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Commodity prices and inflation: A case study of Vanuatu

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ABSTRACT

Using quarterly data from 2021 to 2023 and the ARDL modeling framework, this study investigates the factors that influence inflation in Vanuatu. The results indicate that the main long-term determinants of inflation are changes in the nominal exchange rate and the pricing of commodities around the world, especially food, rice, oil, and important exports like kava and copra. Although policies frequently mitigate the short-term consequences, the long-term effects are significant and demonstrate how vulnerable Vanuatu's small, import-dependent economy is to external shocks. The findings highlight how crucial commodity price tracking and exchange rate stability are in directing monetary and fiscal policy for efficient inflation control.

1. Introduction

Forecasting inflation is crucial for central banks. How accurate such forecasts are have implications for macroeconomic stability and financial market decision making including liquidity in the financial system (Taylor, 2019; Hayo and Neumeier, 2021)t. A persistent challenge for resource-dependent economies is their growing vulnerability to external commodity price shocks, which can diminish the efficacy of domestic monetary policy in responding to external shocks such as oil price increase (see Apergis, Chatziantoniou and Cooray, 2020) and recessions (Rizvi and Sahminan, 2020). In this paper, we focus on Vanuatu by investigating the role that commodity price fluctuations play in shaping inflationary expectations. This is a relevant issue for small island states like Vanuatu because they are heavily dependent on commodity trade.

Our motivation for studying Vanuatu has roots in its relatively diverse export mix among the region's small island economies. Kava, copra, and cocoa, for instance, contribute 15 % to Vanuatu's Gross Domestic Product (GDP). Although agriculture's direct contribution to GDP has diminished over time, it remains essential for rural livelihoods, food security, and foreign exchange revenues. Vanuatu's economic profile reflects that of other small Pacific nations in that it relies on a limited export base, is dependent on imported energy, and remains susceptible to global market fluctuations.

Another common feature of Vanuatu and other island economies is that Vanuatu's economy encounters structural supply-side inflationary pressures, with performance of critical sectors including agriculture, fisheries, and tourism closely linked to commodity price fluctuations (Bai, Tumbarello and Wu, 2016; Jayaraman and Choong, 2009). Vanuatu's dependence on agriculture and tourism—both heavily dependent on imports render the economy especially vulnerable to global price fluctuations. In the last twenty years, Vanuatu has encountered inflationary surges, frequently instigated by robust demand in global energy markets or increases in food prices (Reserve Bank of Vanuatu, 2024).

The literature on commodity price pass-through to inflation rejects claims that commodity prices do not improve inflation projections. (Bernanke and Gertler, 2001). Recent research (Gelos and Ustyugova, 2017) demonstrate that while certain global or regional factors may either attenuate or exacerbate the pass-through effect at various intervals, neglecting commodity prices considerably underestimates their impact on consumer prices in small, open economies.

Following Roeger and Herz (2012), who highlight the predictive power of the classical Phillips curve in comparison to the New Keynesian Phillips Curve (NKPC), we adopt a conventional linear specification augmented by exogenous commodity variables. This methodology aligns with the framework utilized by Correa and Minella (2010) and Rizvi and Sahminan (2020) wherein commodity prices are incorporated as supply-side shocks in inflation forecasting. While some studies (Iyke and Ho, 2020) advocate for a nonlinear specification, the prevailing consensus supports a linear approach for capturing core inflation trends

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Table 1
Descriptive statistics. The table provides descriptive statistics of all variables, namely Inflation, Output Gap, Exchange Rate, Oil Prices, Gold Prices and Sugar Prices. The statistics reported are the Mean, Volatility (Standard Deviation), Minimum, Maximum, Skewness, Kurtosis, and Jarque bera Chi^2 and it prob value for quarterly observations from 2001 till 2023.

		Mean	Volatility	Minimum	Maximum	Skewness	Kurtosis	JB Chi^2	JB Prob
Inflation		2.174	3.109	13.439	-3.537	1.885	3.899	23.83	0.000
Output Gap		0.438	2.636	5.400	-4.400	0.108	-1.047	7.88	0.019
Ex Rate		4.661	0.089	4.807	4.493	-0.333	-1.164	12.17	0.002
Copra Price		4.070	0.287	4.937	3.462	0.493	1.171	5.26	0.072
Coconut Price		4.672	0.223	5.508	4.108	0.086	3.088	7.62	0.022
Beef Price	Exports	6.254	0.128	6.530	6.014	0.245	-0.820	4.44	0.108
Cocoa Price		5.303	0.177	5.916	4.645	0.135	4.354	10.02	0.006
Kava Price		7.061	0.205	8.039	6.925	2.967	11.230	42.31	0.000
Oil Price		4.255	0.337	4.769	3.472	-0.333	-0.759	4.2	0.122
Rice Price	Imports	6.143	0.154	6.468	5.878	0.281	-0.973	6.88	0.032
Metals Price		7.593	0.175	8.160	7.197	0.492	0.841	4.5	0.105
Food Price		4.692	0.157	5.077	4.434	0.371	-0.864	5.58	0.061

Table 2
ARDL Regression Results for Base Model. The following table presents the results for Autoregressive Distributed Lag regression of Eq. 1 incorporating the three identified structural breaks. Inflation is measured as change in Consumer Price Index, Ex Rate is nominal exchange rate, while Output Gap is as reported by Reserve Bank of Vanuatu. Dummy variables represent the three structural breaks identified by Bai and Perron (1998) test. Dummy $_1$ represents the structural break occurring in Q1:2014, Dummy $_2$ represents the structural break occurring in Q3:2018 and Dummy $_3$ represents the structural break occurring in Q1:2021. ECT is the error correction term. t statistics is presented in parentheses. *, **, *** denote statistical significance at the 10 %, 5 % and 1 % levels.

	Model 1	Model 2
ECT	-0.391	-0.504*
	(-0.806)	(-1.796)
Panel A: Long Run Relationship		
Output Gap	-0.183	-0.183
	(-1.406)	(-1.406)
Ex Rate	18.509***	18.509***
	(4.810)	(4.810)
Constant	-83.975***	-83.975***
	(-4.682)	-4.682
Panel B: ECM Results for the models		
$\Delta Inflation_{t-1}$	1.203	1.240
	(2.412)**	(4.206)***
$\Delta Inflation_{t-2}$	0.036	0.016
	(0.197)	(0.09)
$\Delta Inflation_{t-3}$	-0.213	-0.261
	(-1.309)	(-1.648)
$\Delta Ex\ Rate$	-0.134	
	(-0.014)	
$\Delta Dummy_1$		-0.930
		(-1.109)
$\Delta Dummy_2$		0.167
		(0.229)
$\Delta Dummy_3$		1.583*
		(1.989)
Constant	0.558	0.258
	(0.013)	(0.639)

in developing economies (Fasanya and Awodimila, 2020).

