Lab 4
Econ 104

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Part 1: Q9 in Quiz 5

= 12,000 * 192/17.6

= 130,909

Part 2: Data Activity

Question 1:

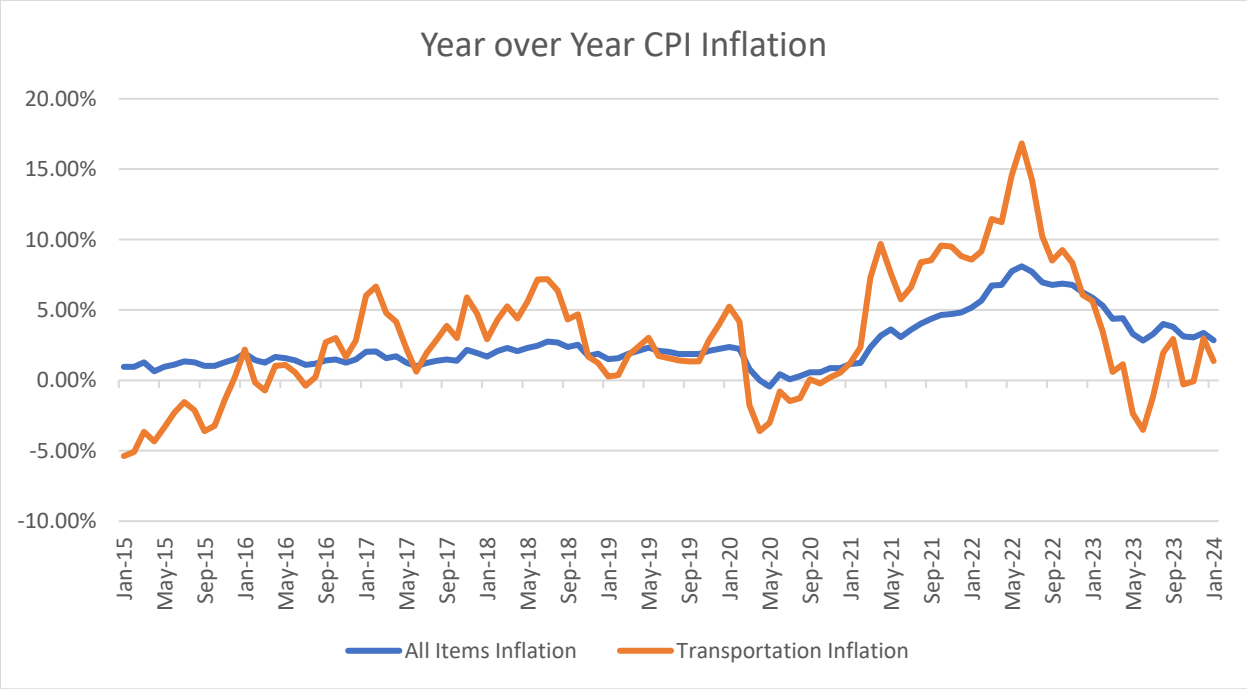
Of the product and product group options, which did you choose to analyze?

I choose Transportation.

Using your downloaded data, calculate the **12-month inflation rate** for the 'All Items' category and your product category of interest. Present a clearly communicated graph with these inflation rates. This graph will have time on the x-axis and inflation rate on the y-axis. Please refer to the 'What makes a good graph' document on our course page to help you create a readable graph.

12-month inflation rate example: For January 2020, you would use the data from January 2020 and January 2019 to calculate the 12-month inflation rate. We are calculating the % increase in the price level from January 2019 to 2020.

Present your clearly communicated graph below:



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Comment on the trends that you see in your graph. What similarities or differences are visible between the "All Items" category and your product category of interest?

Key Points:

- Both categories show a similar trend of increasing inflation starting in early 2015 and peaking in mid-2018.
- Since mid-2018, inflation in both categories has generally trended downward.
- However, transportation inflation has fluctuated more than inflation for all items. For example, transportation inflation increased significantly in early 2021, while inflation for all items remained relatively stable.

Additional Observations/Expanding on previous observations:

General Trend: Both 'All Items' and 'Transportation' inflation rates show cyclical patterns, with peaks and troughs corresponding to various economic conditions over the years.

Volatility: The 'Transportation' category appears to be more volatile with higher peaks and deeper troughs compared to the 'All Items' category. This suggests that transportation costs may be more sensitive to factors such as oil prices and supply chain disruptions.

Peak Inflation: The highest inflation rate for both categories occurs around mid-2021, with the 'Transportation' category reaching significantly higher levels than the 'All Items' category. This could be due to a sharp increase in transportation costs, possibly related to a rebound in demand following the initial phase of the COVID-19 pandemic and/or increases in fuel prices.

Recent Trend: As of the last data point in January 2024, both inflation rates are converging, with the 'Transportation' inflation rate decreasing to a level closer to the 'All Items' rate. This convergence could indicate a stabilization of transportation costs relative to the overall basket of goods and services.

