

NATIONAL DIRECTORATE FOR ECONOMIC POLICY

QUARTERLY INFLATION REVIEW

SEPTEMBER -DECEMBER 2022

N.43

KEY STATISTICS

- In December 2022 (Year on Year, **YoY**) inflation in Timor-Leste rose to 6.9%. This is a large increase considering inflation at the same point last year was only 5.3%
- During the fourth quarter of 2022 (Quarter on Quarter, **QoQ**) inflation in the whole country was 0.7%. It was 1.6% the same time last year.
- Inflation in Dili (QoQ) was higher than in the municipalities outside of Dili (0.7% in Dili, while it was 0.8% outside of Dili).
- In December 2022, core inflation which excludes volatile categories such as food, was 6.6% when compared to the last year (YoY).
- The CPI category with biggest increase over the fourth quarter of the year was alcohol and tobacco at 4.5% (QoQ).
- Transport and Housing fell -2.0% and -0.1% respectively (QoQ).
- The World Bank (WB) food price index increased by 9% between December 2021 and December 2022 (YoY) but a fall of -1% over the last 3 months. This is due to global increases in energy prices and supply chain disruptions driven by the Russian- Ukraine war.
- In Timor-Leste food prices increased even higher than the global food price index, increased in December by 11% (YoY) and 0.5% (QoQ).
- Rice is a main staple in Timor and the world rice price rose by 17% in December 2022 (YoY) by 6% over the last 3 months (QoQ). There was a brief spike in prices in April 2020 but prices are now around 20% lower.
- Coffee is Timor's most important non-oil exports. The world price of coffee (Arabica) has decreased -22% over the last year (YoY) and over the last 3 months (standing at \$4.63/kg). This is 70% of the peak price seen in April 2011 of \$6.62/kg, but a steady recovery from the 10 year low seen in May 2019 (\$2.73/kg).
- High inflation in the US and in Europe have led to increases in the central bank interest rates.
- The price of oil increased 11% from the same time last year, this due to disruption in global oil supply caused by the war Ukraine –Russian but over the last quarter prices have begun to temper and fell by -8.3% over Q4. World oil price is usually influenced by supply. A reduction or disruption in supply of oil

normally increases the price, whereas an increase in the supply normally decreases the price. Oil is an important component of everyday products and involved in the supply chain of nearly all goods, so the increase in oil prices over the last year is a key reason behind higher inflation in Timor-Leste. The government has responded by introducing fuel subsidies to transport operators.

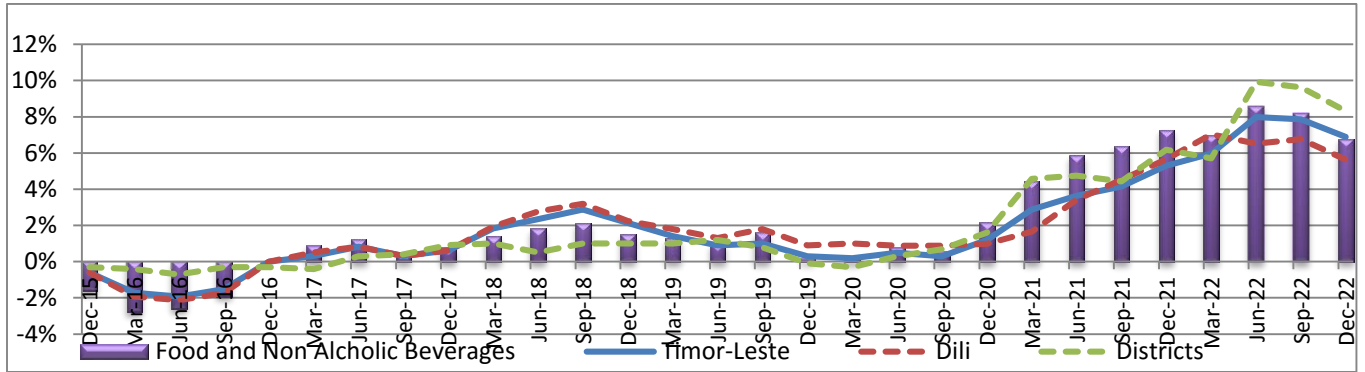
- The Nominal Effective Exchange Rate (NEER) increased 5.3% (YoY) while the Real Effective Exchange Rate (REER) remained the same (YoY). Strong US dollar can reduce the impact of increased global oil prices on the imports.
- Total government spending in Q4 2022 increased 8.0% compared to the same time last year. This is due to the 2022 Budget being larger than the previous year's.
- Money Supply in December 2022 decreased by -2.9%. However is a small open economy such as Timor Leste, without local currency: money supply does not have any systematic and plausible effect over inflation in Timor Leste.
- As a small open economy, the current level of inflation witnessed in Timor-Leste is largely a result of international markets.