Employing an Autoregressive Distributed Lag (ARDL) model, fitted to time-series data, we find that Vanuatu's inflation is highly sensitive to fluctuations in commodity prices, exchange rates, and structural economic shocks. Consistent robust negative error correction terms signify swift short-run adjustments towards long-run equilibrium, demonstrating successful monetary policy responses. A noteworthy observation, likely to be a focus of future research, is our forecast that fiscal policy in Vanuatu plays a similarly major influence in influencing inflation. To evaluate this hypothesis alongside our own, a proposal that simultaneously considers both monetary and fiscal policy shocks, such as the macroeconomic model established by Narayan, Narayan, Prasad and Manoa (2025) for Fiji, would be optimal. More on the Vanuatu results: we see that fluctuations in exchange rates substantially influence long-term inflation, consistent with the prevailing literature on small open economies; see Narayan, Cirikisuva and Naivutu (2023), who find that inflation in Fiji is driven mainly by expectations of forward- and backward-looking economic agents and movements in the real effective exchange rate in the case of Fiji. When we focus on specific commodities of importance to Vanuatu and their effects on inflation, we discover significant inflationary effects from major exports such as copra, coconut, beef, cocoa, and kava, particularly exacerbated during structural disruptions associated with global crises, especially COVID-19; for a survey of the literature on COVID-19, see for instance Narayan (2020) and Phan and Narayan (2020). Comparable substantial inflationary pressures stem from essential imports such as oil, rice, and metals. The ARDL findings, collectively, highlight Vanuatu's economic vulnerability to external shocks, reinforcing theoretical expectations that commodity dependence and structural disruptions substantially amplify domestic inflationary pressures in small island economies.

Our findings advance three key areas of the literature. First, we contribute to the body of work on Phillips curve applications by broadening its empirical significance to a relatively underexplored island setting, characterized by pronounced supply shocks and ongoing data limitations. In this regard, while testing for Phillips curve occupies a crowded literature, its relevance for policy debates and design is actively sorted, particularly by central banks which have the mandate to manage price stability and overall macroeconomic resilience to shocks. The policy makers at the central bank of Vanuatu—namely, the Reserve Bank of Vanuatu, find themselves in a similar position of policy discourse on commodity prices and its effects on CPI inflation.

Second, our research enhances the emerging literature concerning the economic vulnerabilities of small island nations and the distinctive inflationary challenges they encounter. Recent studies have examined factors influencing inflation and macroeconomic stability in small island economies. Specifically, Prabheesh, Prakash, and Vuniivi, (2023) estimate equilibrium exchange rates for Fiji using the BEER approach, highlighting bilateral misalignments; Jain, Singh, Patel, and Chand, (2023) construct an Exchange Market Pressure Index (EMPI) for Fiji to capture macro-financial vulnerabilities; Nakatani (2018) analyzes the effectiveness of flexible exchange rates in Papua New Guinea following negative commodity price shocks; and Abraham and Narayan (2023) find limited macroeconomic effects of regulated fuel price shocks in Fiji.

Table 3
ARDL Regression Results for Model Incorporating Copra (Export Commodity). The following table presents the results for Autoregressive Distributed Lag regression of Eq. 1 incorporating the three identified structural breaks. Inflation is measured as change in Consumer Price Index, Ex Rate is nominal exchange rate, while Output Gap is as reported by Reserve Bank of Vanuatu. Three interaction terms between copra prices and Dummy variables represent the three structural breaks identified by Bai and Perron (1998) test. Copra x Dummy $_1$ represents the structural break occurring in Q1:2014, Copra x Dummy $_2$ represents the structural break occurring in Q3:2018 and Copra x Dummy $_3$ represents the structural break occurring in Q1:2021. ECT is the error correction term. t statistics is presented in parentheses. *, **,*** denote statistical significance at the 10 %, 5 % and 1 % levels.

	Model 1	Model 2	Model 3	Model 4
ECT	−0.367**	−0.060	−0.291	−0.888**
	(−2.297)	(−0.12)	(−0.643)	(−1.941)
Panel A: Long Run Relationship				
Output Gap	−0.199	−0.199	−0.199	−0.199
	(−1.541)	(−1.541)	(−1.541)	(−1.541)
Ex Rate	17.875***	17.875***	17.875***	17.875***
	(4.682)	(4.682)	(4.682)	(4.682)
Copra	−1.884	−1.884	−1.884	−1.884
	(−1.588)	(−1.588)	(−1.588)	(−1.588)
Constant	−73.350***	−73.350***	−73.350***	−73.350***
	(−3.877)	(−3.877)	(−3.877)	(−3.877)
Panel B: ECM Results for the models				
$\Delta Inflation_{t-1}$	1.176***	0.872*	1.058**	1.359***
	(6.483)	(1.706)	(2.291)	(3.013)
$\Delta Inflation_{t-2}$	0.064	−0.141	−0.117	−0.007
	(0.358)	(−0.912)	(−0.777)	(−0.051)
$\Delta OutputGap$		−0.043	−0.012	0.109
		(−0.345)	(−0.096)	(0.976)
$\Delta OutputGap_{t-1}$		0.078	0.045	0.028
		(0.819)	(0.472)	(0.339)
$\Delta Ex\ Rate$		16.536	5.707	−6.997
		(1.285)	(0.556)	(−0.683)
$\Delta Ex\ Rate_{t-1}$		−4.991	−7.284	−4.196
		(−0.62)	(−0.913)	(−0.613)
$\Delta Copra\ xDummy_1$		−0.201		
		(−0.481)		
$\Delta Copra\ x\ Dummy_{1t-1}$		−0.090		
		(−0.195)		
$\Delta Copra\ xDummy_2$			−0.241	
			(−0.559)	
$\Delta Copra\ x\ Dummy_{2t-1}$			0.329	
			(0.572)	
$\Delta Copra\ x\ Dummy_{2t-2}$			0.183	
			(0.418)	
$\Delta Copra\ x\ Dummy_3$				−0.315
				(−0.852)
$\Delta Copra\ x\ Dummy_{3t-1}$				0.295
				(0.597)
$\Delta Copra\ x\ Dummy_{3t-2}$				0.844**
				(2.133)
Constant	−5.532	−52.427	7.119	50.843
	(−1.343)	(−0.894)	(0.166)	(1.227)

Our study adds to this literature by employing an ARDL model for Vanuatu, emphasizing that inflation in this small import-dependent economy is primarily driven by global commodity prices and exchange rate movements, underscoring the need for careful monitoring of these variables to maintain inflation stability.