Negative Inflation (Deflation): There are brief periods where the 'Transportation' category experienced negative inflation, particularly noticeable around early 2015 and again in early 2020. This could be due to a decrease in transportation demand or a drop in fuel prices during those periods.

Recovery and Decline: After the sharp peak in mid-2021, both categories show a decline in inflation rates, with the 'Transportation' category decreasing more rapidly than the 'All Items' category. This suggests that transportation costs may have adjusted more quickly than the general price level of all goods and services.

Overall, the 'Transportation' category shows more extreme changes in inflation rates compared to the 'All Items' category, which could be attributed to the sensitivity of transportation costs to external economic factors. The data also suggests that while both categories follow a similar overall trend, the 'Transportation' category tends to lead in terms of inflation rate changes.

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Part 3: Reading Activity

According to the article, why do many economists conclude that “the rich world’s current bout of inflation has minimal costs, or even none at all”? (Hint: the first half of the article answers the question from two aspects: “Inflation is regarded as costly because it erodes people’s savings and distorts price signals.”)

Answer:

One reason economists believe that the current bout of inflation in the rich world has minimal costs is because of the way it interacts with people's savings. Inflation can erode the value of savings, as the purchasing power of the money saved decreases over time. However, this effect can be mitigated if inflation is low, stable, and predictable. If this is the case, it is easier to account for inflation in price-adjustment contracts and interest rates, reducing its distortionary impact. Moreover, some forms of income, such as social security payments, have cost-of-living adjustments that automatically increase when inflation occurs, protecting these incomes from the eroding effect of inflation.

Inflation Distorting Price Signals

Another reason is related to the distortion of price signals. High rates of inflation can muddle price signals in the short term and prevent market forces from operating efficiently. However, this effect is less pronounced with low rates of inflation. In fact, knowing that prices will be slightly higher in the future can give consumers an incentive to make purchases sooner, which can boost economic activity. Additionally, inflation can lead to a sequential change in purchasing power and prices, known as the Cantillon effect. This process not only increases the general price level over time, but also distorts relative prices, wages, and rates of return along the way.

Additional Considerations

There are also additional factors to consider. For instance, moderate inflation levels can drive consumption, which is crucial for economic growth Furthermore, higher inflation can lead to faster economic growth in the short term, as it can encourage consumers to spend and businesses to invest. Lastly, if inflation is anticipated, the effects of inflation may be less severe, as wage and pension contracts may have inflation clauses built in, and interest rates will be high enough to cover the cost of inflation to savers and lenders.

In conclusion, while inflation can erode savings and distort price signals, these effects can be mitigated or even turned into advantages under certain conditions. This is why many economists conclude that the rich world's current bout of inflation has minimal costs, or even none at all.

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What empirical evidence have economists found in their research on the above two costs of inflation?

1. Impact on real wages:

- **Evidence:** While inflation can sometimes outpace wage growth, it doesn't always happen. The article cites a study from 1975 finding American workers receiving inflation-busting pay rises in the previous decade and data showing real wages rising in some high-inflation years across 35 OECD countries since 1990.
- **Source:** The Economist, study published in 1975, OECD data.

2. Distorting price signals:

- **Evidence:** A 2018 paper by Emi Nakamura et al. found no evidence that price movements deviated more from optimal levels during the high-inflation 1970s compared to the pre-pandemic low-inflation period.
- **Source:** Paper by Emi Nakamura et al. published in 2018.

The article additionally mentions broader research suggesting minimal costs associated with single-digit inflation, including:

- **2014 IMF paper:** "few empirical studies have even tried to find costs of single-digit inflation."
- **1996 study by Michael Bruno and William Easterly:** "no evidence of any relationship between inflation and growth at annual inflation rates less than 40%".

At the end of the article, the author made two (opposite) policy suggestions. Which one do you prefer? Briefly explain.

1. **Ignore the views of ordinary people and focus solely on economic research findings.** This approach suggests that since research finds minimal economic costs from moderate inflation, policymakers should prioritize these findings over public opinion.
2. **Take into account the psychological costs of inflation, even if economic research suggests minimal costs.** This approach acknowledges that even if the economic impact of moderate inflation might be manageable, the public's negative perception and concerns about inflation are real and should be considered when making policy decisions.

While the article presents economic research suggesting minimal negative impacts from moderate inflation, it also acknowledges the significant psychological costs and societal anxieties associated with it. People often fear inflation makes them poorer, hinders planning, and is a sign of unfair business practices.

Considering the potential benefits of taking these psychological costs into account, I would favor the **second policy suggestion**. This approach acknowledges the expertise of economists while recognizing the importance of addressing public concerns, potentially leading to more socially acceptable and effective policy decisions. However, I would also like to mention that neither of the policies are ideal, rather a balance of both must be struck to achieve optimal conditions for the economy but in the real world that is rather difficult if not close to impossible.