ϵ_t is a serially independent error term. The lag specification in (1) is chosen by the Akaike Information Criterion. Equation (1) can be represented in an error correction format:

$$\Delta y_t = \beta_0 + \sum_{i=1}^{p-1} \beta_i \Delta y_{t-i} + \sum_{i=1}^{q_1-1} \delta_{1i} \Delta x_{1,t-i} + \dots + \sum_{i=1}^{q_8-1} \beta_{8,i} \Delta x_{8,t-i} + \gamma D_t + \theta_0 y_{t-1} + \theta_1 x_{1,t-1} + \dots + \theta_8 x_{8,t-1} + \epsilon_t. (2)$$

The Bound testing strategy of Pesaran and Shin (1999) and Pesaran et al. (2001) is based on the usual Wald (F) test for the null hypothesis $H_0: \theta_0 = \theta_1 = \dots = \theta_8 = 0$. The Bound testing procedure is given as follows: if the test statistic (F) exceeds the upper bound significance level, the null hypothesis is rejected, and potentially there is a long-run relationship between y and x_1, \dots, x_8 ; if the F is below the lower bound significance level, the null hypothesis is not rejected and there is no long-run relationship; if F is between the two (lower & upper bound) significance level, the test is inconclusive.

3. Empirical results and discussions

The results are split into two models: Model A includes macroeconomic stability using fluctuation in a composite index of GDP growth, inflation, and real effective exchange rate, and Model B includes political stability using extrapolated data from the World Bank database.

3.1 Unit root results

Table 1. Unit root tests

ADF Test					
	Level		First Difference		Conclusion
	Constant	Trend & Intercept	Constant	Trend & Intercept	
RDPI _t	-1.933	-2.04	-4.874***	-4.7812***	I(1)
RGDP _t	0.770	-2.053	-3.945***	-3.990***	I(1)
RIR _t	-8.085***	-7.739***	-10.268***	-9.933***	I(0) / I(1)
RCRE _t	2.327	-0.986	-3.440***	-4.886***	I(1)
RPUBI _t	-2.433	-2.676	-4.406***	-4.331***	I(1)
RFDI _t	-2.388	-4.762	-7.268***	-7.184***	I(1)
RER _t	-0.953	-4.012***	-3.068**	-3.104*	I(0) / I(1)
MAC_STAB _t	-2.930***	-3.131*	-8.490***	-8.480***	I(0) / I(1)
POL_STA _t	-2.232	-2.037	-5.475***	-5.629***	I(1)
D _t	-1.920	-1.875	-5.656***	-5.598***	I(1)

Note: The bandwidth was selected using the Newey-West method, ADF, Augmented Dickey-Fuller; * significant at 10%, **significant at 5%, ***significant at 1%.

The unit root test results in Table 1 show that the null hypothesis of the variable having unit root is rejected at 1 per cent at the first difference for most variables. None of the variables appear to be integrated at an order higher than one, and therefore justifies that the ARDL bounds procedure can be used here. Another advantage of using this approach is that it can be applied to the model regardless of whether the underlying variables are I(0) or I(1).

3.2 Cointegration results

Table 2. Bound Tests—Cointegration tests for the existence of a long-run relationship

Critical Value Bounds of the F-Statistic: intercept and no trend (Case II)						
K	10%		5%		1%	
	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
8	1.85	2.85	2.11	3.15	2.62	3.77
Calculated F-Statistic: F _{Ip} (RDPI RGDP, RINT, RCRE, MAC_STAB, RPUBI, RFDI, RER, D)					5.5188***	
8	1.85	2.85	2.11	3.15	2.62	3.77
Calculated F-Statistic: F _{Ip} (R_DPI RGDP, RINT, RCRE, POL_STA, RPUBI, RFDI, RER, D)					5.4903***	

Source: Critical values are obtained from Narayan (2004a, b); Note: ***denotes statistical significance at the 1% level. K is the number of regressors.