Commodity prices and how they impact inflation has a voluminous literature Fasanya and Awodimila, (2020) provide a comprehensive overview of the literature while concluding that commodity price indexes are good predictors for both headline and core inflation using Westerlund and Narayan (2015) estimator. Recent studies, such as those by Salisu, Swaray, and Sa'id (2021), confirm global and local commodity price fluctuations as critical determinants of inflation, particularly in advanced economies. The knowledge gap is case studies on small states, whose sustainability matters to the world; A few recent studies offer important insights into the macro-financial dynamics of small island economies. Narayan, Ismail, Saudulla and Rizvi, (2025) show that while both tax hikes and spending cuts aid debt sustainability, tax-based adjustments are more effective in the short run, whereas spending cuts yield stronger long-term benefits for Maldives. Rath, Narayan, Saudulla and Shuaib (2025) find that gross international reserves in the Maldives are highly sensitive to export and exchange rate volatility, with negative export shocks having the largest adverse effect. Prabheesh and Rasheed (2025) demonstrate that climate-related fiscal responses, particularly disaster relief spending, increase financial instability by weakening banking resilience, reducing credit availability, and lowering tourism revenues. These studies underscore the distinct vulnerabilities and policy trade-offs faced by small island economies

The remainder of this paper is organized as follows: Section 2 contains data and empirical framework. Section 3 reports the results, paying particular attention to structural breaks that may arise from global or regional shocks and analyzes them. Section 4 concludes with conclusion and policy implications inflationary dynamics in Pacific Island economies.

2. Model and data

We utilize the conventional Phillips curve framework, commonly used in empirical studies (Ball and Mazumder, 2021), to examine the correlation between commodity price shocks and inflation expectations in Vanuatu. This method has shown strong application, especially in

Table 4
ARDL Regression Results for Model Incorporating Coconut (Export Commodity). The following table presents the results for Autoregressive Distributed Lag regression of Eq. 1 incorporating the three identified structural breaks. Inflation is measured as change in Consumer Price Index, Ex Rate is nominal exchange rate, while Output Gap is as reported by Reserve Bank of Vanuatu. Three interaction terms between Coconut prices and Dummy variables represent the three structural breaks identified by Bai and Perron (1998) test. Coconut x Dummy $_1$ represents the structural break occurring in Q1:2014, Coconut x Dummy $_2$ represents the structural break occurring in Q3:2018 and Coconut x Dummy $_3$ represents the structural break occurring in Q1:2021. ECT is the error correction term. t statistics is presented in parentheses. *,**, *** denote statistical significance at the 10 %, 5 % and 1 % levels.

	Model 1	Model 2	Model 3	Model 4
ECT	−0.428***	−0.446***	−0.455***	−0.306**
	(−2.715)	(−2.938)	(−2.999)	(−2.062)
Panel A: Long Run Relationship				
Output Gap	−0.179	−0.179	−0.179	−0.179
	(−1.347)	(−1.347)	(−1.347)	(−1.347)
Ex Rate	18.604***	18.604***	18.604***	18.604***
	(4.773)	(4.773)	(4.773)	(4.773)
Coconut	0.402	0.402	0.402	0.402
	(0.257)	(0.257)	(0.257)	(0.257)
Constant	−86.295***	−86.295***	−86.295***	−86.295***
	(−4.27)	(−4.27)	(−4.27)	(−4.27)
Panel B: ECM Results for the models				
$\Delta Inflation_{t-1}$	1.165***	1.153***	1.150***	0.828***
	(6.543)	(6.556)	(6.523)	(4.382)
$\Delta Inflation_{t-2}$	0.067	0.066	−0.048	0.057
	(0.373)	(0.371)	(−0.328)	(0.349)
$\Delta Inflation_{t-3}$	−0.196	−0.174		−0.095
	(−1.234)	(−1.086)		(−0.605)
$\Delta OutputGap$	−0.028	−0.028		
	(−0.312)	(−0.312)		
$\Delta Coconut$	−0.366	−0.412	−0.655	
	(−0.354)	(−0.404)	(−0.658)	
$\Delta Coconut_{t-1}$	1.134	1.117	1.307	
	(1.092)	(1.088)	(1.289)	
$\Delta Coconut_{t-2}$	2.371**	2.198**	2.103**	
	(2.320)	(2.127)	(2.039)	
$\Delta Coconut_{t-3}$		0.848	1.045	
		(0.812)	(1.014)	
$\Delta Coconut\ x\ Dummy_3$				−0.446
				(−1.296)
$\Delta Coconut\ x\ Dummy_{3t-1}$				0.222
				(0.485)
$\Delta Coconut\ x\ Dummy_{3t-2}$				0.821**
				(2.089)
Constant	−14.743**	−17.636**	−17.941**	0.107
	(−2.169)	(−2.321)	(−2.359)	(0.316)

small open economies vulnerable to external shocks (Long, Prasad, Krishna, Tang and Chang, 2024). Commodity-augmented Phillips curves openly incorporate commodity prices as exogenous variables to handle supply-side shocks.

$$Inf_t = \alpha + \beta_1 Inf_{t-1} + \beta_2 Inf_{t-2} + \beta_3 Gap + \beta_4 Com + \beta_5 ExRt + \varepsilon \quad (1)$$

Where, *Inf* is consumer price index-based inflation rate, *Gap* is a measure of excess demand (GDP output gap), *ExRt* represents the % change in real exchange rate, and *Com* is change in commodity price.

Eq. (1) is estimated using quarterly data (2001Q1 to 2023Q4).[1] This period is of great policy interest because it contains several important shocks, such as the Global Financial Crisis, fluctuations in the global commodity markets, and the COVID-19 pandemic. This sample offers a total of 92 time-series observations. Considering Vanuatu's economic structure and dependence on commodities, we include essential commodity prices that reflect its international trade exposure. We specifically incorporate the prices of copra and coconut, which are primary export commodities; beef, cocoa, and kava, which generate foreign exchange earnings; and essential imported commodities, such as oil, rice, metals, and food products. All these commodities are important for shaping Vanuatu's inflation.

The econometric approach we employ, namely the ARDL model is suitable for examining short-run dynamics and long-run equilibrium relationships within a cointegration framework. The ARDL model is an idea method to capture short-term deviations and long-term equilibrium corrections in inflation dynamics.[2] Furthermore, we perform the Bai and Perron (1998) structural break test and discover three important structural breaks in Q1:2014, Q3:2018, and Q1:2021, which align with major global and regional economic disturbances, including fluctuations in global commodity price shifts and the COVID-19 pandemic.[3] Our motivation for employing the Bai and Perron (1998) structural break test has roots in its robustness to manage multiple structural breaks in a linear setting, consistent with our research design. Despite the availability of newer methodologies, such as those proposed by Lee and Strazicich (2003) and Narayan and Popp (2010), Bai and Perron's

[1] The data is limited till 2023 Q4, mainly due to availability of uniform and reliable data for all variables.

[2] Reserve Bank of Vanuatu estimates, that total pass-through effect of imported price shocks can take upto 6 months for Vanuatuan economy.

[3] Reserve Bank of Vanuatu estimates that domestic prices tend to rise above their target range of 0 %-4 % owing to supply disruptions post cyclones noticeably in 2015 (Cyclone Pam), 2020 (cyclone Harold), 2023 (cyclone Judy and Cyclone Kevin).

