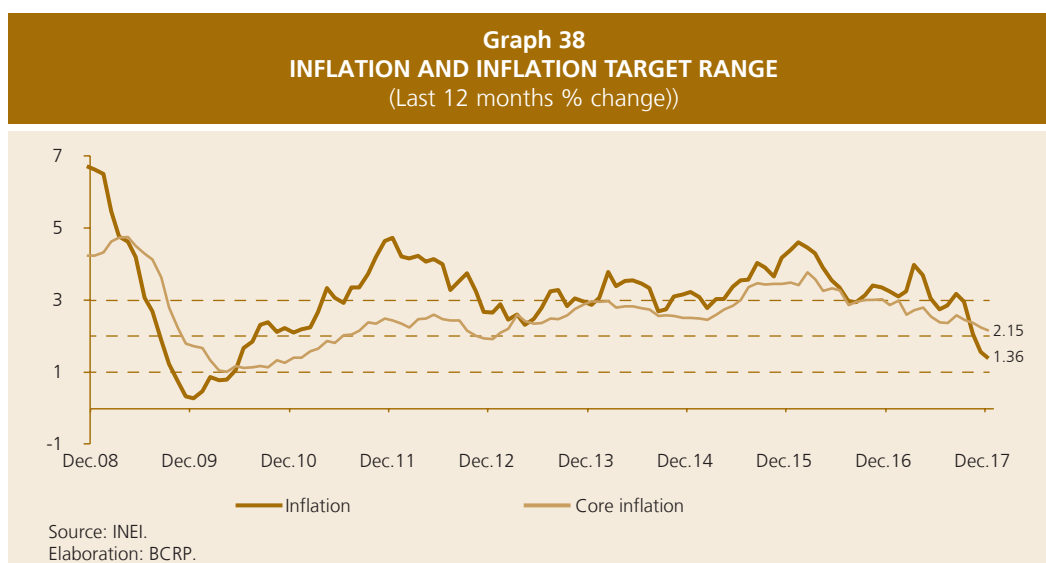


IV INFLATION

For the second year in a row, YoY inflation –measured as the variation in the consumer price index (CPI) of Metropolitan Lima– continued to decrease and fell from 3.23 percent in 2016 to a rate of 1.36 percent in 2017, in the lower band of the target range. At the national level, the change in the CPI was 1.50 percent, also lower than the rate registered in the previous year (3.3 percent). These rates have been the lowest inflation rates observed since 2009. This is mainly explained by the lower price variation of food products (down from 3.5 percent in 2016 to 0.3 percent in 2017) associated with the reversal of the supply shocks that affected the prices of agricultural products at the end of 2016 and the first months of 2017, as well as by the favorable climate conditions observed throughout 2017 after El Niño Costero.

These lower inflation rates have also been accompanied by a slower pace of growth of trend inflation indicators, such as core inflation (which excludes food and energy prices), which was close to the midpoint of the inflation target range after falling from 2.87 percent in 2016 to 2.15 percent in 2017.

The evolution of this indicator of trend inflation was associated both with the appreciation of the PEN against the dollar (4.4 percent between December 2016 and 2017) as well as with a negative output gap, which indicates the absence of inflationary pressures on the side of demand.



Graph 39
CONTRIBUTIONS TO THE ANNUAL CPI VARIATION
(% points)