	Dependent Variable = PDI_t	
	Model A	Model B
	$P=2$	$P=2$
Test Statistics		
F-Statistics	5.5188***	5.4903***
R-Squared	0.957	0.973

Note: p = the optimal lag length, ***significant at 1%.

For both models in Table 2, the F-statistics is below the critical value bounds, therefore the null hypothesis of no long-run relationship exists is rejected. Results conclude that there is the existence of long-run relationships between all variables for model A at a 1 per cent significance level and Model B also at a 1 per cent significance level.

3.3 Results of the short-run dynamic model

We proceed to obtain the error correction representation of equation (1) for both macroeconomic stability and political stability in Model (A) and Model (B), respectively. Table 3 reports the short-run coefficient estimates obtained from the error correlation model (ECM) version of the ARDL model.

Table 3. Short-run error correction estimates

	Model A	Model B
Dependent Variable = RDPI _t		
	Coefficient	Coefficient
The short-run dynamics		
$\Delta \ln \text{RDPI}_{t-1}$	0.265***	0.833***
$\Delta \ln \text{RGDP}_t$	-0.951	0.299
ΔRIR_t	-0.006	-0.001
ΔRIR_{t-1}		0.045***
$\Delta \ln \text{RCRE}_t$	0.101	0.833***
$\Delta \ln \text{RCRE}_{t-1}$	-2.841***	-3.865***
$\Delta \text{MAC_STAB}_t$	0.014	
$\Delta \ln \text{POL_STA}_t$		0.112
$\Delta \ln \text{POL_STA}_{t-1}$		-0.431***
$\Delta \ln \text{RPUBI}_t$	0.128*	-0.029
$\Delta \ln \text{RPUBI}_{t-1}$		-0.297***
$\Delta \ln \text{RFDI}_t$	-0.161***	-0.031
$\Delta \ln \text{RER}_t$	0.984**	2.397***
$\Delta \ln \text{RER}_{t-1}$	1.443***	
ΔD_t	0.782***	1.357***
ΔD_{t-1}	-0.294***	
ΔECT_{t-1}	-0.579***	-0.808***
R-Squared	0.957	0.973
n	31	31

Note: * significant at 10%, **significant at 5%, ***significant at 1%; n – number of observations.

The estimation results show that private investment tends to negatively respond to output growth. In the short-run, the coefficient of real GDP has an insignificant and negative impact on private investment which does not follow the typical accelerator characteristics. This could be explained by the volatility in growth and the lagged pickup in private sector growth post-natural disasters.

In the short-run, private investment in the first period can stimulate new private investment in the second period. The results show that an increase in the lagged (by 1-year period) of private investment by 1 per cent increases private investment in the current period by 0.26 per cent, with the coefficient significant at 1 per cent significance level. This shows that good business investment sentiment supporting private sector growth in the previous year will stimulate the growth of current investment or future investment.

The user cost of capital, proxy by real interest rate has an insignificant negative impact on private investment, a smaller impact than the accelerator indicators. The negative impact is consistent with the user cost of capital theory which indicates that high interest rates discourage private investors to borrow from banks due to the high cost of capital (Jamaludin et al, 2015). Another likely explanation for this is that it may be due to the insignificant positive impact of credit availability that is likely to overshadow the short-run effect of the user cost of capital, therefore, may prevent the role of the interest rate channel in determining private investment. This can also be explained by the low saving rate in Vanuatu.

Credit to the private sector is found to have a positive but insignificant impact on private investment. This means that credit availability to the private sector through policies used over the years have not been able to spur the desired boost in private sector initiatives in Vanuatu. Further-more the increase in credit to the private sector, lagged by one period (1 year) leads to a decrease in private investment. This could be explained by Vanuatu's low financial depth, the low monetary policy transmission effect (Yang, Davis, Wang, Dunn and Wu, 2011) and almost 32 per cent of the adult population who remained unbanked. This is consistent with findings by Chand (2002) whose study on financial development and economic growth in Pacific island countries suggests that poor state of financial development constrained mobilisation of savings for growth.