Table 5
ARDL Regression Results for Model Incorporating Beef (Export Commodity). The following table presents the results for Autoregressive Distributed Lag regression of Eq. 1 incorporating the three identified structural breaks. Inflation is measured as change in Consumer Price Index, Ex Rate is nominal exchange rate, while Output Gap is as reported by Reserve Bank of Vanuatu. Three interaction terms between Beef prices and Dummy variables represent the three structural breaks identified by Bai and Perron (1998) test. Beef x Dummy $_1$ represents the structural break occurring in Q1:2014, Beef x Dummy $_2$ represents the structural break occurring in Q3:2018 and Beef x Dummy $_3$ represents the structural break occurring in Q1:2021. ECT is the error correction term. t statistics is presented in parentheses. *,**,*** denote statistical significance at the 10 %, 5 % and 1 % levels.

	Model 1	**Model 2**	**Model 3**
ECT	0.666***	0.664***	0.495
	(6.627)	(7.247)	(4.781)
Panel A: Long Run Relationship			
Output Gap	−0.125	−0.125	−0.125
	(−1.049)	(−1.049)	(−1.049)
Ex Rate	12.100***	12.100***	12.100***
	(3.097)	(3.097)	(3.097)
Beef	9.975***	9.975***	9.975***
	(3.634)	(3.634)	(3.634)
Constant	−116.534***	−116.534***	−116.534***
	(−6.28)	(−6.28)	(−6.28)
Panel B: ECM Results for the models			
$\Delta Inflation_{t-1}$	0.356***	0.278**	0.372**
	(2.847)	(2.369)	(2.66)
$\Delta Inflation_{t-2}$	0.007	0.009	0.076
	(0.057)	(0.078)	(0.531)
$\Delta Inflation_{t-3}$	−0.069	−0.093	−0.115
	(−0.588)	(−0.853)	(−0.858)
$\Delta Ex\ Rate$	11.754***	10.331***	
	(4.937)	(4.721)	
$\Delta Beef$	1.435	0.151	1.438
	(0.82)	(0.091)	(0.73)
$\Delta Beef\ x\ Dummy_3$		−0.037	−0.040
		(−0.19)	(−0.173)
$\Delta Beef\ x\ Dummy_{3t-1}$		0.343	0.175
		(1.707)	(0.585)
$\Delta Beef\ x\ Dummy_{3t-2}$			0.310
			(1.214)
Constant	−62.144***	−47.598***	−7.922
	(−4.631)	(−3.631)	(−0.647)

approach continues to be highly effective for shorter and moderately sized samples, as utilized in our study, and is widely employed in recent literature addressing similar inflation dynamics in small open economies.

All data series have been authenticated and confirmed as stationary. In the proposed ARDL models, inflation was designated as the dependent variable with two lags, whereas the explanatory factors incorporated up to three delays. The lag structure was determined using the Akaike Information Criterion (AIC) to effectively capture short-run dynamics and to guarantee the absence of residual autocorrelation. Inflation expectations are modeled adaptively through employing lagged inflation variables. The data for this study are sourced from the Reserve Bank of Vanuatu and the Vanuatu Bureau of Statistics, ensuring reliability and uniformity.

3. Results and analysis

From Tables 1 and 2, we read descriptive statistics, which mask the behavior of key variables of our empirical model. The first thing to note is about the inflation rate: its quarterly average during the sample period was roughly 2.17 %, characterized by significant volatility (-3.54–13.44 %). This volatility reflects substantial changes in Vanuatu's macroeconomic landscape, typical of small, open economies vulnerable to external shocks (Clarida, Gali, and Gertler, 1999). The output gap averaged 0.44 %, suggesting that the economy functioned marginally above its potential output, despite significant cyclical variations between -4.4 % and 5.4 %.

The initial observation pertains to the error correction term (ECT). In Model 1, the ECT is -0.391 but is not statistically significant. In Model 2, the coefficient is -0.504 and is statistically significant at the 10 % level. This suggests a moderately paced adjustment of inflation towards its long-run equilibrium after a shock. For the significant coefficient, the calculated half-life of adjustment is approximately 0.99 quarters, or about 3 months. This indicates that deviations from the long-term trajectory are corrected at a moderate speed. The adjustment dynamics underscore the efficacy of short-term mechanisms in stabilizing inflation expectations, especially in the face of external disruptions like natural disasters.

Nominal exchange rates demonstrate substantial and statistically significant long-term effects on inflation. The long-run coefficient for the exchange rate is 18.509 (t-stat = 4.810), highlighting its powerful influence on domestic prices in a highly import-dependent economy. This finding is economically meaningful for the Reserve Bank of Vanuatu. While the short-run effects of exchange rate changes on inflation are statistically insignificant in the model presented, the strong long-run relationship is consistent with open-economy macroeconomic models, which emphasize the importance of exchange rate pass-through in small, trade-reliant economies (Clarida, Galí, and Gertler, 2002).

Additional evidence from Table 3 explores the impact of export commodity prices, especially copra on inflation. In the long run, the

Table 6
ARDL Regression Results for Model Incorporating Cocoa (Export Commodity). The following table presents the results for Autoregressive Distributed Lag regression of Eq. 1 incorporating the three identified structural breaks. Inflation is measured as change in Consumer Price Index, Ex Rate is nominal exchange rate, while Output Gap is as reported by Reserve Bank of Vanuatu. Three interaction terms between Cocoa prices and Dummy variables represent the three structural breaks identified by Bai and Perron (1998) test. Cocoa x Dummy $_1$ represents the structural break occurring in Q1:2014, Cocoa x Dummy $_2$ represents the structural break occurring in Q3:2018 and Cocoa x Dummy $_3$ represents the structural break occurring in Q1:2021. ECT is the error correction term. t statistics is presented in parentheses. *,**,*** denote statistical significance at the 10 %, 5 % and 1 % levels.