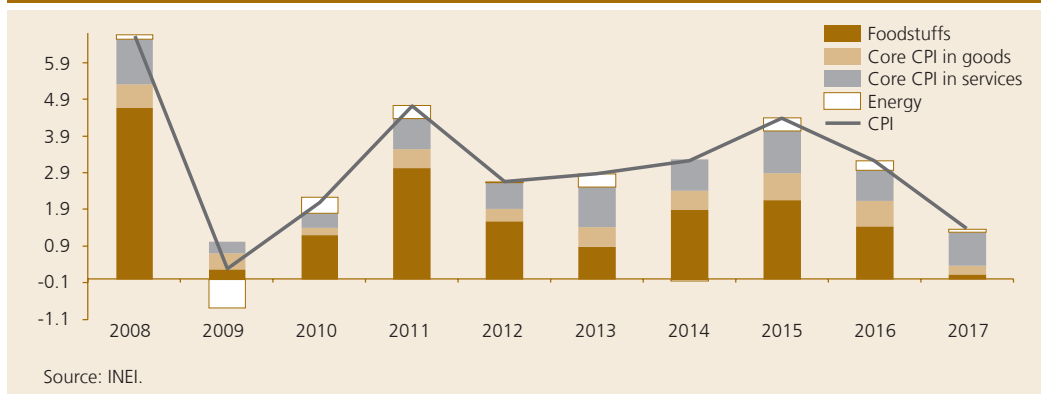


Table 50
INFLATION
(% change)

	Weight	2015	2016	2017	Aver. % chg. 2002-2017,1/
CPI	100.0	4.40	3.23	1.36	2.83
1. Core CPI	56.4	3.49	2.87	2.15	2.17
a. Goods	21.7	3.57	3.41	1.24	1.80
<i>Textiles and footwear</i>	5.5	3.08	1.71	1.53	2.24
<i>Domestic appliances</i>	1.3	3.45	0.54	0.89	-0.44
<i>Other industrial products</i>	14.9	3.77	4.29	1.16	1.74
b. Services	34.8	3.44	2.54	2.70	2.45
<i>Of which:</i>					
<i>Education</i>	9.1	5.16	4.96	4.58	4.04
<i>Rent</i>	2.4	3.47	1.79	0.38	0.55
<i>Health</i>	1.1	5.53	5.00	1.83	2.97
<i>Transportation</i>	8.9	2.57	1.67	1.38	2.67
<i>Telephone and water</i>	1.6	8.08	0.00	13.04	5.02
2. Food and energy	43.6	5.47	3.66	0.46	3.50
a. Food and beverages	37.8	5.37	3.54	0.31	3.48
<i>Of which:</i>					
<i>Chicken meat</i>	3.0	3.62	3.17	-4.83	2.15
<i>Bread</i>	1.9	0.41	0.76	0.87	3.85
<i>Rice</i>	1.9	2.59	1.62	2.11	1.79
<i>Sugar</i>	0.5	19.04	10.03	-3.67	2.91
<i>Noodles</i>	0.5	4.06	1.28	0.71	2.43
<i>Oils</i>	0.5	-0.89	2.24	4.84	3.63
<i>Potato</i>	0.9	62.87	1.75	-38.99	3.24
<i>Fresh and frozen fish</i>	0.7	1.58	9.92	-7.23	3.33
<i>Meals outside the home</i>	11.7	5.44	4.61	3.65	3.87
b. Fuels and electricity	5.7	6.20	4.48	1.55	3.63
Fuels	2.8	-6.33	0.61	3.95	3.34
<i>Oil and lubricants</i>	1.3	-8.05	-1.13	5.05	2.62
<i>Gas</i>	1.4	-5.76	1.64	3.08	2.12
Electricity	2.9	18.71	7.53	-0.21	3.15

1/ Regime Inflation Targeting since 2002. Base December 2001=100 for period 2002-2009 and base 2009=100 for period 2010-2017.

Source: INEI.

By items, the inflation rate in 2017 is mainly explained by increases in the prices of services, such as meals consumed outside the home and education, as well as by increases in water rates and urban fares. On the other hand, the prices of some foodstuffs –i.e. chicken– declined due to higher increases in the supply than in the demand and due to lower production costs, while the prices of other products –i.e. potatoes– declined due to increased cultivated areas in the main supply regions of Lima and yield improvements in the Sierra producing areas.

