SQL PROJECT

Commentary on the project and answers to the questions:

The primary table (*t_pavel_potsch_project_sql_primary_final*) summarizes information on average wages for each industry (as well as the average wages for the entire economy) from 2000 to 2021 and average prices for selected food items for 2006 to 2018. For further processing, data indicating the number of persons employed (calculation code = 100) was used rather than converting to full-time equivalents (calculation code = 200). Furthermore, the data were averaged on an annual basis (the original measurements were made quarterly), the same operation was carried out for food prices.

A secondary table (*t_pavel_potsch_project_sql_secondary_final*) shows us an overview of European countries with their VAT, Gini index (which describes income inequality in society) and population size. However, we lack additional data to compare food availability in the Czech Republic and other European countries, as this information is not available in the accessible datasets.

Q No. 1: Have wages been rising over the years in all sectors, or have they been falling in some sectors?

A: Between 2000 and 2021, there are sectors where wages experience some decline in some sectors. While wages are rising in all sectors at the start of the period, we see a more pronounced fall in wages after the recession arrives at the turn of the decade, with some sectors being hit harder than others by this decline. This is particularly the case in Accommodation, Food Services, Hospitality; Real Estate Activities; Education and Arts, Entertainment and Recreation. A similar situation is then repeated in 2020 and 2021 at the time of the Covid pandemic. It is also worth noting the Mining and Quarrying sector, which experienced a more difficult period between 2013 and 2016.

Q No. 2: How many litres of milk and kilograms of bread can be bought in the first and last comparable periods in the available price and wage data?

A: The first year for which we have data for both wages and food prices is 2006. In that year, it was possible to buy 1,309 litres of semi-skimmed milk and 1,173 kg of caraway bread for average wage of CZK 18,902. Twelve years later, in 2018, Czech citizens were slightly better off. The average wage had risen to CZK 30,998 and it was possible to buy almost 20% more milk and 9% more bread, i.e. in absolute terms 1,564 litres of milk and 1,279 kg of bread.

Q No. 3: Which food category is becoming more expensive at the slowest rate (lowest percentage increase year-on-year)?

A: I based my answer to this question on data for the period 2006-2018. However, item 212101 - Quality white wine - was not included in the survey as it only appears in the data from 2015. The resulting table shows us that for two items - Crystal Sugar and Red Tomato - the price even decreased, by 27.5% for sugar and 23% for tomatoes. Other categories of selected food items then increased in price, with Bananas being the slowest (7.36% overall for the period).

Q No. 4: Is there any year in which the annual increase in food prices was significantly higher than wage growth (greater than 10%)?

A: To simplify the procedure and to make it clearer, two Views have been created whose outputs are the percentage year-on-year changes in the variables being compared - food prices (perc_YoY_FP_change) and wages (perc_YoY_PR_change). These values were then compared with each other (v_payroll_vs_prices_change_comparison). The given hypothesis was not confirmed, with 2013 being the nearest to the hypothesis, when the price of food went up by five per cent, while wages remained almost the same as the previous year.

Q No. 5: Does the level of GDP affect changes in wages and food prices? Or, if GDP rises more significantly in one year, does this translate into a more significant rise in food prices or wages in the same or the following year?

A: Table *t_GDP_food_price_payroll_comparison* shows that an increase in GDP growth in one year is correlated with wage growth in the following year (not in the same year). In contrast, the relationship between GDP growth and food price growth is not apparent from the table and the factors that influence their movements need to be looked for elsewhere.

Database tables used*: czechia_payroll*, *czechia_payroll_industry_branch*, *czechia_price*, *czechia_price_category*, *countries, economies*