Food availability depending on salaries

Data set

The origin of the data set comes from the Engeto academy and the CZSO.

Project goal

Provide public access to information on food availability depending on wages during the common years: **2006 - 2018.**

How do wages in different industries change over time? Are they increasing in all areas or are there some areas where there is a decrease?

What is the number of liters of milk and kilograms of bread that can be purchased with wages in the first and last comparable period according to price and wage data available across industries?

Which food category has the slowest price increase?

Has there ever been a year where year-on-year food price increases exceeded wage growth by more than 10%?

Does the level of GDP affect the dynamics of changes in wages and food prices?

Data transformation and aggregation

A calculation method based on an average value was applied to analyze the wage structure across different sectors.

In the context of the research questions, each row in dataset is characterized by its specific calculation, which is implemented at the level of individual lines due to differences in individual salaries (wages) and the effect of % changes.

Periodicity

Annual

General logic

In cases where it was necessary to combine some previous attributes for data analysis, the method of temporary tables was implemented.

This approach allows efficient comparison and manipulation of data.

Project data analysis identified common years ranging from **2006** in a year **2018.**

To calculate the percentage year-on-year growth, the general method of calculating the percentage year-on-year growth - YOY was used.

$$\text{Percentage change} = \left(\frac{\text{Current value} - \text{Initial value}}{\text{Initial value}} \right) \times 100\%$$

Overview of resulting attributes

industries
- data type:**VARCHAR**

reference_year
- data type: **INTEGER**

salaries
- data type: **DECIMAL**

salary_measure
- data type: **VARCHAR**

ΔP_yr_grow_salary
- data type:**DECIMAL**

ΔP_yr_measure_grow
- data type: **VARCHAR**

item
- data type:**VARCHAR**

unit_price
- data type:**DOUBLE**

unit_price_measure
- data type:**VARCHAR**

purchasing_power
- data type:**DOUBLE**

price_unit
- data type:**VARCHAR**

year_min
- data type:**BIGINT**

year_max
• data type:**BIGINT**
ΔP_food_dif
• data type:**DOUBLE**
P_diff_GDP
• data type: **DECIMAL**
measure_food_dif
• data type:**VARCHAR**
country
• data type:**TEXT**
year
• data type: **INTEGER**
GDP
• data type: **DECIMAL**
fees
• data type: **DECIMAL**

Answers to research questions

• Research question number 1
We can state that during the monitored years there is an overall increase in wages in all sectors.

• Research question number 2
In connection with changes in salaries (wages) in individual sectors, the following can be stated:
In areas where there has been **reduction** salaries(wages), was purchasing power lower.
On the contrary, sectors with incomes that gradually **were** increasing , they could purchase multiple units tracked goods.
Overall, it can be stated that the number of units of purchased purchased goods depends on the change in unit prices and on

the change in wages in the relevant sector.

- **Research question number 3**

Among all categories of goods, the smallest percentage increase in the monitored period is characterized by:
Pork roast with bone.

- **Research question number 4**

In the period of years **2007** until **2012** a percentage increase in food prices was recorded which exceeded 10%.

- **Research question number 5**

Based on the information found from the data, it can be concluded that there is a correlation between GDP and growth in food prices and wages.
GDP growth may be in line with food price and wage growth, but can be affected by a number of other factors.
GDP declinemay have negative impact on food price growth, but a decline in GDP does not necessarily leadto a drop in food prices and wages.
It follows from these data that **GDP can affect** rising food prices and wages, but this effectcan be affected by a number of other factors.

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