Table 51
ITEM WITH THE HIGHEST WEIGHTED CONTRIBUTION TO INFLATION: 2017

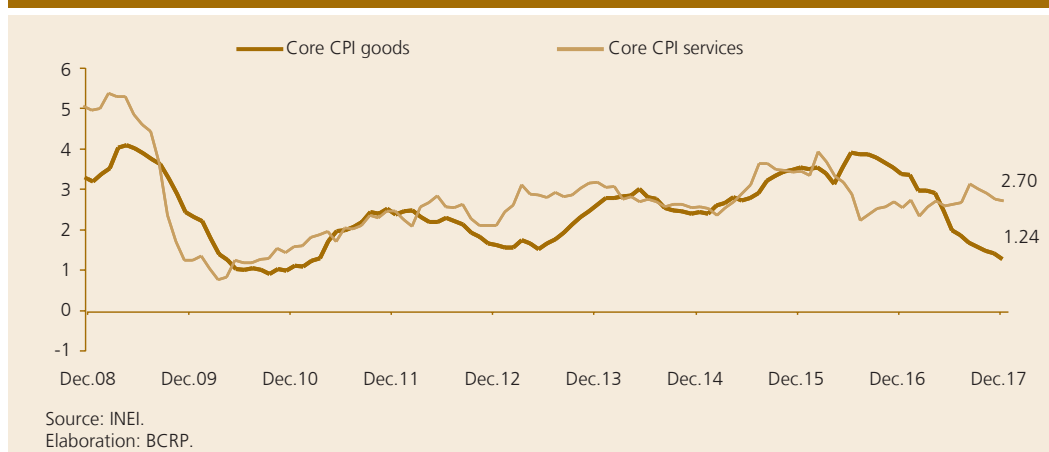
Positive	Weight	% chg.	Contribution	Negative	Weight	% chg.	Contribution
Meals outside the home	11.7	3.6	0.49	Potato	0.9	-39.0	-0.51
Education costs (tuition and fees)	8.8	4.7	0.45	Poultry meat	3.0	-4.8	-0.15
Water consumption	1.6	13.0	0.22	Fresh and frozen fish	0.7	-7.2	-0.06
Urban fare	8.5	1.4	0.11	Airplane fare	0.4	-14.3	-0.05
Beer	0.8	8.7	0.07	Purchase of cars	1.6	-2.5	-0.04
Toiletries	4.9	1.3	0.06	Fresh legumes	0.2	-10.6	-0.03
Gasoline and lubricants	1.3	5.0	0.06	Tangerine	0.2	-12.9	-0.03
Tickets for events	1.7	3.2	0.05	Sugar	0.5	-3.7	-0.02
Carbonated beverages	1.3	3.5	0.05	Carrots	0.1	-12.9	-0.02
Banana	0.3	11.5	0.04	Tomato	0.2	-5.3	-0.01
Total			1.60	Total			-0.92

Source: INEI.

Core Inflation

The annual rate of core inflation decreased from 2.87 percent in December 2016 to 2.15 percent in December 2017. The prices of goods fell from a rate of 3.4 percent in 2016 to 1.2 percent in 2017, whereas the prices of services increased from 2.5 to 2.7 percent in the same period, the latter being explained mostly by the adjustment of water rates in the month of August.

Graph 40
CORE CPI GOODS AND SERVICES
(Last 12-month % change)



Goods

The items that contributed more to moderate inflation between 2016 and 2017 were **personal care items** (the prices of which fell from 3.9 in 2016 to 1.3 percent in 2017), **vehicles** (from 3.3 to -2.5 percent), and **medical products** (from 4.9 to 0.5 percent). These three items are sensitive to **exchange rate** changes. It is worth pointing out that the PEN went from a depreciation rate of 0.4 percent against the dollar in 2016 to an appreciation of 4.4 percent during 2017.

