

NATIONAL DIRECTORATE FOR ECONOMIC POLICY

QUARTERLY INFLATION REVIEW

OCTOBER – DECEMBER 2015

n.16

EXECUTIVE SUMMARY

In December 2015, year-on-year (YoY) inflation in Timor-Leste was -0.6%, this rate is below the 4%-6% target range set out in the Government's Strategic Development Plan and is the second month in a row that Timor-Leste has experienced deflation (YoY); YoY inflation was -0.1% in November 2015. Quarter-on-quarter (QoQ) inflation in December 2015 was -0.7%; this is lower than the rate of 0.4% seen in December 2014 and the rate of -0.4% witnessed in September 2015.

This episode of deflation in Timor-Leste can mainly be attributed to international factors such as the appreciation of the US dollar against the majority of Timor-Leste's trading partners' currencies and the decrease in the international price of oil and food prices. Education remained as the most significant contributor to the annual increase in inflation due to an increase in university fees in January 2015. YoY core inflation, which excludes the prices of particularly volatile items, namely food and non-alcoholic beverages, was 1.6% in December 2015, up from -0.2% in December 2014.

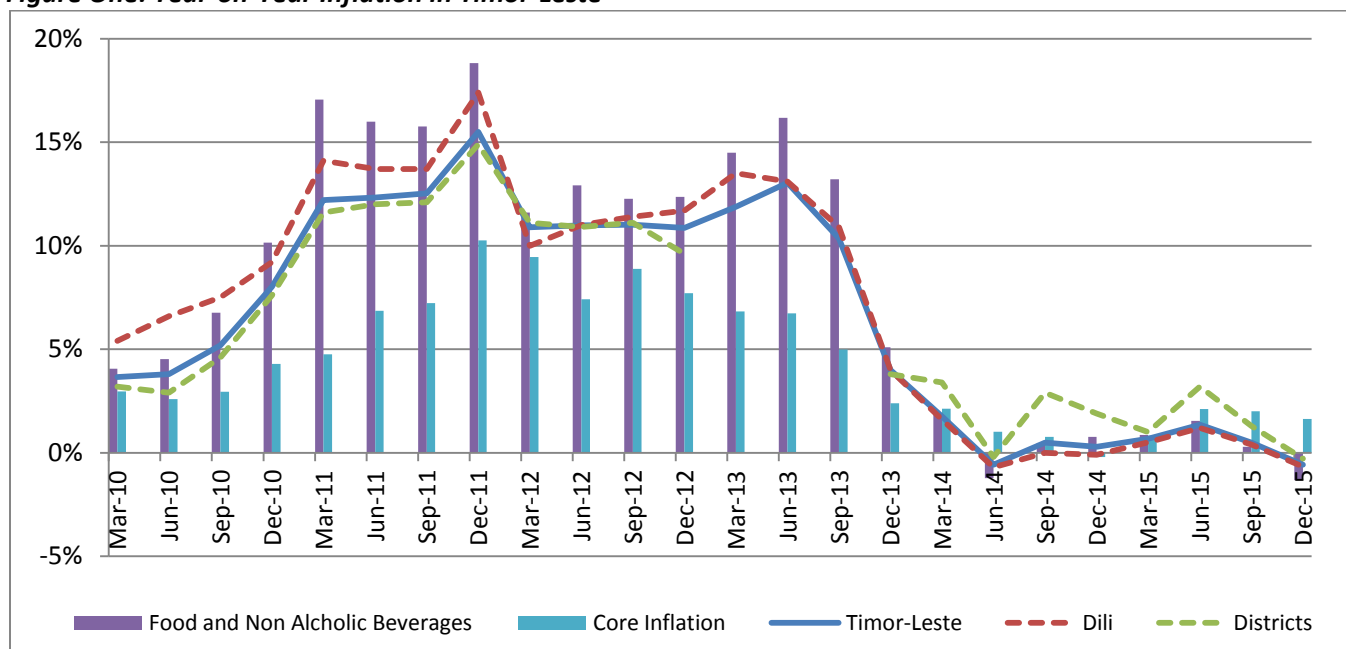
TRENDS IN INFLATION

In December 2015 YoY inflation in Timor-Leste was -0.6%; this means that a basket of goods and services that cost \$100.00 in December 2014 will now cost \$99.40 in December 2015. YoY inflation is lower than the rate seen in December last year (0.3%) and lower than the rate of 0.5% seen in September 2015. QoQ inflation in December 2015 was -0.7%; lower than the rate of 0.4% and -0.4% seen in December 2014 and September 2015 respectively.