	Model 1	**Model 2**	**Model 3**	**Model 4**
ECT	0.612***	0.815***	0.548***	0.575***
	(7.444)	(13.254)	(7.227)	(7.636)
Panel A: Long Run Relationship				
Output Gap	−0.120	−0.120	−0.120	−0.120
	(−0.921)	(−0.921)	(−0.921)	(−0.921)
Ex Rate	17.697***	17.697***	17.697***	17.697***
	(4.729)	(4.729)	(4.729)	(4.729)
Cocoa	4.242**	4.242**	4.242**	4.242**
	(2.19)	(2.19)	(2.19)	(2.19)
Constant	−102.713***	−102.713***	−102.713***	−102.713***
	(−5.308)	(−5.308)	(−5.308)	(−5.308)
Panel B: ECM Results for the models				
$\Delta Inflation_{t-1}$	0.595***	0.371***	0.406***	0.441***
	(5.379)	(4.625)	(3.776)	(4.16)
$\Delta Inflation_{t-2}$	0.006	0.004	0.026	0.023
	(0.047)	(0.046)	(0.208)	(0.197)
$\Delta Inflation_{t-3}$	0.003	0.035	0.029	−0.059
	(0.029)	(0.433)	(0.254)	(−0.521)
$\Delta Cocoa$	−0.487	−0.834	−1.159	
	(−0.415)	(−1.051)	(−1.111)	
$\Delta Cocoa_{t-1}$	−1.902	−0.421	−2.442**	
	(−1.617)	(−0.514)	(−2.3)	
$\Delta Cocoa_{t-2}$			−0.551	
			(−0.5)	
$\Delta Cocoa_{t-3}$			−0.603	
			(−0.577)	
$\Delta Cocoa\ x\ Dummy_1$		0.407***		
		(7.705)		
$\Delta Cocoa\ x\ Dummy_3$			−0.055	0.073
			(−0.249)	(0.324)
$\Delta Cocoa\ x\ Dummy_{3_{t-1}}$			0.173	0.096
			(0.61)	(0.326)
$\Delta Cocoa\ x\ Dummy_{3_{t-2}}$			0.380	0.244
			(1.494)	(0.952)
Constant	13.573*	6.549	25.982**	1.001***
	(1.711)	(1.204)	(2.658)	(5.157)

price of copra has a negative but statistically insignificant effect on inflation (coefficient = -1.884, t-stat = -1.588). In the short run, the effects are mixed. Notably, when copra prices are interacted with the COVID-19 structural break (Dummy 3 for 2021Q1 onward), the second lag of this interaction term has a positive and significant effect (coefficient = 0.844, t-stat = 2.133), indicating that external disruptions can lead to delayed inflationary pressure from this export commodity.

Table 4 presents the impact of coconut prices. In the long run, coconut prices have a positive but statistically insignificant effect on inflation. In the short run, the second lag of the change in coconut prices has a positive and statistically significant impact on inflation, with coefficients around 2.103–2.371 (t-stat between 2.039 and 2.320). This suggests that price changes in this commodity contribute to inflationary pressures with a time lag.

The analysis of beef prices in Table 5 reveals a strong, positive, and statistically significant long-term effect, with a coefficient of 9.975 (t-stat = 3.634). This highlights the sensitivity of domestic prices to this key commodity. In the short term, however, changes in beef prices and their interaction with the structural break dummy do not show a statistically significant effect on inflation.

Tables 6 and 7 report findings on cocoa and kava prices. The long-run effect of cocoa is positive and statistically significant (coefficient = 4.242, t-stat = 2.19). In the short run, there is a highly significant positive effect from the interaction of cocoa prices with the first structural break Model 2. Kava prices, by comparison, show no statistically significant impact on inflation in either the long run or the short run in any of the models presented.

Table 8 examines oil prices, which play a central role in inflation dynamics. The long-run coefficient is 3.209 (t-stat = 2.697), confirming that higher oil prices lead to higher domestic inflation. In the short run, the second lag of the interaction with the post-pandemic period shows a positive effect that is significant at the 10 % level, highlighting oil's role in transmitting global shocks to domestic inflation with a delay. Table 9 shows that rice prices also have a significant long-run inflationary impact (coefficient = 10.168, t-stat = 4.777). In the short term, the direct effect of rice price changes is positive and significant, while its interaction with the Dummy 3 structural break is negative and significant.

Table 7
ARDL Regression Results for Model Incorporating Kava (Export Commodity). The following table presents the results for Autoregressive Distributed Lag regression of Eq. 1 incorporating the three identified structural breaks. Inflation is measured as change in Consumer Price Index, Ex Rate is nominal exchange rate, while Output Gap is as reported by Reserve Bank of Vanuatu. Three interaction terms between Kava prices and Dummy variables represent the three structural breaks identified by Bai and Perron (1998) test. Kava x Dummy $_1$ represents the structural break occurring in Q1:2014, Kava x Dummy $_2$ represents the structural break occurring in Q3:2018 and Kava x Dummy $_3$ represents the structural break occurring in Q1:2021. ECT is the error correction term. t statistics is presented in parentheses. *,**,*** denote statistical significance at the 10 %, 5 % and 1 % levels.

	Model 1	Model 2	Model 3
ECT	0.544***	0.498***	0.542***
	(5.59)	(5.331)	(6.15)
Panel A: Long Run Relationship			
Output Gap	−0.192	−0.192	−0.192
	(−1.462)	(−1.462)	(−1.462)
Ex Rate	18.079***	18.079***	18.079***
	(4.653)	(4.653)	(4.653)
Kava	−1.500	−1.500	−1.500
	(−0.889)	(−0.889)	(−0.889)
Constant	−71.373***	−71.373***	−71.373***
	(−3.118)	(−3.118)	(−3.118)
Panel B: ECM Results for the models			
$\Delta Inflation_{t-1}$	0.589***	0.466***	0.444
	(4.952)	(3.888)	(3.731)
$\Delta Inflation_{t-2}$	−0.009	−0.002	−0.004
	(−0.061)	(−0.018)	(−0.031)
$\Delta Inflation_{t-3}$	−0.091	−0.109	−0.093
	(−0.701)	(−0.864)	(−0.744)
$\Delta Kava$	−0.401	0.140	
	(−0.461)	(0.17)	
$\Delta Kava_{t-1}$	−1.421	−1.218	
	(−1.554)	(−1.421)	
$\Delta Kava\ x\ Dummy_3$		0.091	0.063
		(0.471)	(0.327)
$\Delta Coconut\ x\ Dummy_{3t-1}$		0.008	0.070
		(0.03)	(0.274)
$\Delta Coconut\ x\ Dummy_{3t-2}$		0.214	0.183
		(0.977)	(0.844)
Constant	14.014	8.693	1.097***
	(1.536)	(1.012)	(4.885)

Table 8
ARDL Regression Results for Model Incorporating Oil (Import Commodity). The following table presents the results for Autoregressive Distributed Lag regression of Eq. 1 incorporating the three identified structural breaks. Inflation is measured as change in Consumer Price Index, Ex Rate is nominal exchange rate, while Output Gap is as reported by Reserve Bank of Vanuatu. Three interaction terms between Oil prices and Dummy variables represent the three structural breaks identified by Bai and Perron (1998) test. Oil x Dummy $_1$ represents the structural break occurring in Q1:2014, Oil x Dummy $_2$ represents the structural break occurring in Q3:2018 and Oil x Dummy $_3$ represents the structural break occurring in Q1:2021. ECT is the error correction term. t statistics is presented in parentheses. *,**,*** denote statistical significance at the 10 %, 5 % and 1 % levels.