Services

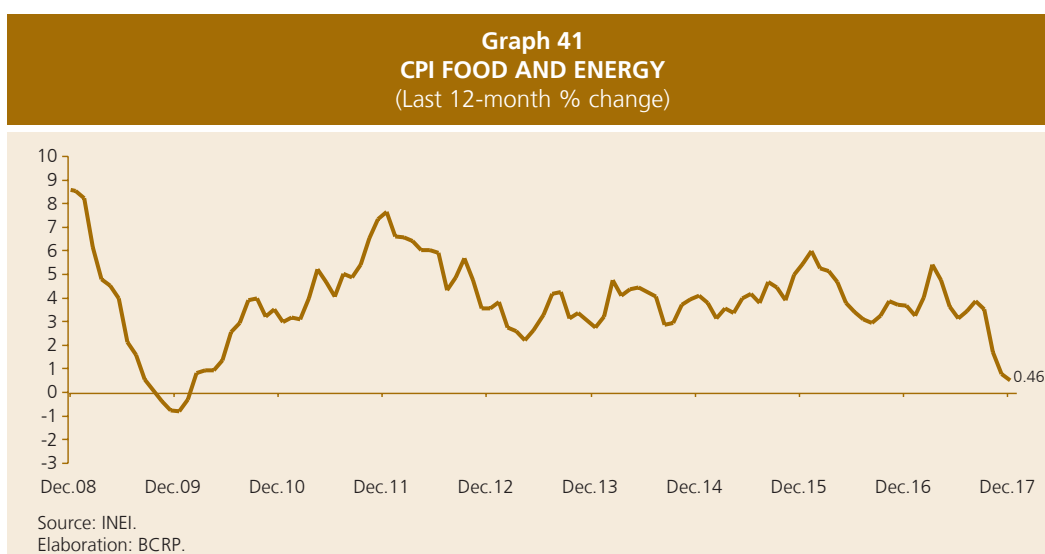
Education prices –**tuition and fees**– increased 4.7 percent, a lower rate than in 2016 (5.1 percent) and 2015 (4.9 percent), mainly due to the increase in education fees in March (4.0 percent) at the beginning of the school year. In addition to this, fee adjustments in higher education institutes were observed throughout the year.

In the price category of **transportation, urban fares** increased 1.4 percent. The prices in this category also showed a lower variation rate in 2017 than in 2016 (1.9 percent) and 2015 (2.9 percent).

Water rates increased 13.0 percent, mainly due to the rate adjustment made in August (9.5 percent), this increase being the highest increase in the average residential rate observed in the last 17 years. Moreover, this increase resulted from the application of the cross-subsidy targeting system, whereby rates increased 20 percent for non-subsidized households (67 percent of households in Lima).

Food and Energy Prices

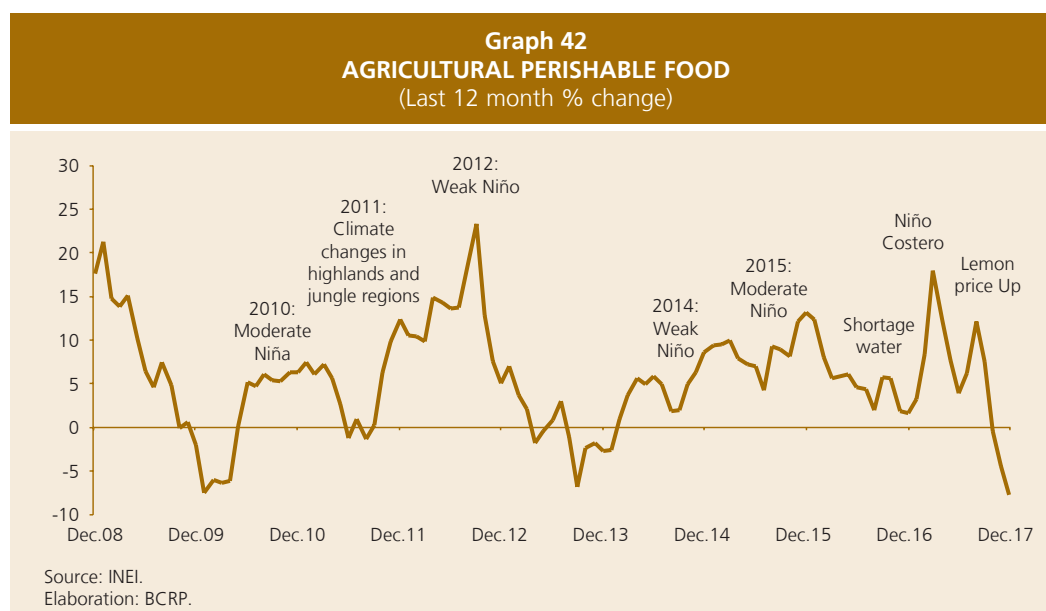
Inflation in food and energy items, indicator reflecting short-term variations associated more to supply factors and of a more volatile nature, showed a downward trend declining from 3.7 percent in 2016 to 0.5 percent in 2017. This trend was influenced mainly by lower variation in the prices of foodstuffs (down from 3.5 percent in 2016 to 0.3 percent in 2017) due to the reversal of the effects of weather anomalies. In addition to this, the variation in electricity rates fell from 7.5 percent in 2016 to -0.2 percent in 2017.



