Measuring Inflation:

Notes on CPI Statistics and Wage Adjustments

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With the acceleration of price rises since the COVID pandemic, inflation has rightly become the top concern of working people in B.C. and elsewhere around the world. From traditional inflation rates of around 2% per year, inflation has surged as a result of economic challenges resulting from pandemic lockdowns and subsequent economic re-opening. Supply chain disruptions, a global energy price shock (related to Russia's invasion of Ukraine), and big shifts in consumer spending are the main causes of this inflationary surge.

It is important to note that workers and their wages clearly did NOT cause this rise in inflation. Wages have been increasing much slower than prices, and even a recent modest pickup in wage growth came months after prices first began accelerating. Corporate profits, in contrast, have done much better: because prices rose faster than production costs (including labour), business profits have expanded – reaching their highest share of Canada's GDP ever (almost 20%) by spring of 2022. Corporate greed, not workers' wages, are the key culprit in rising inflation.

Almost certainly, inflation will slow significantly in the next year or two: partly because its underlying causes are largely temporary, and partly because central banks around the world are now increasing interest rates rapidly to reduce overall spending and economic activity to cool off prices. For workers, whose wages did not cause inflation, this slowdown (which may cause a recession in the near future) will only make matters worse. Nevertheless, it is almost certain that inflation will slow down markedly in 2023 and 2024.

Trying to protect the purchasing power of wages against the effects of higher prices is a vital priority for workers and their unions. Previous inflation protections (such as cost of living clauses in collective agreements) were largely removed from most contracts over the past 3 decades, at the insistence of employers. They argued that since inflation was low and stable, workers didn't need that protection. With inflation surging, it is once again essential for workers to win back that protection. In this context, the negotiation of a new cost-of-living clause in the recent tentative agreement for B.C. health care workers is a very important step forward.

Like all cost-of-living provisions, this new agreement relies on a specific methodology for calculating the rise in prices, and resulting adjustment in wages, which then apply over each full year of the collective agreement. Measuring inflation is a complicated process, and there are many different price indexes published. It is important that the contract specify an appropriate measure, and that the method for calculating the wage adjustment is clearly spelled out – to ensure that the employer lives up to their commitment in the contract.

The new cost-of-living adjustment negotiated for B.C. workers uses the consumer price index (CPI) for the province of B.C., published each month by Statistics Canada (the official federal government statistics agency). It is appropriate to use the B.C. index, since the cost of living in B.C. is somewhat higher than the average for all of Canada.

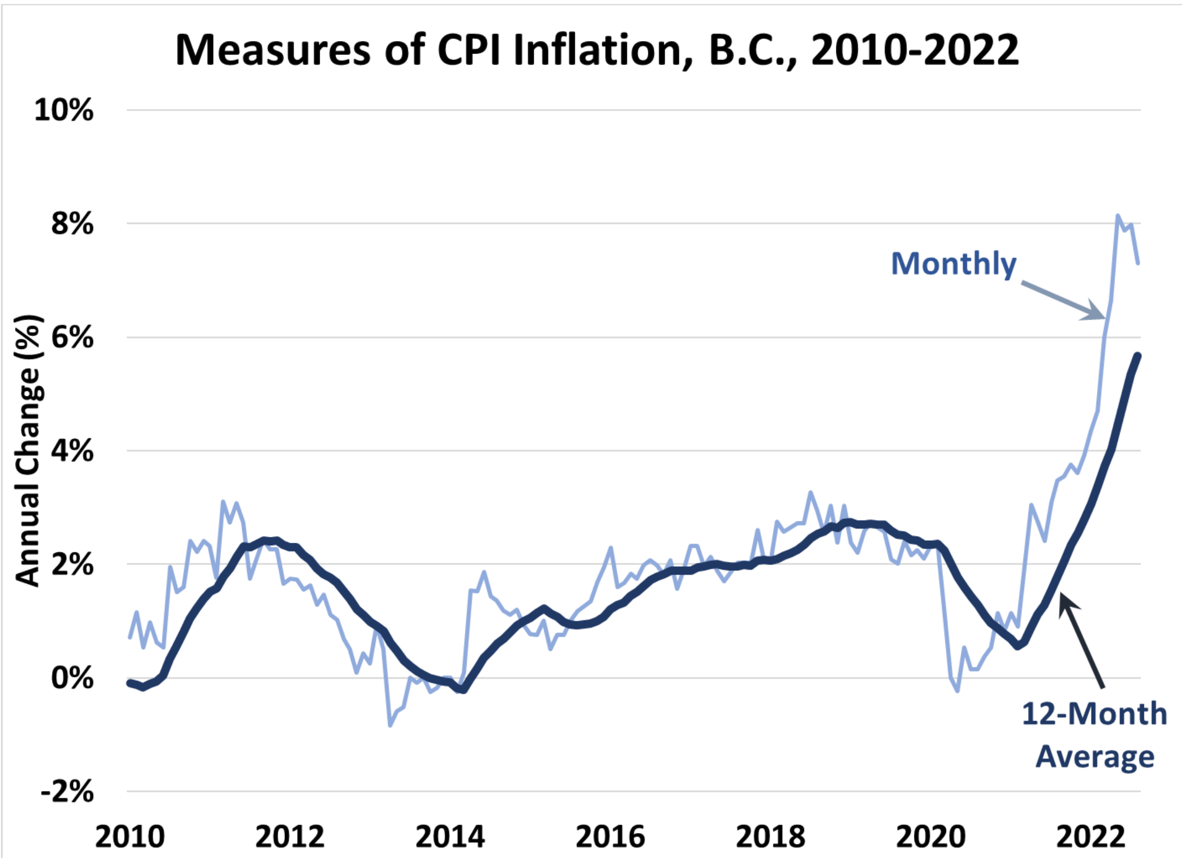
The formula provides an additional adjustment in wages in 2023 and 2024, if the change in the annualized (12-month) average for the B.C. CPI in the 12 months immediately prior to the month of the wage adjustment exceeds the negotiated base wage increase. So, for the wage increase occurring on April 1 2023, this formula compares the average B.C. CPI for 12 immediately preceding months (from March 2022 to February 2023), to average prices during the 12 months before that (March 2021 to February 2022).