After a lengthy period of double-digit inflation between March 2011 and September 2013, inflation decreased dramatically and fell below the Government's 4%-6% target range in January 2014. In recent months YoY inflation appears to have stabilized at around 0.0% - 1.4% (see Figure One), but has now dipped negative. Given low international food prices, this trend is likely to continue into 2016. As seen in Figure Two, Food and

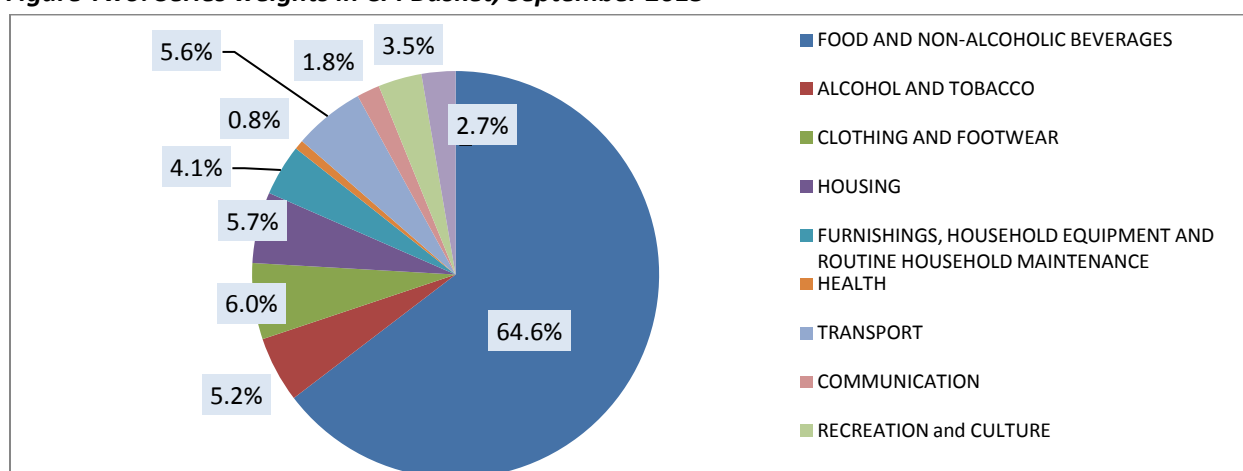
non-alcoholic beverages account for approximately 65% of Timor-Leste's CPI basket¹, as nearly two thirds of Timorese household expenditure is spent on this group. Thus price movements in this group will have a significant impact on the overall rate of inflation and the purchasing power of the Timorese citizens. YoY food and non-alcoholic beverage inflation in December 2015 was -1.3%, down from 0.3% in September 2015.

Figure One: Year-on-Year Inflation in Timor-Leste



YoY core inflation², which excludes the prices of particularly volatile items, namely food and non-alcoholic beverages, was 1.6% in December 2015, up from -0.2% in December 2014. Core / non-food inflation may provide a more accurate measure of long-term inflationary trends as it is less susceptible to being impacted by temporary food price shocks.

Figure Two: Series weights in CPI Basket, September 2015



¹ Timor-Leste's CPI basket is made up of the ten expenditure groupings seen in Figure Two.

² Calculated by the National Directorate of Economic Policy

Over the past 12 months there have been significant price changes in the following expenditure classes³:

- Milk, cheese and eggs (6.1%)
- Rice (-3.2%)
- Education (18.6%)
- Transport (-4.0%)

The largest **upwards** contributions (see Figure Three) to the overall year-on-year inflation rate in December 2015 came from:

