

# FUEL PRICE ANALYTICS

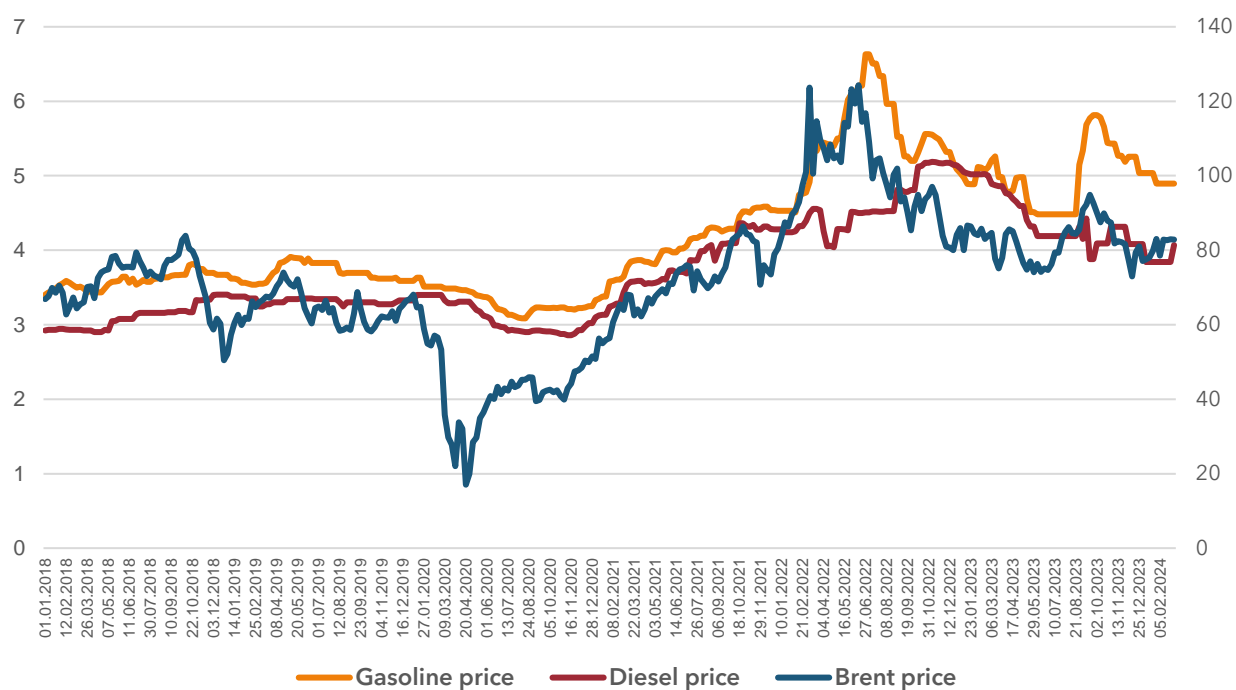
## Peru

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## Key takeaways

- High correlation of gasoline prices with oil prices and currency values suggests that gasoline prices are largely market determined.
- Weaker sensitivity of diesel prices to oil prices and currency values suggests some government intervention for diesel fuel.
- The fuel prices are close to the average world levels indicating an average level of taxation. Gasoline is more expensive than diesel fuel.
- Gasoline prices are higher and diesel prices are lower than the Latin America average.
- Fuel price affordability is similar to elsewhere in Latin America.
- Sluggishness in price adjustments. Price flexibility is about 0.6 on a scale from 0 to 1.