	Model 1	Model 2	Model 3
ECT	0.702***	0.620***	0.615***
	(8.974)	(8.456)	(7.654)
Panel A: Long Run Relationship			
Output Gap	-0.137	−0.137	−0.137
	(-1.097)	(−1.097)	(−1.097)
Ex Rate	25.325***	25.325***	25.325***
	(5.705)	(5.705)	(5.705)
Oil	3.209***	3.209***	3.209***
	(2.697)	(2.697)	(2.697)
Constant	-129.432***	−129.432***	−129.432***
	(-5.406)	(−5.406)	(−5.406)
Panel B: ECM Results for the models			
$\Delta Inflation_{t-1}$	0.417***	0.319***	0.380***
	(4.178)	(3.184)	(3.514)
$\Delta Inflation_{t-2}$	-0.104	−0.032	−0.032
	(-0.911)	(−0.297)	(−0.274)
$\Delta Inflation_{t-3}$	-0.006	−0.080	−0.070
	(-0.059)	(−0.789)	(−0.636)
$\Delta Ex\ Rate$	11.820***		
	(5.975)		
ΔOil		−1.379***	
		(−3.264)	
$\Delta Oil\ x\ Dummy_3$		0.292	0.255
		(1.125)	(0.898)
$\Delta Oil\ x\ Dummy_{3t-1}$		0.091	0.113
		(0.276)	(0.313)
$\Delta Oil\ x\ Dummy_{3t-2}$		0.508*	0.362
		(1.758)	(1.157)
Constant	-53.507***	7.005***	1.093***
	(-5.857)	(3.849)	(5.588)

Finally, Tables 10 and 11 evaluate metal and food prices. Metal prices have a statistically significant positive effect on inflation in both the long run (coefficient = 3.554, t-stat = 1.769) and the short run is significant at t-stat 3.229 and 3.528 in Models 1 and 2 respectively. Food prices also have a significant inflationary effect in the long term, with a coefficient of 6.156 (t-stat = 2.819). In the short run, food prices exhibit a significant inflationary in Model 2 and a significant lagged inflationary effect of interaction of food and Dummy for 3rd break in Model 3.

3.1. Summary of the key findings[4]

The findings show that Vanuatu's inflation is extremely susceptible to changes in the exchange rate and the price of commodities globally, which is indicative of a small, import-reliant economy. Long-term inflation is strongly and statistically significantly influenced by the nominal exchange rate, with a large positive coefficient of 18.509. The long-term impact highlights the crucial significance of imported inflation, even though the short-term consequences are negligible.

The price of export commodities has a varied impact. Long-term results show that cocoa prices have a statistically significant inflationary effect. In contrast, the long-run effects of copra and kava prices are not statistically significant. However, the interplay of copra prices with the post-COVID structural break indicates that inflationary pressures emerge with a significant lag. While coconut prices do not have a significant long-term effect, they contribute to delayed inflationary pressures in the short run.

Inflation is also greatly influenced by the price of imported commodities. Particularly over the long run, beef prices show clear and statistically significant inflationary effects, with a large coefficient of 9.975. Similarly, oil and rice prices are major drivers of long-term inflation. Overall, food prices have a significant long-term impact on inflation. Contrary to having no effect, metal prices are found to be inflationary in both the long and short term. These results emphasize how crucial exchange rate stability and global commodity price tracking are to Vanuatu's inflation control.

4. Concluding remarks

Using quarterly data from 2021 to 2023 and the Autoregressive Distributed Lag modelling technique, this study examines the main

[4] For robustness checks, we validated our long-term cointegration results using alternative approach Fully Modified Ordinary Least Squares (FMOLS) and the results remained consistent, reaffirming the robustness of our primary findings

Table 9
ARDL Regression Results for Model Incorporating Rice (Import Commodity). The following table presents the results for Autoregressive Distributed Lag regression of Eq. 1 incorporating the three identified structural breaks. Inflation is measured as change in Consumer Price Index, Ex Rate is nominal exchange rate, while Output Gap is as reported by Reserve Bank of Vanuatu. Three interaction terms between Rice prices and Dummy variables represent the three structural breaks identified by Bai and Perron (1998) test. Rice x Dummy $_1$ represents the structural break occurring in Q1:2014, Rice x Dummy $_2$ represents the structural break occurring in Q3:2018 and Rice x Dummy $_3$ represents the structural break occurring in Q1:2021. ECT is the error correction term. t statistics is presented in parentheses. *,**,*** denote statistical significance at the 10 %, 5 % and 1 % levels.

	Model 1	**Model 2**	**Model 3**
ECT	0.680***	0.787***	0.535***
	(8.729)	(13.654)	(5.991)
Panel A: Long Run Relationship			
Output Gap	−0.030	−0.030	−0.030
	(−0.259)	(−0.259)	(−0.259)
Ex Rate	24.683***	24.683***	24.683***
	(7.031)	(7.031)	(7.031)
Rice	10.168***	10.168***	10.168***
	(4.777)	(4.777)	(4.777)
Constant	−175.240***	−175.240***	−175.240***
	(−7.176)	(−7.176)	(−7.176)
Panel B: ECM Results for the models			
$\Delta Inflation_{t-1}$	0.481***	0.172**	0.489***
	(4.885)	(2.267)	(4.128)
$\Delta Inflation_{t-2}$	−0.033	0.004	0.035
	(−0.285)	(0.053)	(0.268)
$\Delta Inflation_{t-3}$	0.041	0.031	−0.011
	(0.38)	(0.41)	(−0.084)
$\Delta Ex\ Rate$	10.259***	18.937***	
	(5.203)	(9.84)	
$\Delta Rice$		6.259***	
		(6.368)	
$\Delta Rice\ x\ Dummy_3$		−0.258**	−0.071
		(−2.029)	(−0.328)
$\Delta Rice\ x\ Dummy_{3t-1}$		0.192	0.117
		(1.164)	(0.411)
$\Delta Rice\ x\ Dummy_{3t-2}$		0.224	0.324
		(1.56)	(1.319)
Constant	−46.658***	−125.017***	0.767***
	(−5.117)	(−9.083)	(3.633)

Table 10
ARDL Regression Results for Model Incorporating Metals (Export Commodity). The following table presents the results for Autoregressive Distributed Lag regression of Eq. 1 incorporating the three identified structural breaks. Inflation is measured as change in Consumer Price Index, Ex Rate is nominal exchange rate, while Output Gap is as reported by Reserve Bank of Vanuatu. Three interaction terms between Metals prices and Dummy variables represent the three structural breaks identified by Bai and Perron (1998) test. Metals x Dummy $_1$ represents the structural break occurring in Q1:2014, Metals x Dummy $_2$ represents the structural break occurring in Q3:2018 and Metals x Dummy $_3$ represents the structural break occurring in Q1:2021. ECT is the error correction term. t statistics is presented in parentheses. *,**,*** denote statistical significance at the 10 %, 5 % and 1 % levels.