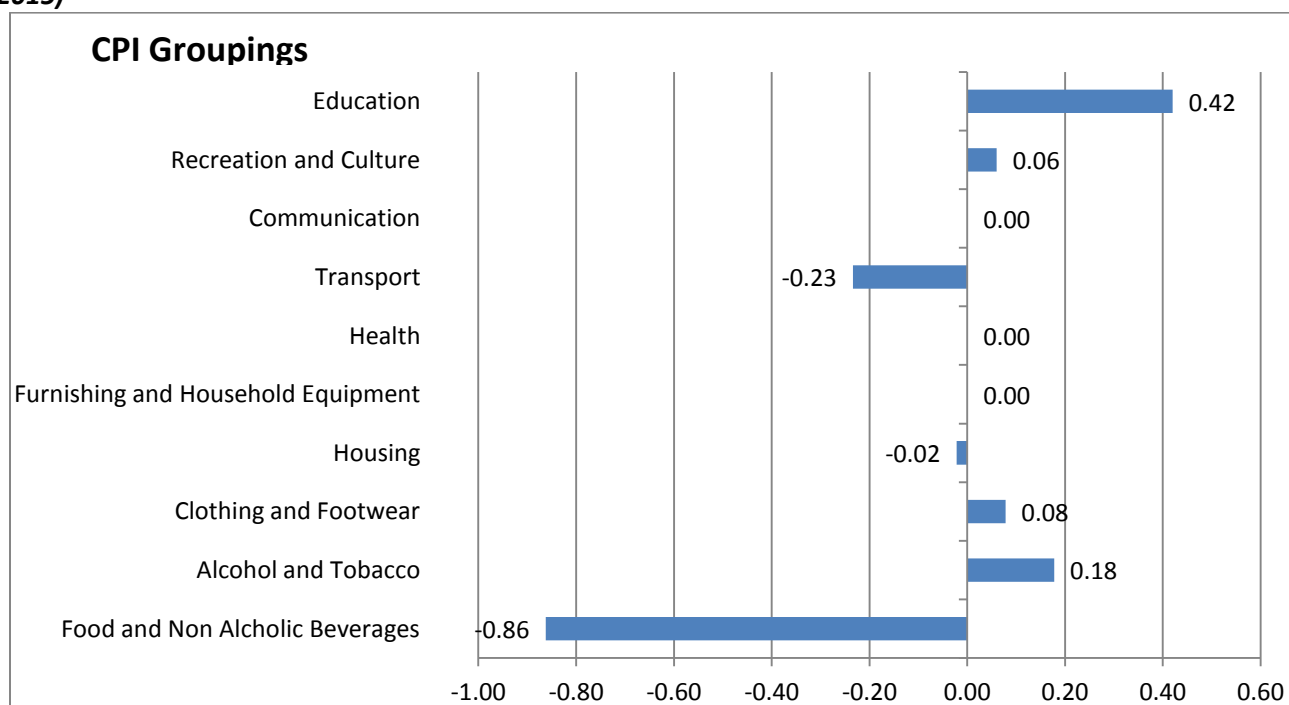
- Education (0.42pp (percentage points))
- Alcohol and Tobacco (0.18 pp)

The large increase in the price of education was due an increase in university fees in January 2015; this impact will drop out of the data in the next quarter. The largest **deflationary** contributions (see Figure Three) to the overall year-on-year inflation rate in December 2015 came from:

- Food and Non-Alcoholic Beverages (-0.86pp)
- Transport (-0.23pp)

The large decrease in the price of food is largely due to the drop in the annual price of rice and vegetables. Between December 2014 and December 2015, the price of rice fell by 3.2 % while the price of vegetables fell by 2.4%. Rice holds a 17% weight in the CPI basket and vegetables hold a 15% weight in the CPI basket.

Figure Three: Contribution to Overall YoY Inflation Rates taking into account the CPI weights (December 2015)⁴