The results show evidence that public investment crowds-in private investment confirming the hypothesis of complementarity between private and public investment. In the short run, a 1 per cent increase in government investment leads to a 0.12 per cent increase in private investment, significant at a 10 per cent significance level. When political stability is incorporated into the model, public sector investment tends to have a crowding-out effect on private investment in the short run. An explanation for this is that during a period of political instability, public funds directed towards the stability of government likely crowds-out resources and investment priorities to the private sector, thus creating periods of high uncertainty resulting in investors postponing their investment plans.

Foreign Direct Investments (FDIs) has a significant negative effect on private investment, meaning that FDIs crowds out domestic investment. In the short run, a 1 per cent increase in FDI leads to a reduction in private investment by 0.16 per cent, significant at 1 per cent significance level.

The real exchange rate has a significant and positive effect on private investment. In the short run, the depreciation of the RER by 1 per cent leads to a 0.98 per cent increase in private investment significant at a 5 per cent significance level. There could be two possible effects. The RER depreciation could raise the real cost of imported capital goods and adversely affect private investment. On the other hand, the RER depreciation raises the price of tradable goods (mainly major commodity exports or makes it relatively cheaper for foreign tourist visitors to spend in Vanuatu). This will help stimulate investment in the tradable (goods and services) sector. In this case, the short-term results showing an RER depreciation leads to a positive increase in private investment. This means that the positive impact on the tradable sector outweighs the negative impact on the non-tradable sector, the likely effect of the lower real income and wealth, and the higher cost of imported capital goods.

An increase in macroeconomic stability exerts an increase in private investment, although insignificant. This can be explained by the assumption that Vanuatu's GDP growth was less volatile in the decade leading to 2013 compared to the more volatile levels in the 1980s. This result is consistent with empirical findings of Greene and Villanueva (1991) and Jongwanich and Kohpaiboon (2008) that increases in uncertainty reduce private investment in developing countries.

Finally, consistent with expectation, the dummy variable measuring the structural reform (accounting for new flights to major tourist markets between 2004 and 2008) through Vanuatu's open sky policy and code-sharing agreements with other airlines, and the new entrant into the telecommunication sector (Digicel Vanuatu Ltd in 2006) and banking sector (Bred Bank Vanuatu Ltd in 2008) has a significant and positive impact on private investment. In the short run, the positive impact of the dummy variable capturing the periods of these new policy changes and structural reform is significant at the 1 per cent significance level.

Graphical views of domestic private investment and the selected nine determinants

Figure 1. Real domestic private investment (LnRDPI)

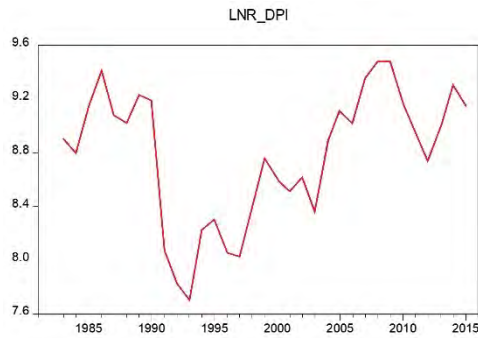


Figure 2. Real gross domestic product (LnRGDP)

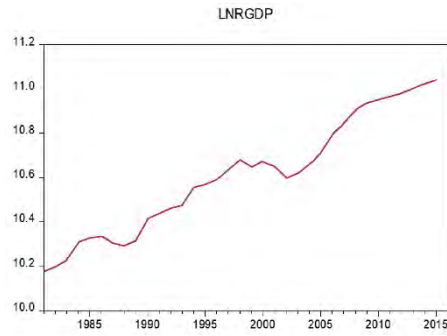


Figure 3. Real interest rate (LnRIR)