	Model 1	**Model 2**	**Model 3**	**Model 4**
ECT	0.838***	0.833***	0.824***	0.597***
	(16.691)	(16.567)	(15.348)	(7.098)
Panel A: Long Run Relationship				
Output Gap	−0.182	−0.182	−0.182	−0.182
	(−1.417)	(−1.417)	(−1.417)	(−1.417)
Ex Rate	18.940***	18.940***	18.940***	18.940***
	(5.004)	(5.004)	(5.004)	(5.004)
Metals	3.554*	3.554*	3.554*	3.554*
	(1.769)	(1.769)	(1.769)	(1.769)
Constant	−112.995***	−112.995***	−112.995***	−112.995***
	(−4.696)	(−4.696)	(−4.696)	(−4.696)
Panel B: ECM Results for the models				
$\Delta Inflation_{t-1}$	0.201***	0.220***	0.200***	0.384***
	(3.229)	(3.528)	(2.878)	(3.406)
$\Delta Inflation_{t-2}$	−0.086	−0.097	−0.074	0.016
	(−1.286)	(−1.442)	(−0.975)	(0.134)
$\Delta Inflation_{t-3}$	0.010	0.009	−0.033	−0.076
	(0.169)	(0.153)	(−0.451)	(−0.656)
$\Delta OutputGap$		0.021	0.010	
		(0.563)	(0.256)	
$\Delta OutputGap_{t-1}$		0.066*	0.057	
		(1.9)	(1.617)	
$\Delta OutputGap_{t-2}$		−0.028	−0.037	
		(−0.741)	(−0.974)	
$\Delta OutputGap_{t-3}$		15.259***		
		(9.198)		
$\Delta Ex\ Rate$	16.262***	0.220***	9.214**	
	(12.928)	(3.528)	(2.296)	
$\Delta Ex\ Rate_{t-1}$			3.663	
			(0.888)	
$\Delta Ex\ Rate_{t-2}$			3.052	
			(0.794)	
$\Delta Metals$	3.786***	3.232***	1.696	
	(3.667)	(3.039)	(1.173)	
$\Delta Metals_{t-1}$	−0.186	0.130	1.185	
	(−0.185)	(0.131)	(0.765)	
$\Delta Metals_{t-2}$			0.461	
			(0.287)	
$\Delta Metals_{t-3}$			−0.466	
			(−0.400)	
$\Delta Metals\ x\ Dummy_2$		0.028		
		(0.718)		
$Metals\ x\ Dummy_3$			0.099	0.165
			(1.049)	(1.015)
$\Delta Metals\ x\ Dummy_{3t-1}$			−0.031	0.045
			(−0.318)	(0.212)
$\Delta Metals\ x\ Dummy_{3t-2}$				0.127
				(0.699)
Constant	−101.182***	−94.834***	−94.146***	1.081***
	(−13.097)	(−9.104)	(−7.064)	(5.253)

causes of inflation in Vanuatu. Global commodity prices and changes in exchange rates are found to be the most important long-term drivers of inflation. The strong inflationary impact of the nominal exchange rate highlights the crucial role that imported inflation plays in Vanuatu's heavily open and import-reliant economy. The consequences of commodity prices are complex; the impact of export commodities is mixed, with cocoa showing a significant long-term inflationary effect, while copra and kava do not have a statistically significant long-run impact. However, during times of global upheaval, such as the period following the COVID-19 outbreak, copra's influence becomes inflationary with a time lag. Imported goods, especially food, rice, oil, and beef show significant and persistent long-term inflationary effects.

Overall, the findings underline the significance of managing currency rates and keeping an eye on the prices of important international commodities, as well as Vanuatu's structural susceptibility to external price shocks. These findings require coordinated macroeconomic policies from the Reserve Bank of Vanuatu and fiscal authorities, taking into consideration the asymmetric and time-varying character of inflation determinants. Future inflation management strategies should focus on increasing domestic production, enhancing trade resilience, and bolstering inflation forecasting models by including structural break analysis and global commodities cycles.

CRediT authorship contribution statement

August Letlet: Writing – original draft, Validation, Project

Table 11
ARDL Regression Results for Model Incorporating Food (Import Commodity). The following table presents the results for Autoregressive Distributed Lag regression of Eq. 1 incorporating the three identified structural breaks. Inflation is measured as change in Consumer Price Index, Ex Rate is nominal exchange rate, while Output Gap is as reported by Reserve Bank of Vanuatu. Three interaction terms between Food prices and Dummy variables represent the three structural breaks identified by Bai and Perron (1998) test. Food x Dummy $_1$ represents the structural break occurring in Q1:2014, Food x Dummy $_2$ represents the structural break occurring in Q3:2018 and Food x Dummy $_3$ represents the structural break occurring in Q1:2021. ECT is the error correction term. t statistics is presented in parentheses. *,**,*** denote statistical significance at the 10 %, 5 % and 1 % levels.

	Model 1	**Model 2**	**Model 3**	**Model 4**
ECT	0.567***	0.132***	0.722***	0.674***
	(5.298)	(1.667)	(8.576)	(8.341)
Panel A: Long Run Relationship				
Output Gap	−0.148	−0.148	−0.148	−0.148
	(−1.195)	(−1.195)	(−1.195)	(−1.195)
Ex Rate	21.130***	21.130***	21.130***	21.130***
	(5.64)	(5.64)	(5.64)	(5.64)
Food	6.156***	6.156***	6.156***	6.156***
	(2.819)	(2.819)	(2.819)	(2.819)
Constant	−125.116***	−125.116***	−125.116***	−125.116***
	(−5.600)	(−5.600)	(−5.600)	(−5.600)
Panel B: ECM Results for the models				
$\Delta Inflation_{t-1}$	0.601***	0.163**	0.286***	0.346***
	(4.746)	(2.675)	(2.724)	(3.34)
$\Delta Inflation_{t-2}$	−0.020	−0.090	−0.055	0.000
	(−0.135)	(−1.387)	(−0.515)	(0.002)
$\Delta Inflation_{t-3}$	−0.001	0.025	−0.111	−0.104
	(−0.006)	(0.423)	(−1.01)	(−0.983)
$\Delta OutputGap$	0.040	0.019	−0.022	
	(0.485)	(0.585)	(−0.383)	
$\Delta OutputGap_{t-1}$	0.158	0.062	0.045	
	(1.908)	(1.796)	(0.752)	
$\Delta OutputGap_{t-2}$	0.035	−0.022	−0.029	
	(0.419)	(−0.653)	(−0.488)	
$\Delta OutputGap_{t-3}$	0.125	0.014	0.026	
	(1.539)	(0.388)	(0.439)	
$\Delta Ex\ Rate$		12.428		
		(3.431)		
$\Delta Ex\ Rate_{t-1}$		3.413		
		(0.959)		
$\Delta Ex\ Rate_{t-2}$		0.752		
		(0.24)		
$\Delta Food$	−0.338	6.857***	−1.368	
	(−0.098)	(3.287)	(−0.566)	
$\Delta Food_{t-1}$	2.615	−0.447	−2.984	
	(0.743)	(−0.201)	(−1.155)	
$\Delta Food\ x\ Dummy_1$		0.132		
		(1.667)		
$\Delta Food\ x\ Dummy_3$			0.569**	0.384
			(2.328)	(1.587)
$\Delta Foodx\ Dummy_{3t-1}$			0.121	0.096
			(0.417)	(0.313)
$\Delta Food\ x\ Dummy_{3t-2}$			0.148	0.199
			(0.514)	(0.746)
$\Delta Food\ x\ Dummy_{3t-3}$			0.203	
			(0.797)	
Constant	−9.882	−105.839***	21.557***	1.145***
	(−1.64)	(−8.835)	(3.548)	(6.065)