Inflation Outlook	2018	2019	2020	2021	2022	2023*	2024*
Timor-Leste	2.3%	0.9%	0.5%	3.8%	7.0%	6.3%	2.5%

TRENDS IN INFLATION OVER TIME

In December 2022 YoY inflation in Timor-Leste was 6.9%; this means that a basket of goods and services that cost \$100.00 in December 2021 cost \$106.9 in December 2022— on average, prices are up compared to one year ago. Over the last 5 years, Timor-Leste experienced deflation (average price level falling) during 2016 but then experience low stable inflation between 2017 and 2020. Since December 2020 there has seen a sustained increase in inflation due to a combination of Covid-19 and the war in Ukraine increasing world oil prices and disrupting supply chains. Due to the significant weight of food and non-alcoholic beverages in the CPI basket and the high proportion of food imported into Timor-Leste every year, international food prices remain one of the key drivers of the overall CPI rate. Inflation outside of Dili was 8.3% (YoY) which is slightly more than inflation in Dili which rose by 5.6% over the same period.

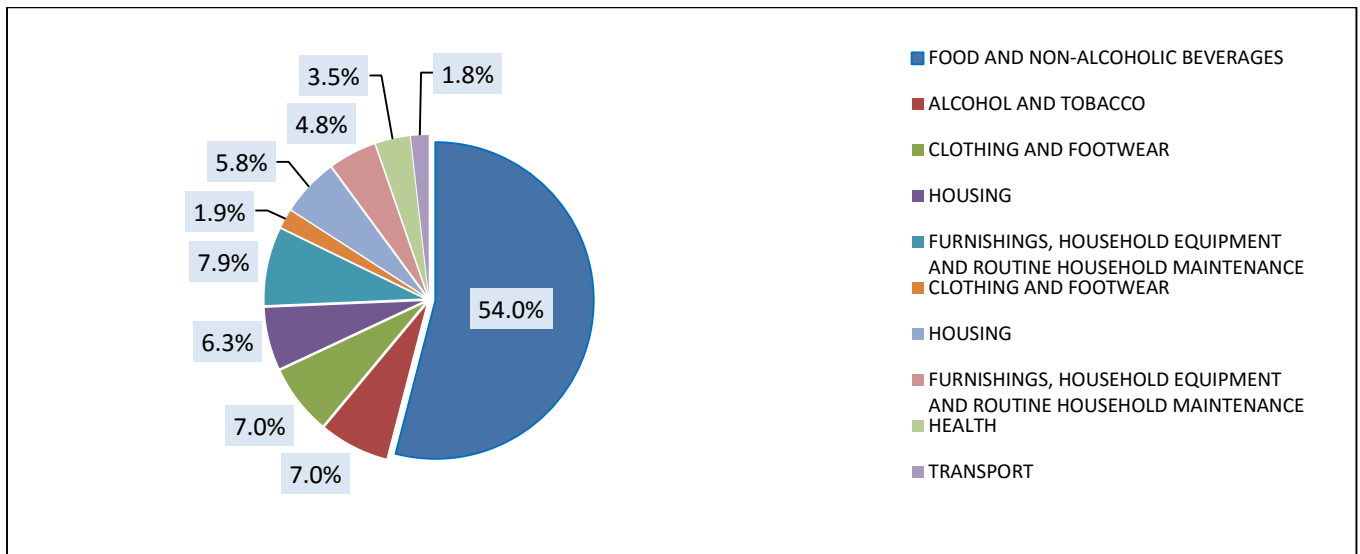
Figure 1: Year-on-Year Inflation in Timor-Leste over the last 5 years