This may seem complicated, but it is the most appropriate methodology for a calculation that will affect members' wages for the entire following year (and, indeed, for subsequent years – since future wage increases will be applied against that adjusted base wage). Inflation statistics fluctuate substantially from one month to the next, based on many factors: including seasonal patterns (some food products, for example, are cheaper in the summer and more expensive in winter), economic conditions, and competition between sellers (such as post-Christmas discounts). We do not want a wage increase for an entire year to be tied to any particular month's inflation statistic: that could easily create a situation in which wages were held back because of an accidental one-month reduction in the inflation statistic.

To insulate wage changes against those rapid monthly fluctuations, this cost-of-living formula considers the ***12-month average level of prices*** in the full year preceding each adjustment, compared to the average prices that prevailed in the year before that. This is a less risky and ultimately more accurate way to adjust wages for the impact of higher prices. It ensures that, in the long run, wages will adjust to reflect the sustained rise in prices – rather than being determined by one particular month's events.

The impact of this annualized CPI formula in "smoothing out" measured inflation can be seen in the accompanying chart. The light line shows the rate of inflation B.C. measured by the commonly reported and more volatile monthly statistic. The dark line shows the rate of inflation measured by the smoothed 12-month average (annualized) change in the price level. The annualized measure evolves more gradually over time, but follows the same path. Ultimately, the two measures show an equivalent rate of change in prices – but the annualized statistic is less sensitive to immediate changes in any particular month.

For example, there are recent occasions when the monthly CPI inflation measure fell below zero (in 2013 and 2020), indicating that average prices actually declined. A cost-of-living adjustment based on those volatile monthly figures could have resulted in a *reduction* in wages – even though prices for the full year, on average, were still higher. This is a good illustration of the risk created when wage adjustments are tied to inflation data for any particular individual month. The annualized 12-month average methodology, in contrast, provides a more reliable and less risky measure of how overall prices have changed.



Source: Centre for Future Work calculations from Statistics Canada Table 18-10-0004-01.

Wage increases driven off an annualized CPI measure ultimately are not meaningfully different over time from those tied to the volatile monthly figures. In some years the annualized measure is slightly higher; in others, slightly lower. Over time they track each other. It is worth noting that since the annualized measure takes time to reflect ongoing monthly changes, it tends to be *higher* than the monthly statistic when inflation is *falling* (since one or two months of declining inflation doesn't immediately pull down the annualized average). This was true, for example, from 2012 through 2014, and again in 2020-2021.

It is very likely that monthly inflation will indeed be declining by next spring – the time of the first wage adjustment in the new B.C. health care collective agreement. Indeed, the monthly inflation rate in B.C. has already slowed down since May 2022 (from 8.1% to 7.3%), as illustrated in the chart. During this same time, however, the annualized measure continued to increase (from 4.5% in May, to 5.7% in August). If monthly inflation continues to slow down, then those two lines will soon cross – so that the annualized inflation measure is *higher* than the more volatile monthly statistic.

Further reductions in monthly inflation are likely in 2023, due to falling energy prices, other post-COVID economic adjustments, and the negative impacts of high interest rates. In this case, the annualized CPI measure provides a better chance that the cost-of-living trigger in the new collective agreement will deliver a larger wage increase. In the event that inflation continues to slow down in the subsequent year (especially given a potential recession on the horizon), then the annualized formula also provides better odds that the trigger will be activated in the subsequent year (April 1, 2024), as well.

In my opinion, the negotiation of a cost-of-living formula in the tentative collective agreement for B.C. health care workers is a very important step forward in protecting workers' incomes against the impacts of the recent surge in inflation. The specific methodology reflected in that provision is appropriate, fair, and much less risky than tying wage increases for an entire year to unpredictable fluctuations in a monthly inflation index. It is quite likely that the cost-of-living trigger will be partly or wholly activated for the April 1, 2023 adjustment – more so than if a monthly CPI measure had been used for the calculation. And in the current macroeconomic environment, the annualized formula provides strong confidence for B.C. health workers that the real purchasing power of their wages will be protected.

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