Foodstuffs

In 2017, the evolution of food prices was influenced to a large extent by weather alterations. In the first months of the year, the high temperatures brought about by El Niño Costero were joined by heavy rains and river overflows which caused flooding and road disruptions. This affected not only production, but also transport to cities, which reflected in the March inflation rate (1.3 percent, the highest since 1998).

Some of these supply shocks reversed as from April, with negative inflation rates reflecting this between April and June. However, the negative impact of El Niño Costero continued to affect the production and yields of some crops in the following months. This was particularly noteworthy in the case of lemons, whose price showed an increase of 133 percent in August and only reversed in the last quarter of the year with the recovery of its production.



In 2017, three food products were among the items with the highest negative contribution to inflation: potatoes, chicken, and fish.

The price of **potatoes** dropped 39.0 percent as a result of increased supply. Larger cultivated areas in the main supply regions of Lima led to an increase of 12.0 percent in the supply, while yield improvements in the Central Sierra due to the greater frequency and intensity of rainfall during the crop season – especially in Huánuco, which had been affected by a severe drought in 2016– contributed also to this. In addition to this, greater cultivated areas were observed in Ica, where the crop season lasted until November.

The price of **chicken meat** declined 4.8 percent due mainly to a higher supply. The domestic production of chicken increased 3.4 percent, encouraged by the lower cost of feeding the birds. The price of hard yellow maize, the main input of this food, fell from US\$ 132 per ton in December 2016 to US\$ 125 in December 2017 (-5.2 percent) and the price of imports of this input in soles showed a similar decrease. In spite of this, the price of chicken meat fluctuated throughout the year, the rises registered in March (5.9 percent) and December (6.3 percent) standing out.

In March, the problems caused by El Niño Costero, i.e. flooding and road disruption, hindered production and commercialization. Moreover, high temperatures also affected the feeding and the growth of the birds. This situation started normalizing from April, with price decreases being observed in the following months, but new increases were recorded in November and December, influenced by the irregular supply of fish and the higher relative price of substitute products, i.e. bonito and jack mackerel, and by the higher demand for poultry for end-of-year celebrations.

Prices in the category of **fresh fish** decreased 7.2 percent as a result of the greater availability of some species. In the first quarter of the year the higher sea temperature caused by El Niño Costero brought about a greater supply of warm water species such as bonito, with the consequent reduction in prices. This situation was reversed in the following months by changes in marine conditions (temperature drop, strong winds, and anomalous waves) that led to an irregular supply and rising prices. In the last months of the year, the fishing of bonito increased again, favored by the remnants of warm waters away from the coast. In addition to this, the beginning of the fishing season of perico contributed to new price decreases.

Energy

Electricity rates decreased 0.2 percent in 2017, contrasting with the rate increases registered in 2015 (18.7 percent) and 2016 (7.5 percent). This was influenced by the rate reductions implemented in the first months of the year mainly due to the suspension of the charge for “Consolidation of Energy Security”, destined to financing the Gasoducto Sur Peruano. The rates also decreased in May (-3.6 percent), mainly due to the quarterly review of the balances of the contracts between the generation companies and the distribution companies.