TIMOR LESTE’S CPI BASKET

The Consumer Price Index (CPI)¹ is used to measure consumer price inflation. To understand CPI think of a large basket containing the goods and services bought by households, the CPI estimates the change to the total cost of the basket on a monthly basis. Food and non-alcoholic beverages represent 54% of Timor-Leste’s CPI basket² as more than half of Timorese household expenditure is spent on this group. Thus price movements in this group will have a significant impact on the overall rate of inflation and the purchasing power of Timorese citizens.

Figure 2: Timor Leste’s CPI Weights



Over the 12 months from December 2021 to December 2022 there have been significant *price changes* in the following spending classes³ :

¹ The CPI is a weighted index meaning that the influence on the CPI index of a given item is dependent on the item’s share in total household consumption.

² Timor-Leste’s CPI basket is made up of the ten expenditure groupings seen in Figure Two.

³ Expenditure classes are the sub-categories within an expenditure group in a CPI index

- Alcohol and Tabacco (+28.3%)- *biggest increase (this is largely due to government policy, an increase in taxes to deter consumption)*
- Transport (+11.0%)- *second biggest increase*
- Food and non-alcoholic beverages (+6.8%)- *third biggest increase*
- Communication was the only category to decrease -0.1%

Despite these price changes for the groups mentioned above, contribution to overall inflation can be very different. **Contribution to inflation rate** measures the contribution to the overall rate of inflation of a grouping of goods and services, eg, the combination of its *price change and weight* within the series⁴. Therefore a small change in the growth rate of Food and Non Alcoholic Beverages can still have a big contribution to overall inflation due to it being the most important category as we can see below.

CAUSES OF INFLATION⁵

International Factors

Commodity Prices

As mentioned, due to the significant weight of food and non-alcoholic beverages in the CPI basket and the high proportion of food imported into Timor-Leste every year, international food prices remain one of the key drivers of the overall CPI rate. International food prices have increased significantly over the last year with the World Bank (WB) food price index increasing 9% between December 2021 and December 2022. Domestic food prices have also been seeing an increase of 6.8% in the same time frame. It is expected that the current world food prices are projected to start stabilizing in 2023 into the short and medium term.

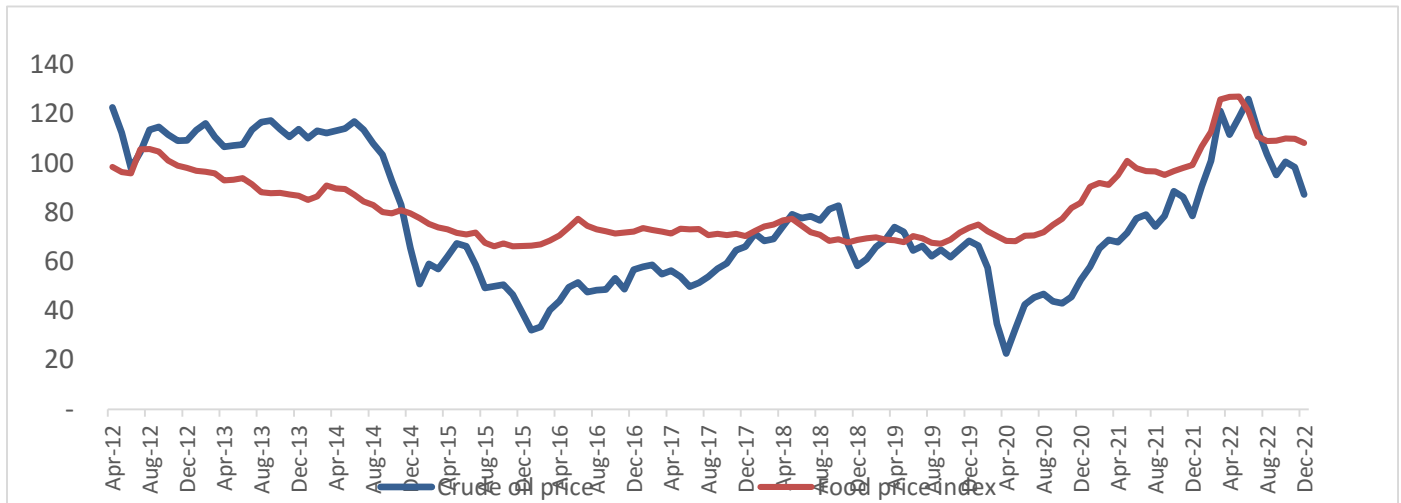
Rice specifically is a staple part of the Timorese diet. The international benchmark for rice prices increased 17% in December 2022 over the last year, this will have a positive effect on poorer households where basic foods make up the majority of their spending and this will leave them with more disposable income. Coffee prices (both Arabica and Robusta) Decreased -22% in December 2022 year on year. This will negatively affect those families who rely on coffee production in Timor-Leste.

