



MONETARY POLICY

Fixing Canada's CPI:  
A Simple and Sensible Policy Change for Minister Flaherty

By  
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- Accurate measurement of the Consumer Price Index counts. Consumers rely on the CPI as a barometer of changes in their overall cost of living and their purchasing power. Ottawa uses it to determine the payouts of inflation-indexed programs and the thresholds of personal income-tax brackets.
- However, the measured CPI inflation rate is biased upward by about 0.6 percent on average. So when the measured inflation rate is at the Bank of Canada's 2 percent target, the true rate of inflation is closer to 1.4 percent.
- Errors in the measurement of inflation are costly to the federal government, to the tune of hundreds of millions of dollars a year. Fixing them would help Minister Flaherty achieve a balanced budget and create a simple and transparent fiscal system that operates in its intended fashion, to the long-term economic benefit of all Canadians.

Finance minister Jim Flaherty soon will unveil his 2011 federal budget, and public servants in Ottawa and their political masters are currently deciding its many details. Given large deficits and a planned return to balance within four years, Budget 2011 is unlikely to contain big ideas, and certainly not expensive ones.

This *e-brief* discusses a small idea that offers relatively large payoffs to Canadians and to the government. By devoting the small amount of resources necessary to improve Statistics Canada's measurement of the Consumer Price Index, Canadians would have a truer sense of changes in the cost of living, monetary policy would be guided by a more accurate measure of inflation, and Minister Flaherty would more easily achieve the government's commitment to balance the federal budget by 2015/16.<sup>1</sup>

Canada's rate of inflation, as measured by the change in the Consumer Price Index (CPI), is biased because of known problems inherent in the construction of the data (Rossiter 2005). The measured CPI inflation rate is biased upward by about 0.6 percent on average. So when the measured inflation rate is at the Bank of Canada's 2 percent target, the true rate of inflation is closer to 1.4 percent.

<sup>1</sup> The recommendation in this *e-brief* is drawn from a larger package of policy recommendations contained in the author's recently released C.D. Howe Commentary No. 321, *Precision Targeting: The Economics – and Politics – of Improving Canada's Inflation-Targeting Framework*.

An important reason for the bias is that the CPI does not adjust the weights attached to specific products in its typical consumption basket as quickly as it should in response to consumers' frequent changes in spending patterns. Instead, the weights are determined by past behaviour, and modified only occasionally. In particular, the CPI does not automatically take account of consumers' natural substitution away from products with rising prices, and toward products with stable or falling prices. So the estimated CPI places too much weight on products whose prices are rising, and the measured rate of inflation is thus higher than what is actually experienced by the average consumer (Smith 2009). This is the "substitution bias" in the CPI.<sup>2</sup>

### *Why Measurement Errors Matter*

Errors in the measurement of inflation are a problem for three reasons. The first is the general problem of inaccuracy – the rate of inflation is widely seen as indicating the rate of increase in consumers' overall cost of living. Consumers generally know very well how their dollar incomes are changing, but if inflation is measured incorrectly then they can't correctly gauge how their real purchasing power is evolving. In addition, the errors in measurement are a problem for any workers or firms or households with payments or receipts tied to CPI growth – from nominal wages and apartment rental rates to pension payouts and children's benefits. The errors in measured inflation result in income redistributions among workers and firms, governments and citizens, borrowers and lenders. Bad enough to live in a world in which the value of our money is continuously eroded by inflation; even worse when we do not measure this erosion accurately.

The second problem is the inconstancy of the bias. The value of 0.6 percent is an average over time; at some times the bias is larger and at other times smaller. To conduct monetary policy, however, the Bank of Canada needs a measure of inflation that accurately reflects the excess demand or supply pressures in the economy. The Bank's policy decisions are driven by what this measure is doing and is likely to do in the future – tightening policy when inflation shows signs of exceeding the Bank's target, and loosening when inflation is likely to drop below target.