A series of increases were recorded in the months thereafter due to the price updates established in the contracts between these companies as a result of bids and also due to the quarterly settlement made by the regulating entity to compensate price differences at the generation level among regulated users. Another relevant factor was the updating of the transmission component, which had been affected by the charges intended to ensure the continuity of the electric service and by the start-up of new transmission lines.

The price of **gasoline** increased 5 percent in 2017. In January there was a rise of 4.4 percent, influenced by the increase in the international price of oil after the OPEC countries agreed to reduce oil production. However, the international price of oil dropped in the following months due to expectations that higher US production would compensate for the OPEC production cuts and to the increase in gasoline inventories in that country. Prices in the domestic market fell in line with the lower benchmark prices set by the regulating body Osinergmin.

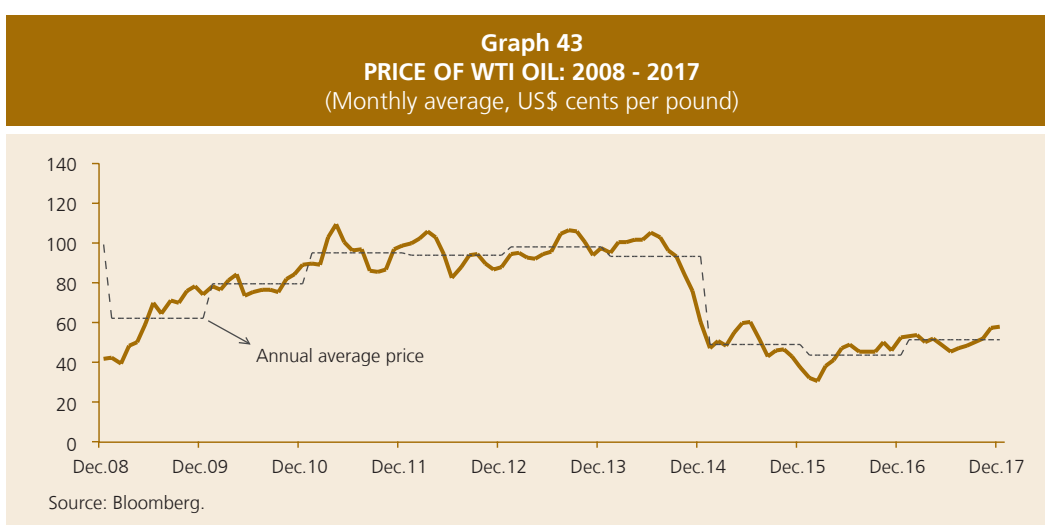
This situation reversed since mid-July, the highest increase of the year being observed in September (5.3 percent). Fuel import parity prices increased due to the higher international oil price. The latter was associated with the decrease in oil reserves and with lower inventories of gasoline in the United States, whose fuel production in the Gulf Coast was affected by hurricanes and storms.

Moreover, new price reductions were observed in the domestic market since October, influenced by the restart of operations in the refineries of the United States and the consequent reduction in benchmark prices.



Table 52 FUEL PRICES (Annual % change)				
	2015	2016	2017	Average 2007-2016
Fuels	-6.3	0.6	3.9	0.7
Gasoline	-8.1	-1.1	5.0	-0.1
Gas	-5.8	1.6	3.1	1.4
Price of WTI oil, end of period 1/				
US Dollars	37.2	51.9	57.9	
Soles	126.0	176.4	188.0	

1/ West Texas Intermediate.
Source: INEI and Bloomberg.