administration, Formal analysis, Conceptualization. **Syed Aun R. Rizvi:** Writing – original draft, Formal analysis, Data curation. **Paresh Kumar Narayan:** Writing – review & editing, Writing – original draft, Validation, Data curation, Conceptualization.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Data availability

Data will be made available on request.

References

Abraham, J., Narayan, P.K., 2023. How are fuel prices linked to Fiji's macroeconomy? Bull. Monet. Econ. Bank. 26 (3), 437–444.
Apergis, N., Chatziantoniou, I., Cooray, A., 2020. Monetary policy and commodity markets: unconventional versus conventional impact and the role of economic uncertainty. Int. Rev. Financ. Anal. 71, 101536.

Bai, J., Perron, P., 1998. Estimating and testing linear models with multiple structural changes. Econometrica 47–78.
Bai, X., Tumbarello, P., & Wu, Y. (2016) Drivers of Inflation in the Pacific Island Countries. In Resilience and Growth in the Small States of the Pacific. International Monetary Fund.
Ball, L., Mazumder, S., 2021. A phillips curve with anchored expectations and short-term unemployment. J. Money Credit Bank. 53 (7), 1935–1966.
Bernanke, B.S., Gertler, M., 2001. Should central banks respond to movements in asset prices? Am. Econ. Rev. 91 (2), 253–257.
Clarida, R., Gali, J., Gertler, M., 1999. The science of monetary policy: a new keynesian perspective. J. Econ. Lit. 37 (4), 1661–1707.
Clarida, R., Galı, J., Gertler, M., 2002. A simple framework for international monetary policy analysis. J. Monet. Econ. 49 (5), 879–904.
Correa, A.D.S., Minella, A., 2010. Nonlinear mechanisms of the exchange rate pass-through: a phillips curve model with threshold for Brazil. Rev. Bras. De. Econ. 64, 231–243.
Fasanya, I.O., Awodimila, C.P., 2020. Are commodity prices good predictors of inflation? The African perspective. Resour. Policy 69, 101802.
Gelos, G., Ustyugova, Y., 2017. Inflation responses to commodity price shocks–How and why do countries differ? J. Int. Money Financ. 72, 28–47.
Hayo, B., Neumeier, F., 2021. Explaining central bank trust in an inflation-targeting country: the case of the reserve bank of New Zealand. Oxf. Econ. Pap. 73 (1), 27–48.
Iyke, B.N., Ho, S.Y., 2020. Consumption and exchange rate uncertainty: evidence from selected asian countries. World Econ. 43, 2437–2462.
Jain, D.K., Singh, R., Patel, A., Chand, R., 2023. Foreign exchange market asymmetries in pacific small island developing states: evidence from Fiji. Int. J. Financ. Econ. 28 (4), 4353–4364.
Jayaraman, T.K., Choong, C.K., 2009. Growth and oil price: a study of causal relationships in small pacific island countries. Energy Policy 37 (6), 2182–2189.
Lee, J., Strazicich, M.C., 2003. Minimum lagrange multiplier unit root test with two structural breaks. Rev. Econ. Stat. 85 (4), 1082–1089.
Long, H., Prasad, B., Krishna, V., Tang, K., Chang, C.P., 2024. Understanding the key determinants of Fiji's renewable energy. Econ. Anal. Policy 82, 1144–1157.
Nakatani, R., 2018. Adjustment to negative price shocks by a commodity exporting economy: does exchange rate flexibility resolve a balance of payments crisis? J. Asian Econ. 57, 13–35.
Narayan, P.K., 2020. Oil price news and COVID-19—Is there any connection? Energy Res. Lett. 1 (1), 13176.
Narayan, P.K., Popp, S., 2010. A new unit root test with two structural breaks in level and slope at unknown time. J. Appl. Stat. 37 (9), 1425–1438.
Narayan, P.K., Ismail, A.S., Saudulla, M.I., Rizvi, S.A.R., 2025. Debt sustainability and the effectiveness of fiscal policy tools-The case of the Maldives. Econ. Anal. Policy 86 (C), 1377–1390.
Narayan, P.K., Narayan, S., Prasad, B., Manoa, S., 2025. How is remittance related to prices and output? New evidence from Fiji's data. J. Asian Econ. 98, 101906.
Narayan, S., Cirikisuva, S., Naivutu, R., 2023. A hybrid NKPC inflation model for the small island state of Fiji. Econ. Anal. Policy 78, 873–886.
Phan, D.H.B., Narayan, P.K., 2020. Country responses and the reaction of the stock market to COVID-19 – a preliminary exposition. Emerg. Mark. Financ. Trade 56 (10), 2138–2150.
Prabheesh, K.P., & Rasheed, S. (2025). The impact of climate change on financial stability: evidence from Maldives. International Journal of Islamic and Middle Eastern Finance and Management.
Prabheesh, K.P., Prakash, B., Vuniivi, V., 2023. Assessment of Fiji's exchange rate. Econ. Anal. Policy 78, 1282–1305.
Rath, B.N., Narayan, P.K., Saudulla, M.I., & Shuaib, D. (2025). Determinants of gross international reserves in the case of the Maldives. International Journal of Islamic and Middle Eastern Finance and Management.
Reserve Bank of Vanuatu. (2024). Reserve Bank of Vanuatu Quarterly Economic Review, March 2024.
Rizvi, S.K.A., Sahminan, S., 2020. Commodity price shocks, monetary policy and inflation dynamics: evidence from commodity-exporting emerging markets. Emerg. Mark. Rev. 45, 100713.
Roeger, W., Herz, B., 2018. Traditional versus new keynesian phillips curves: evidence from output effects. Int. J. Cent. Bank. 8 (1), 87–109.
Salisu, A.A., Swaray, R., Sa'id, H., 2021. Improving forecasting accuracy of the phillips curve in OECD countries: the role of commodity prices. Int. J. Financ. Econ. 26 (2), 2946–2975.
Taylor, J.B., 2019. Inflation targeting in high inflation emerging economies: lessons about rules and instruments. J. Appl. Econ. 22, 103–116.