Journal of Applied Economics. Vol XIX, No. 2 (November 2016), 249-270

PRICE-LEVEL TARGETING VERSUS INFLATION TARGETING IN A NEW KEYNESIAN MODEL WITH INFLATION PERSISTENCE

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Submitted June 2015, accepted May 2016

We compare Price-Level Targeting (PLT) versus Inflation Targeting (IT) using a New Keynesian model, which exhibits inflation persistence (as a result of partial indexation to lagged inflation). We find that, for standard values of the underlying parameters, (i) the loss associated to macroeconomic volatility may decrease about 29% by switching to PLT, (ii) a wide range of values for the weight given by the PLT central bank to output stabilisation allows to attain higher levels of social welfare, (iii) the higher the price rigidity the wider the range over which PLT outperforms IT, but the lower the welfare gain, and (iv) only when the level of indexation is higher than 65% it becomes better not to switch to PLT.

JEL classification codes: E52, E58
Key words: inflation targeting, price-level targeting, indexation, macroeconomic stability

I. Introduction

Since the adoption of Inflation Targeting (IT) by New Zealand in 1990, a growing number of countries have implemented this regime to conduct monetary policy (27 countries according to Hammond 2012). However, in recent years the financial

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crisis and the new challenges facing monetary policy have led to a re-examination of IT (Walsh 2011).

In 2006, the Bank of Canada, one of the IT countries, focused part of its research efforts on the exploration of an alternative regime known as Price Level Targeting (PLT), which intends to stabilise the economy's price level (rather than inflation) around a predetermined path.[1] In 2011, the Bank of Canada finally decided to stick with IT. An important reason was that IT has served Canadians well (Ragan 2011), and therefore the decision was in the spirit of the idea that 'one should not fix something that does not appear to be broken.'

The fact that IT works well does not imply that an alternative regime cannot work better. PLT is a good candidate to replace IT due to its potential benefits: decreasing long-term price level uncertainty, increasing short-term macroeconomic stability and reducing the probability and impact of Zero Lower Bound events.

Vestin (2006) and Roisland (2006) have shown that the optimal policy under commitment (also known as the timeless-perspective policy) can be implemented by assigning a price-level target and the appropriate weight on the output target to a central bank that acts under discretion. Consequently, at least from a theoretical perspective, PLT can outperform IT under discretion.

However, as the Bank of Canada remarks, there is uncertainty about the possibility of realising these theoretical advantages in practice (Bank of Canada 2011). The benefits of PLT stem from its ability to provide an anchor for the level of prices such that inflation expectations help to stabilise the economy, and therefore this regime requires a high degree of credibility and a significant proportion of agents with forward-looking expectations.

In the recent academic literature there is still an ongoing debate on whether or not PLT has possibilities to replace IT. Ambler (2014), for instance, considers that the problem with PLT is that while it entails a certain degree of commitment to the future course of monetary policy, central banks strongly prefer to

[1] This path may have a positive slope, and hence PLT does not necessarily imply a zero-inflation target. In many PLT models (including those of the present paper), as is common in IT models as well, it is assumed that there is a long-run zero-inflation target for the sake of simplicity, without trying to suggest that this is the optimal target. As some previous works have pointed out, a target of zero inflation may impose high costs in terms of social welfare (e.g. Akerlof, Dickens and Williams 1996; Caraballo and Dabús 2013).