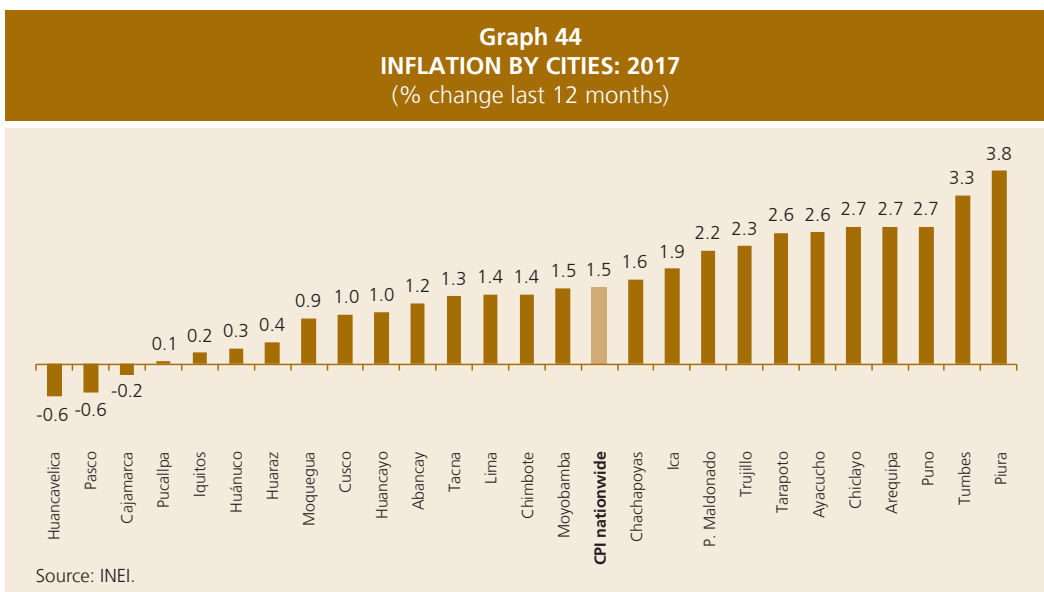


Domestic Inflation

In 2017 the rate of domestic inflation was 1.50 percent, the lowest rate recorded since 2009 (0.09 percent). Thirteen cities showed higher inflation rates than Lima, while 12 cities showed lower rates. Domestic inflation is calculated as the average inflation rate of the 26 major cities in the country.

The cities that showed the higher annual inflation rates were Piura, Tumbes, and Puno. In Piura the items that contributed more to increase inflation were urban fares (18 percent), meals outside the home (8.9 percent), and education (tuition and fees: 6 percent). Tumbes registered price rises in meals outside the home (7.3 percent), education (tuition and fees: 4.4 percent), and fish (8.1 percent), while Puno registered rises in the prices of personal care items (9.1 percent), education (tuition and fees: 3.6 percent), and house rents (14.3 percent). The increase in the prices of urban fares in Piura is explained by the deterioration of roads due to the heavy rains observed during El Niño Costero.

On the other hand, the cities with lower inflation rates were Huancavelica and Pasco, each of which showed rates of -0.6 percent due to the negative variation rates recorded by some foodstuffs. In Huancavelica, the low inflation rate is explained by decreases in the prices of potatoes (-63.2 percent) and chicken meat (-8.5 percent), while in Pasco this is explained by falls in the prices of potatoes (-52.8 percent) and carrots (-32.7 percent).



In terms of the annual variation of core inflation, 16 cities registered higher variation rates than Lima, while 9 cities registered lower variation rates. In Piura, which showed the highest rate of core inflation (5.4 percent), the items that increased were urban fares (18 percent) and education: tuition and fees (6 percent). In Arequipa (where core inflation registered 4.5 percent), urban fares increased 16.5 percent and education: tuition and fees increased 5.8 percent, and in Ayacucho, tuition and fees increased 7.8 percent and urban fares, 7.6 percent.

Conversely, Iquitos and Cajamarca recorded the lowest rates of core inflation (0.6 and 1.3 percent, respectively). In Iquitos, airfares decreased 14 percent and the price of vehicles showed a rate of -6.4 percent, while in Cajamarca, declines were observed in television prices (-2.1 percent) and airfares (-13.7 percent).