## Historical chart of fuel prices in PEN/liter, Brent prices on right axis



<i>Analytics</i>	<i>Peru</i>	<i>Latin America</i>
<i>Correlation gasoline, crude oil prices</i>	0.85	0.73
<i>Correlation diesel, crude oil prices</i>	0.72	0.76
<i>Correlation gasoline, USD exchange rate</i>	-0.67	-0.34
<i>Correlation diesel, USD exchange rate</i>	-0.76	-0.39
<i>Correlation gasoline, diesel prices</i>	0.88	0.91
<i>Gasoline price / world average price</i>	0.99	0.89
<i>Diesel price / world average price</i>	0.80	0.85
<i>Gasoline price / regional average price</i>	1.11	
<i>Diesel price / regional average price</i>	0.95	
<i>Gasoline price / diesel price</i>	1.29	1.11
<i>Cost of 40-liter tank of gasoline / income</i>	9.70%	7.81%
<i>Cost of 40-liter tank of diesel / income</i>	1.74%	2.91%
<i>Spending on gasoline, percent of income</i>	7.54%	7.10%
<i>Spending on diesel, percent of income</i>	1.35%	2.70%
<i>Gasoline pass through</i>	5.16%	2.85%
<i>Diesel pass through</i>	1.75%	3.17%
<i>Gasoline price flexibility</i>	0.65	0.93
<i>Diesel price flexibility</i>	0.58	0.93

## Correlation with crude oil prices

A measure of how international oil prices affect domestic retail fuel prices. Higher values, close to 1, mean that domestic prices rise and fall with crude oil prices. That typically implies that prices are determined in an open market by the supply and demand of fuel. Negative correlation in some countries means that fuel prices fall when oil prices increase. That is sometimes the case in oil rich countries. All reported correlations are based on the last five years of data.

## Correlation with the USD exchange rate

Shows the importance of exchange rates. Oil is traded in U.S. dollars. When the USD increases in value relative to the domestic currency, it becomes more expensive to buy oil and refined products. Therefore, when the domestic currency depreciates fuel prices typically rise. That is reflected in a negative correlation. If that correlation is close to -1, then the impact of exchange rate changes on fuel prices is strong.

## Correlation between gasoline and diesel prices

Shows if fuel market policies differ between gasoline and diesel fuel. Countries sometimes have different policies and taxes on gasoline and diesel. They may liberalize one fuel and regulate the other. Similar policies are reflected in a high correlation. Dissimilar policies are reflected in correlation that is close to 0 or even negative.

## Comparisons with the world and regional averages

Shows if fuel taxes are relatively high or low compared to the world and regional levels. All countries purchase oil and refined products at roughly the same prices globally. Respectively, price differences between countries comes primarily from different taxes or subsidies. High prices mean higher taxes and lower prices mean lower taxes.

## Cost of 40-liter tank as percent of income

That is a measure of fuel price affordability. It shows how much it costs to fill a 40-liter fuel tank as a percentage of the average monthly GDP per capita. Higher values mean lower affordability. The calculation uses World Bank data.

## Fuel consumption as percent of income

Shows how important fuel consumption is in the overall budget of households. Fuel prices may be high but if driving is limited or incomes are high, then households do not spend much on fuel. If fuel prices are low, the measure may still be high if income is low or people drive a lot. We use data from the U.S. Energy Information Administration on fuel consumption and our fuel price data to compute the annual spending on fuel. Then we express it as percentage of GDP with data from the World Bank.

## Pass through

Shows by how many percent would the retail fuel price change if crude oil prices change by a hypothetical 10 percentage points. Based on the last three years of historical data. High values indicate a greater impact of crude oil price changes on fuel prices. That is typically the case in countries with low excise taxes and loose fuel price regulations. Stricter fuel price regulations lower the pass-through metric.

## Price flexibility

Higher values mean more frequent price changes. In countries with liberalized markets, the value is close to 1, i.e. prices change each week. In other countries the value is 0 which means that the government does not let prices adjust for very long periods of time. The measure equals the percent of weeks when prices have changed in the last two years.

## ABOUT GLOBALPETROLPRICES.COM

We track retail fuel, electricity, and natural gas prices in over 160 countries using data from companies, government institutions, regulatory agencies, statistical institutes, and major media outlets.

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