Oil is an important component of everyday products and involved in the supply chain of nearly all goods, so the increase in oil prices over the last year is a key reason behind higher inflation in Timor-Leste. The price of oil increased 11% from the same time last year, this is due to disruption in global oil supply caused by the war Ukraine –Russian however, The government has responded by introducing fuel subsidies to transport operators. Over the last quarter prices have begun to temper and fell by -25% over Q4.

⁴ The contributions of each grouping will sum to give the overall rate of inflation

⁵ Within this section inflation refers to YoY inflation

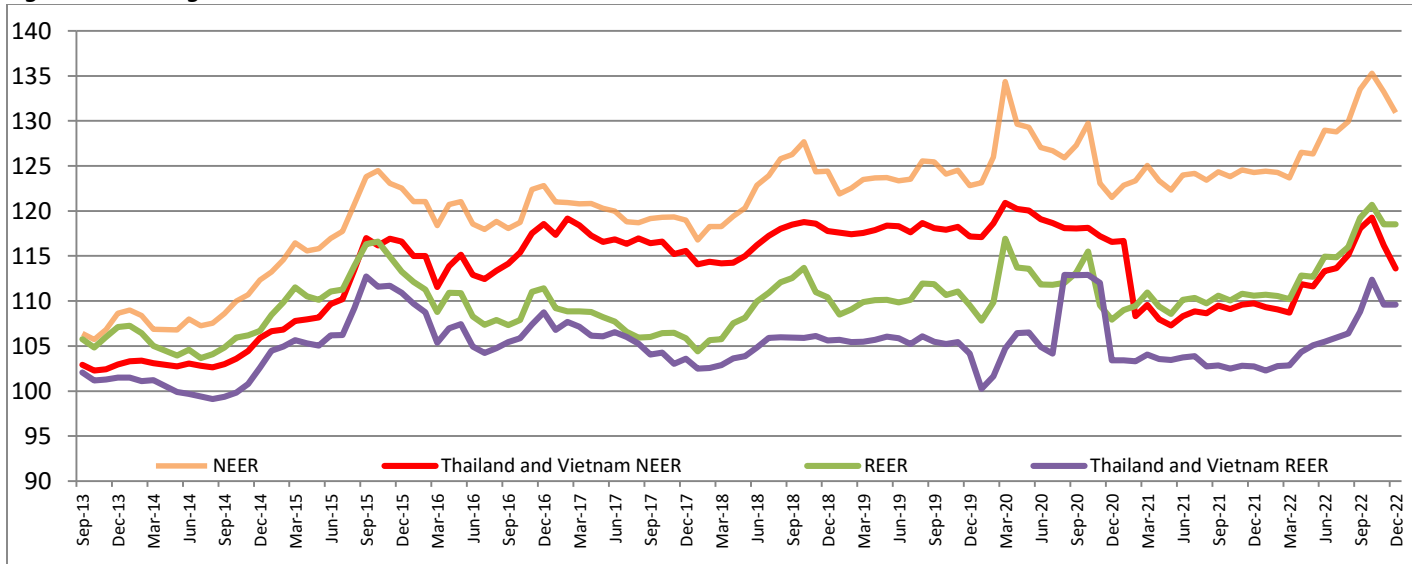
Figure 3: International Commodity Price Indice