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

⁴ See concepts and terminology section for further explanation

CAUSES OF INFLATION⁵

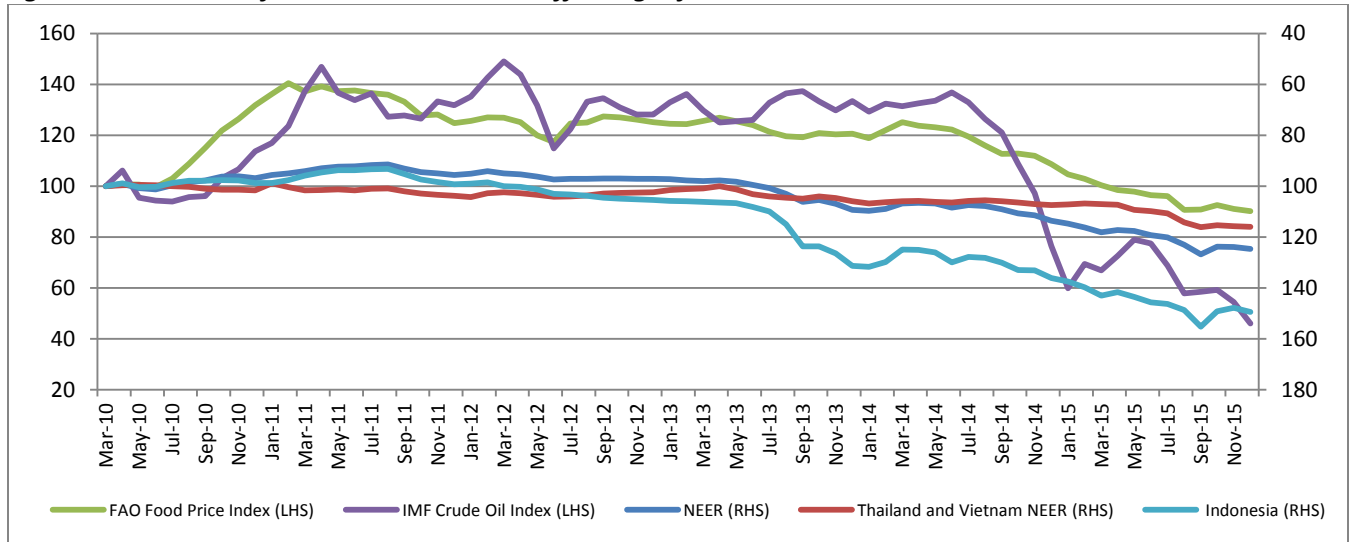
International Factors

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 occur⁶, 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. For this reason exchange rate movement over the September 2014 to September 2015 period is analysed.

Between September 2014 and September 2015 Timor-Leste’s nominal effective exchange rate (NEER) appreciated by 16.3%, this appreciation was largely driven by the 19.3% appreciation of the US dollar against the Indonesian rupiah, the currency of Timor-Leste’s largest trading partner⁷. Over this period the US dollar also appreciated by 9.7% against a weighted Thai baht and Vietnamese dong basket. This appreciation placed downward pressure on rice prices (as these countries export large quantities of rice to Timor-Leste) and therefore inflation, as rice has a large weight in the CPI index.

International oil prices also fell over the September 2014 to September 2015 period; the IMF’s crude petroleum price index fell⁸ by 51.8% over the period placing significant downward pressure on prices, especially transport prices. International food prices also fell over the period with the Food and Agricultural Organization’s (FAO) food price index falling by 19.4% placing further downward pressure on imported food prices.

Figure Four: Indices of International Factors affecting Inflation in Timor-Leste



⁵ Within this section inflation refers to YoY inflation

⁶ This analysis lags the impact by one quarter

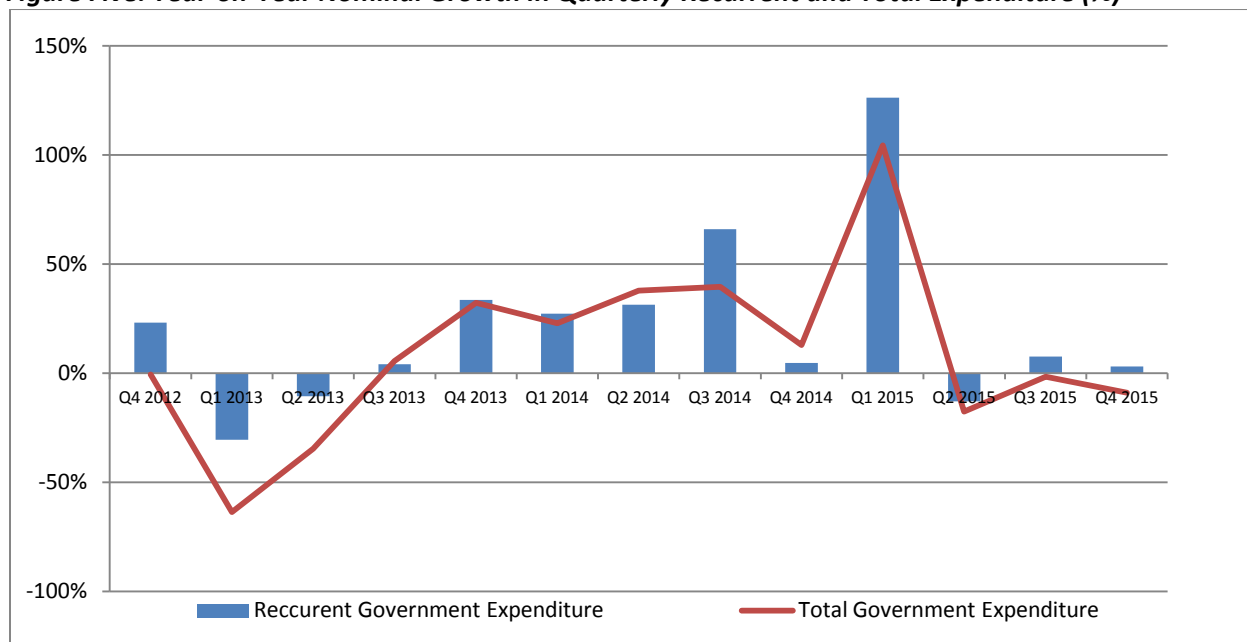
⁷ External Trade Statistics Annual Report 2013, General Directorate of Statistics