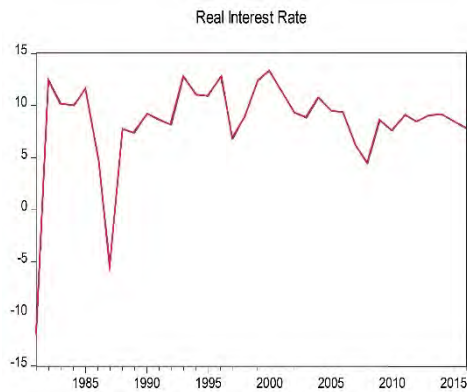


Figure 4. Real credit to the private sector (LnCRE)

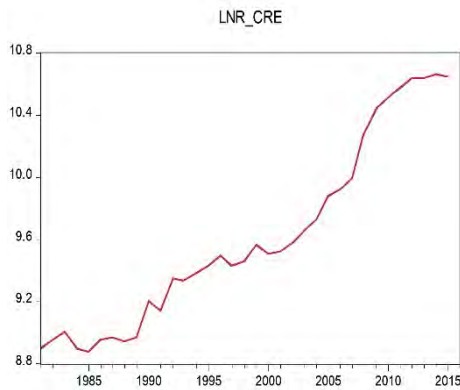


Figure 5. Real public sector investment (LnRPUBI)

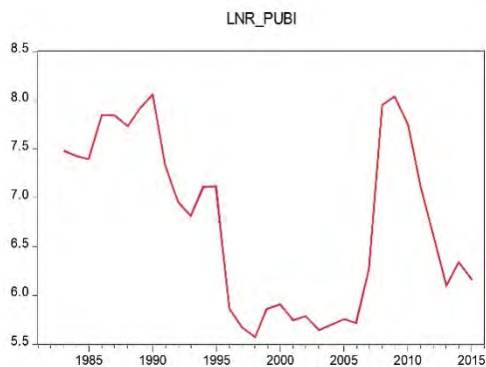


Figure 6. Real foreign direct investment (LnRFDI)

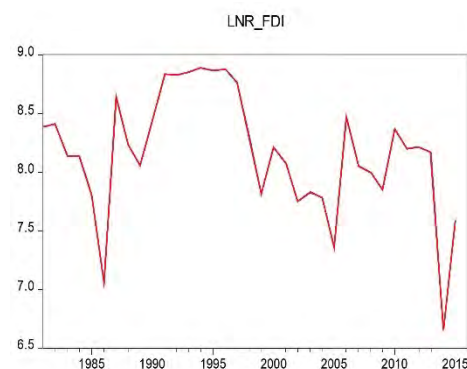


Figure 7. Real exchange rate (lnRER)



Figure 8. Macroeconomic stability (MAC_STAB)

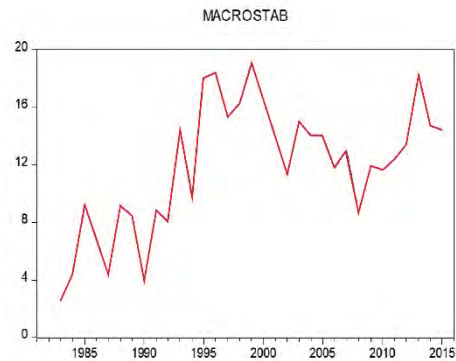


Figure 9. Political stability (lnPOL_STAB)

