Impact of Foreign Prices and Interest Rates on Canadian Economy under Alternative Monetary and Exchange Rate Regimes

Part I

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Abstract: The main objective of this paper is to analyze the impact of U.S. short- and long-term monetary policy under both flexible and managed floating systems, using the new CANDIDE Model 2.0. We have also examined the role of domestic monetary policy in the Canadian economy under both fixed and flexible exchange rate systems.

The following are some of the important findings of our study:

1. Our results support the traditional view that under the fixed exchange rate regime, monetary authorities cannot successfully pursue an independent monetary policy from its trading partners—an effort to increase money supply will be almost offset by increases in the balance of payments deficit.
   In contrast, in the flexible exchange rate regime, monetary policy is more effective in producing an increased growth in output and employment. However, the increased output growth comes at the cost of higher prices induced by increased wages and a depreciation of the Canadian dollar.

2. Our results suggest that the impact of U.S. interest rates on investment, GNE, employment, productivity, and government debt is less severe in a pure floating exchange rate regime, compared to the managed floating system. However, the impact of U.S. interest rate policy on the Canadian inflation rate is worse in the case of flexible exchange rate regime. Even though real income and inflation are less favourable in both cases, our results indicate a trade-off between output growth and inflation.

3. Our results imply that under a pure floating monetary authorities can determine the long-run rate of inflation in Canada independent of others. However, the United States and Canadian economies are interrelated during the adjustment process, even under the flexible exchange rates, through the terms of trade and the wage-price spiral channels.

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1. Introduction

It is often maintained that under flexible exchange rates, even a small open economy like Canada can conduct its monetary policy independent of its major trading partners, and that under flexible exchange rates economic disturbances originating outside Canada can be absorbed by changes in the exchange rate, so that they do not have disturbing effects on the Canadian economy. However, in recent years (especially in the post-oil embargo period), we did see a high degree of synchronization in fluctuations in unemployment and inflation among the countries in the world. Of course, this is partly because the flexible exchange rate system we observe in reality is not purely floating, but a highly managed regime.

In spite of high unemployment and sluggish economy, in the last two and half years, the Bank of Canada has raised its lending rate several times (approximately 700 base points), in response to increase in U.S. short rates, caused by changes in U.S. monetary policy to support the U.S. dollar in the world money market. The alternative monetary policy is not to raise Canadian short rates (especially in view of the sluggishness in the economy), but to allow the Canadian dollar to vary in response to variations in capital flows caused by the narrowing of the U.S. — Canadian interest rate differentials. Canada, being a small open economy, depreciation of the dollar would raise the prices of traded goods (exports and imports), resulting in a higher inflation. This in turn could set in motion a wage-price spiral, which could further depreciate the dollar (the vicious circle hypothesis). The objective of this paper is to analyse the impact of the U.S. short- and long-term monetary policy on Canadian economy under both flexible and managed floating systems, using the new CANDIDE Model 2.0. This would enable us to evaluate the trade-offs involved in pursuing the alternative monetary and exchange rate policies. The following are some of the specific objectives of this paper:

a) To outline the basic structure of the financial sector of the new CANDIDE Model 2.0.
b) To discuss some of the important linkages between the real and the financial sectors of the model.
c) To evaluate the effectiveness of monetary policy in Canada under both fixed and flexible exchange rate regimes.
d) To evaluate the impact of U.S. short term monetary policy under both flexible and managed floating systems.
e) To investigate the role of foreign inflation, caused by U.S. monetary policy on Canadian economy under both accommodating and nonaccommodating (following a monetary rule) monetary policy.

The plan of the paper is as follows:
Section 2 discusses the structure of financial sector of the new CANDIDE Model 2.0.
Section 3 discusses the important feedbacks between real and financial sector of the CANDIDE Model 2.0.
The role of monetary policy in the Canadian economy under both fixed and flexible exchange rates is analysed in Section 4.