⁸ The crude oil (petroleum) price index is a simple average of three spot prices; Dated Brent, West Texas Intermediate, and the Dubai Fateh.

Domestic Factors

It is possible that increases in Government expenditure, particularly recurrent expenditures such as transfers and salaries & wages, have increased inflationary pressure in Timor-Leste. Recurrent Government expenditure has been substantially higher since Q3 2013 (see Figure Five). As a result, government expenditure is likely to keep putting upward pressure on inflation.

Figure Five: Year-on-Year Nominal Growth in Quarterly Recurrent and Total Expenditure (%)⁹



This is at odds with the observed low inflation; however this is likely the result of a combination of other factors:

- The favourable international conditions, as discussed above, may outweigh the domestic inflationary pressure coming from Government expenditure.
- The inflationary impact of Government expenditure may not be felt until several periods after it occurs as it takes time for prices to adjust to the increase in demand.
- Increases in government expenditure often result in an increase in imports which can mediate the inflationary impact.
- Downward inflationary pressure may be coming from other domestic factors on both the supply and demand side such as improvements in the supply side of the economy¹⁰ and decreased non-Government aggregate demand.

The growth in the money supply of an economy is also likely to have some influence on inflation. In Timor-Leste money supply growth weakened in the fourth quarter at only 7.1% compared to 20.4% in the third quarter. This may have impacted upon inflation.

⁹ This measures the year-on-year growth in quarterly nominal expenditure, i.e. the growth rate in Q1 2015 measure the change between nominal expenditure in Q1 2014 and Q1 2015.

¹⁰ The amount of money that can be spent in an economy before inflation begins to increase

CONSEQUENCES OF INFLATION

Inflation will cause households' purchasing power to fall, if increases in household income are lower than the increases in inflation. This situation is more likely to occur in a high inflation environment. Inflation which reduces consumers' purchasing power can reduce living standards and may increase poverty. Thus the recent negative inflation seen in Timor-Leste is consistent with the Government's poverty reduction strategy. Given the high weight of food in Timor-Leste's basket of goods, it is unlikely that deflation will lead to delayed-purchasing and is not, therefore, currently a concern for the Government.