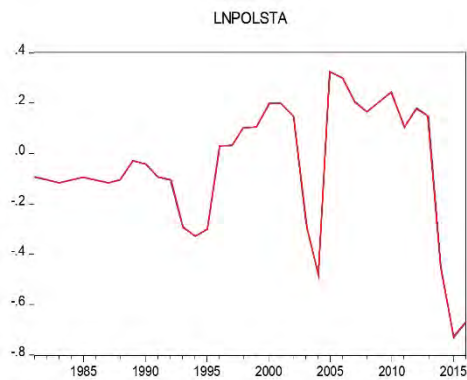
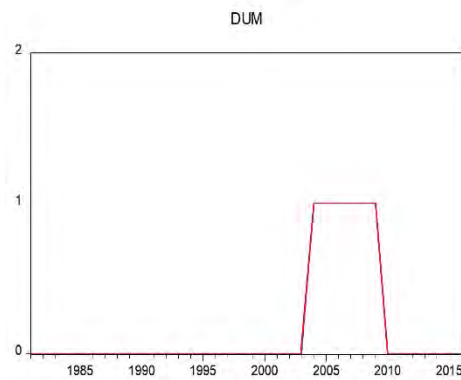


Figure 10. Structural reform dummy (D)



Figures 1 to 10 show the trends of the dependent and independent variables. Findings show that although these variables are important determinants of private domestic investment, the declining trend in public investment, macroeconomic stability (slowing GDP growth) and political stability (indicating an increase in uncertainty in the economy), and lack of reforms between 2009–2015 were primary reasons for the declining trend in domestic private investment during the same period. The unfavourable investment climate was also driven by other factors in play such as increased uncertainties surrounding the proposed changes in tax policy (proposed introduction of an income tax). The Anti-Money Laundering (AML) issues and the increased non-performing loans post-tropical cyclone Pam (in 2015) also contributed to the weak private sector growth.

3.4 Results of the long run ARDL model

Table 4. Long-run error correction estimates

	Model A	Model B
Dependent Variable = $RDPI_t$		
	Coefficient	Coefficient
The long-run dynamics		
Constant	7.240	-44.613*
$\ln RGDP_t$	-2.253	-1.299
RIR_t	-0.091**	-0.103***
$\ln RCRE_t$	2.001	4.060***
$\ln RPUBI_t$	0.197	0.293***
$\ln RFDI_t$	-0.257*	-0.056
$\ln RER_t$	1.548	5.581***
MAC_STAB _t	0.026	
$\ln POL_STA_t$		1.268***
D	1.428***	1.433***

Note: * significant at 10%, **significant at 5%, ***significant at 1%.

Private investment tends to positively respond to output growth in the short run and long run. The model result for Vanuatu in Table 4 shows that increases in output or aggregate demand conditions have a negative impact on private investment in the long-run.

In the long run, the higher user cost of capital (interest rates) has a negative impact on private investment. Empirical findings show that in the long-run, a 1 per cent increase in the real cost of capital leads to a 0.09 per cent reduction in private investment, statistically significant at a 5 per cent significance level. This is associated with wide interest rate spreads in Vanuatu indicating high lending interest rates and low deposit rates.

Credit to the private sector is found to have an insignificant positive impact on private investment in the long-run. This means that credit availability to the private sector through policies used over the years have not been able to spur the desired boost in private sector initiatives in Vanuatu. Access to credit is cited by various reports³ to be a major constraint faced by the private sector, so, another explanation for the insignificant coefficient could be related to the assumption that credit is scarcely given to potentially viable enterprises.

Public investment has a significant and positive impact on private investment in the long run. The long-run elasticity derived from the coefficient of public investment (RPUBI) suggests that a 1 per cent increase in government investment yields a 0.19 per cent increase in private investment, and the impact increases further when political stability is incorporated in the investment model. This means that the government's efforts at providing infrastructure (e.g. telecommunication, transport, and energy) complements private investment in Vanuatu.

In the long run, an increase in Foreign Direct Investment (FDI) in the previous period will have a negative (and significant) effect on domestic investment in the current period. The crowding-out effect could indicate that the high technological or skill gap between foreign and domestic firms is impeding the growth of domestic private investment firms.