Exchange Rate

An appreciation (depreciation) of the US dollar against the currencies of Timor-Leste’s major trading partners will put downward (upward) pressure on the price of imports in Timor-Leste. However, the effects of exchange rate and international commodity price movements on prices in Timor-Leste are likely to be felt some time after they occur, as it takes time for the change in the price of imported goods to feed through to a change in the price of consumer goods. The **effective exchange rate** is the exchange rate of a country’s currency, measured as the weighted sum of the exchange rates with its commercial partners. The **nominal effective exchange rate (NEER)** is an unadjusted weighted average rate at which one country's currency exchanges for a basket of multiple foreign currencies. The **real effective exchange rate (REER)** is adjusted for the effects of inflation.

Figure 4: Exchange Rates



Between December 2021 and December 2022 Timor-Leste’s NEER appreciated by 5.3% while the REER appreciated 0.0%. Over this period the NEER also appreciated 3.5% against a weighted Thai Baht and Vietnamese Dong basket and, the REER appreciated by 9.6% against the same basket. This real appreciation places downwards pressure on rice prices and inflation in Timor-Leste (as Thailand and Vietnam export large quantities of rice to Timor-Leste).

Domestic Factors

Government Spending

Year on year total government expenditure increased in Q4 2022 by 8.0% as the 2022 State Budget was bigger than the previous year’s. However, the current rise in big inflation in Timor-Leste is likely the result of a combination of international factors for example, as a result the war in Ukraine, oil prices have increased and these have spread to all sectors.

Money Supply

The average change in money supply across the year to December 2022⁶, was a -2.9% decrease. However is a small open economy such as Timor Leste, without local currency: money supply does not have any systematic and plausible effect over inflation in Timor Leste.

Tradable vs Non-tradable (International vs Domestic pressures)

Tradable goods and services refer to those whose prices are largely determined on the world market, and all other goods and services are non-tradable. This enables splitting out the inflationary (or deflationary) pressures coming from international or domestic sources. In December 2022 non-tradeable (domestic) prices have been lower than the tradeable (international) prices, with non-tradeable prices growing at 0.0% vs tradeable prices growing 9.6% (YoY) in December 2022. This backs up the idea that the current level of inflation in Timor-Leste is largely determined by international markets.

CONSEQUENCES OF INFLATION

Inflation can cause households’ purchasing power to fall. **Purchasing power** measures the quantity of goods and services which can be purchased with a unit of currency. Therefore inflation decreases the amount of goods and services a consumer is able to purchase with their monthly salary which can reduce living standards and may increase poverty.

INFLATION OUTLOOK

Inflation Outlook	2018	2019	2020	2021	2022	2023*	2024*
Timor-Leste	2.3%	0.9%	0.5%	3.8%	7.0%	6.3%	2.5%

⁶ Taking the average change in money supply for the last 12 months compared to the previous 12 months.

World food prices are due to fall in the short term which will ease the pressure on domestic inflation.

ANNEX 1: CONCEPTS AND TERMINOLOGY

Year-on-year (YoY) inflation is the most commonly used measure and is calculated by comparing the price index from a given period with the same month in the previous year. For example, the year-on-year inflation in December 2021 measures the percentage change in prices between December 2021 and December 2022.

Quarter-on-quarter inflation (QoQ) is calculated by comparing the price index from the last month of a given quarter (March, June, September or December) with the last month of the previous quarter. Eg QoQ inflation in December 2022 measures the percentage change in prices between September 2022 and December 2022.

Month-on-month inflation (MoM) is calculated by comparing the price index from the latest month to the previous month. Eg, MoM inflation in December 2022 measures the percentage change in prices between November 2022 and December 2022. Timor-Leste's Consumer Price Index is published monthly by General Directorate of Statistics (MPF)⁷.

ANNEX 2: NOTES

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⁷ See for latest CPI data from the General Directorate of Statistics (<http://www.statistics.gov.tl/category/survey-indicators/consumer-price-index/?lang=en>)