INFLATION OUTLOOK

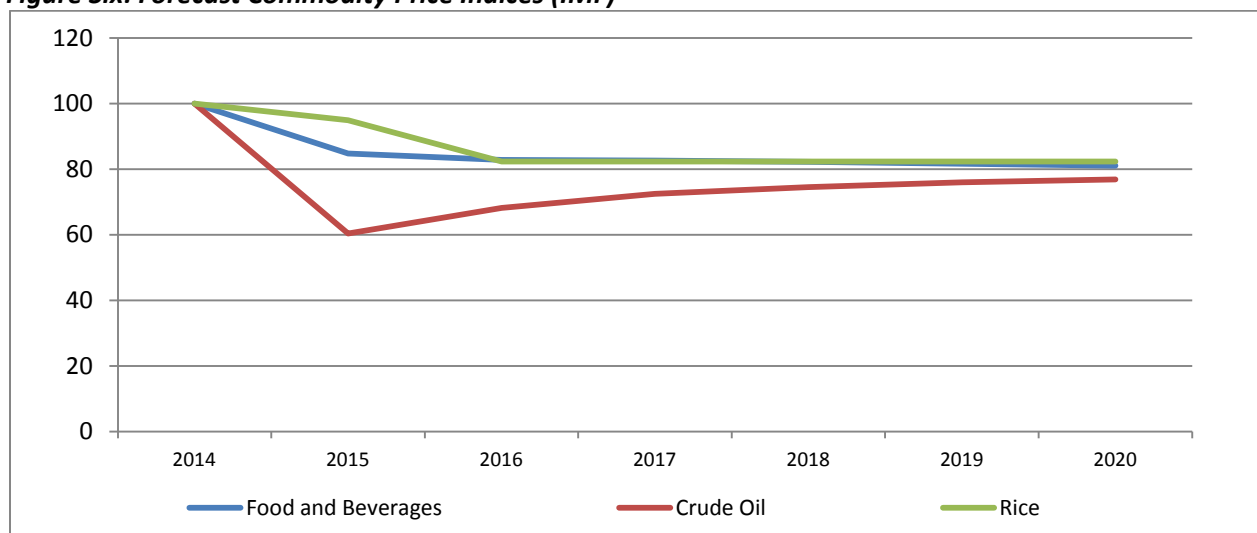
YoY inflation is likely to remain below the SDP target range (4%-6%) in the near term. The following factors are likely to have an impact on future rates of inflation in Timor-Leste:

International commodity prices: between September 2015 and December 2015, international food prices fell by 0.8% and the price of crude oil fell by 21.2%. As changes in commodity prices have a lagged effect on inflation in Timor-Leste it is likely that this will impact upon inflation in Q1 2016. In the medium to long-term the low forecasted¹¹ commodity prices will help to keep inflation low in Timor-Leste.

International exchange rates: between September 2015 and December 2015 Timor-Leste's NEER depreciated by -1.7%. This could put a slight upward pressure on inflation by increasing the cost of imported goods and services.

Government expenditure: the increase in Government expenditure over the last four quarters will result in increased inflationary pressure, the extent to which this will result in higher inflation depends on the impact of other factors and the economies absorptive capacity.

Figure Six: Forecast Commodity Price Indices (IMF)



¹¹ Primary Commodity Prices, IMF (<http://www.imf.org/external/np/res/commod/index.aspx>)

ANNEX 1: CONCEPTS AND TERMINOLOGY

Consumer price inflation the rate at which the prices of goods and services bought by households increase or decrease.

The Consumer Price Index (CPI)¹² 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.

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 March 2015 measures the percentage change in prices between March 2014 and March 2015.

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 quarter¹³. Thus quarter-on-quarter inflation in March 2015 measures the percentage change in prices between December 2014 and March 2015.

Month-on-month inflation (MoM) is calculated by comparing the price index from the latest month to the previous month. Thus the month-on-month inflation in June 2015 measures the percentage change in prices between May 2015 and June 2015.

Contribution to inflation rate measures the contribution to the overall rate of inflation of a grouping of goods and services, a groups contribution to the overall rate of inflation is determined by its growth rate and weight within the series¹⁴.

Nominal effective exchange rate (NEER) is the weighted average value of a country's currency relative to the currencies of its major trading partners.

Core inflation is a measure of inflation which excludes certain items that face volatile price movements. Core inflation eliminates products¹⁵ that can have temporary price shocks because these shocks can cause a divergence from the overall trend in inflation giving a false measure of inflation.

Purchasing Power measures the quantity of goods and services which can be purchased with a unit of currency. All else being equal inflation decreases the amount of goods and services a consumer is able to purchase with their monthly salary.

Timor-Leste's Consumer Price Index is published monthly by General Directorate of Statistics (MoF)¹⁶. This index is divided into 10 specific groups representing specific sets of commodities such as food and non-alcoholic beverages, housing and transport. In addition, separate consumer price indices are compiled for both Dili and the districts.

¹² 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.

¹³ In this publication

¹⁴ The contributions of each grouping will sum to give the overall rate of inflation

¹⁵ The core inflation index in Timor-Leste excludes all food and non-alcoholic beverage items

¹⁶ See for latest CPI data from the General Directorate of Statistics (<http://www.statistics.gov.tl/category/survey-indicators/consumer-price-index/?lang=en>)