The real exchange rate has a positive impact on private investment in the long run (although insignificant), however, it becomes significant when political stability is accounted for in the investment model. A 1 per cent depreciation of the RER, (i.e. an increase in RER) leads to an increase in private investment by 5.58 per cent, significant at 1 per cent significance level. The positive and significant coefficient corresponding to RER depreciation is associated with the nature of a particularly services-export-led growth economy where tourism is one of the source drivers of growth in Vanuatu.

Structural reforms also have a positive impact on private investment in the long run. The impact of structural reforms implementation (2004 to 2008) increases private investment by 1.42 per cent, significant at a 1 per cent significance level. This reinforces the need for structural reforms that create the potential for boosting investment and improving private sector growth.

4. Conclusion and Policy Implications

This study adds to existing studies done on private sector growth in Vanuatu. This empirical study uses an ARDL model to investigate the determinants of private sector investment in Vanuatu using annual time-series data from 1983–2015. Private sector investment growth was measured using private fixed capital formation as a proxy indicator. Results of this ARDL model show that despite their positive influence on domestic private investment, the declining trend (from 2009–2015) in public investment, macroeconomic stability (slowing GDP growth) and political stability (indicating an increase in uncertainty in the economy), and slow progress of reforms were likely primary reasons for the declining trend in domestic private investment. The impact of the AML issues, increased non-performing loans, and the impact of proposed changes in tax policies creating uncertainties were also obstacles to improvement in private sector growth.

The findings of the ARDL model show that in the short run, private domestic investment in the previous period (1-year lag) positively influence private domestic investment in the current period. Public investment is found to have a complementary effect on private investment and both real exchange rate and structural reforms have a positive impact on the investment climate in Vanuatu. In the long-run, consistent with the prediction of the neoclassical model, a higher user cost of capital (real interest rate) has a negative influence on private sector investment. When macroeconomic and political stability (proxies measuring the level of low uncertainties) is considered in the model, results show political stability, public investment, availability of financial resources in the economy, real exchange rate, and structural reforms are positive and significant determinants of private domestic investment in the long-run. The findings point to key policy outcomes that will sustain future private sector growth in Vanuatu.

These policies include offering more investment incentives, easing credit constraints, facilitating infrastructure development, reducing macroeconomic and political uncertainties, and offering reforms that boost and create a conducive investment climate for the private sector to grow.

The Vanuatu Government and its stakeholders may consider facilitating the ongoing support by the donors and development partners by considering the following policy recommendations which will favour private sector growth in the Vanuatu economy: (i) increase aggregate demand by stepping up the level of economic activity. Creating investment opportunities for the private sector to grow; (ii) reduce credit constraints by boosting the availability of funds for investment under adequate financial supervision and proper regulations. Reduce user cost of capital (real lending interest rate) to support private investment start-ups will be beneficial (Hallward-Driemer and Steward, 2005). Increase access to finance results in higher employment growth in micro, small, and medium enterprises (Ayyagari et al, 2016). Higher financial development leads to higher levels of investment which can stimulate growth; (iii) enhance the complementary or crowding-in effect of public investment on private domestic investment through infrastructure development. Improving the access to transport, aviation, telecommunications, utilities, and markets translates to reducing the cost of doing business. This will offer long-term benefit and boost private domestic investment growth; (iv) Promote macroeconomic stability and political stability by reducing uncertainties (institutional, structural and political) in the economy. The private sector will be willing to invest if they are certain about the future return of their investment. To create a conducive investment climate, suitable legislation and availability of skilled and semi-skilled workers are essential (Cole, 1993); and (v) Develop structural reform in the economy and incentives to boost private sector investment (ADB, 2017; Preston, 2003).

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Notes

- 1 Vanuatu National Statistics Office (VNSO).
- 2 Explanatory variables include real gross domestic product, real user cost of capital, real bank credit to the private sector, real public investment, real foreign direct investment, real exchange rate, macroeconomic stability, political stability and a dummy variable representing structural reform.
- 3 Vanuatu SME survey (2016).



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