If the bias in measured inflation was constant over time, it would present no fundamental problem for monetary policy, as changes in measured inflation would still be an accurate measure of changes in true inflation. But if the bias fluctuates over time in irregular and unpredictable ways, it is unclear what is revealed, for example, by a gradual increase in measured inflation. Is excess demand driving up inflation, requiring a tightening of monetary policy? Or is the bias increasing for some unknown reason, even while true inflation is constant?<sup>3</sup>

The third problem with the CPI bias is that it creates a loophole in the government's fiscal system. The personal income-tax system is indexed to the measured rate of inflation, so the basic personal amount rises along with the measured CPI, as do the threshold income levels that define the tax brackets. But if the true rate of inflation is regularly less than the measured rate, people will pay less tax than they should, given the true amount of inflation. The same problem exists on the spending side because many payments, such as child and elderly benefits, are indexed to measured inflation. Here, the upward bias in measured inflation makes benefit payments bigger than they would be otherwise. This "over indexation" of the federal government's taxing and spending implies that a correction of the CPI measurement would improve the government's fiscal position, beginning immediately and extending indefinitely.

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2 The substitution bias is one of several sources of upward bias; the others are due to changes in retail outlets, changes in the quality of existing products, and the introduction of new products. The 0.6 percent is the estimate for the total upward bias in CPI inflation.

3 Some might argue that an average bias of 0.6 percent in measured inflation is small enough to be ignored: this would be true if the Bank's formal target was very high, such as 10 percent or more. But with an inflation target of 2 percent, and perhaps a lower one in the future, a bias of 0.6 percent is quite large.

*Assessing the Benefits*

Correcting the CPI bias, some might say, would simply be akin to raising taxes and reducing government spending, so any fiscal benefit to the government would not be a genuine benefit to Canadians overall. This argument arises anytime the government closes existing loopholes in the tax system, and it fails to recognize the economic benefits of a simple and transparent fiscal system that operates in its intended fashion. There is no purpose in retaining a system designed to collect taxes of \$9 and make payments of \$9, only to find that our flawed measurement of the CPI results in tax collection of \$8 and payments of \$10. Better to eliminate the errors in measurement and then adjust our taxing and spending in transparent ways in response to evolving political priorities.

How large a fiscal improvement would result if the CPI bias was eliminated? A precise estimate would require access to detailed tax and expenditure data possessed by the federal government. But a back-of-the-envelope estimate of one component of the government's indexed spending can illustrate the scale. Payments made through Old Age Security are about \$35 billion annually, and they are growing at about 4 percent a year. Half of the growth is due to a rising number of recipients; the other half, to inflation. If the 0.6 percent bias in measured inflation was eliminated, OAS payments would fall by roughly \$210 million a year, without altering the intended purchasing power of seniors' benefits.

Echoed across other programs, fiscal improvement from correcting the CPI bias would amount to hundreds of millions of dollars per year. For a federal government searching for ways to ensure a prudent path back to fiscal balance by 2015/16, a few hundred million dollars per year should look attractive.

What would be required to correct the CPI's measurement? The technical details are for Statistics Canada to address, but the broad outlines are straightforward. To eliminate the existing bias, data on products and consumer expenditure patterns need to be collected more frequently and with finer detail. The measured inflation rate then would more quickly take account of changes in consumer behaviour. There is a fiscal cost to making this improvement, but given the benefits to millions of Canadians, the better foundation for monetary policy, and the improved fiscal room in the federal budget, the direct costs are likely to be very small relative to the overall benefits.

Over the past five years, Jim Flaherty has shown that he is deeply concerned about the quality of economic policy in Canada, and also that he is prepared to make policy decisions in the interest of Canada as a whole. The simple policy recommendation discussed here might generate some objections, not least because some Canadians might argue against the resulting adjustments to their benefit payments. Policy changes often pit gains for one group against losses for another. But the gains available through more accurate measurement of prices and the better conduct of monetary policy extend to all Canadians, far into the future.

Minister Flaherty should adopt this simple policy change in the interests of the majority of current and future Canadians.<sup>4</sup>

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<sup>4</sup> I argue elsewhere (Ragan 2011) that a decision to correct the bias in the CPI should be accompanied by a decision to reduce the Bank of Canada's formal inflation target. If the bias was corrected and the formal target remained at 2 percent, the true rate of inflation would rise from its current level of 1.4 percent to 2.0 percent. Without any formal announcement to this effect, such an increase in inflation would occur by stealth, and should be avoided.

## References

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