Abstract: This paper presents a simple macroeconomic model that includes all of the main channels of transmission for fiscal policy and that can generate either Keynesian or monetarist results for the impact of fiscal policy depending on the values assumed for particular parameters. The structure of this model, called KEMO for KEynesian-MOnetarist, was kept very simple and schematic. The objective of this paper is to examine through simulations of the model the degree of sensitivity of the fiscal multiplier to certain hypotheses concerning the way the economy functions and the value of certain parameters, as well as the dynamic process of adjustment of the economy to a fiscal shock.

1. Introduction

For many years one of the most controversial stabilization policy questions has been whether or not discretionary changes in fiscal policy can have a significant and lasting effect on the level of economic activity during periods when unemployed resources are available. Economists are extremely divided on this question. On the one hand, there are the Keynesians, who believe that fiscal policy is an effective instrument of stabilization. On the other, there are the monetarists, who believe in the predominant role of the money supply in the determination of national income and who argue

1) A french version of this paper was presented at the annual meeting of the Société Canadienne de science économique which was held from May 14 to 16, 1980 at Laval University in Quebec City. We would like to thank Erik Hansen and Chris Georgas for the comments and assistance they provided to us in preparing this paper. Thanks are also due to two anonymous referees and the managing editor of this Journal for useful suggestions which have significantly improved the contents of this paper. However, none of the individuals mentioned is responsible for any remaining errors which are the sole responsibility of the authors. The views expressed in this paper are the authors' and no responsibility for them should be attributed to the Department of Finance. Those interested in using the model for its pedagogical value should contact the first author for obtaining the model and its data.

that fiscal policy action, not accompanied by an accomodating monetary policy, can only have a temporary and insignificant impact on output.³

To support their case, the Keynesians point to the results of simulations with large macro-econometric models which show that fiscal policy initiatives have a significant and lasting impact on the level of activity.⁴⁵) The monetarists, for their part, do not regard the results of these simulations as very convincing evidence. According to them, the simulations only reflect the nature of the models, which, being Keynesian in structure, ignore too many links which exist among the different sectors of the economy and which work to reduce the impact of fiscal policy on the economy even in the short-run.⁶)

To measure the real effect of fiscal policy, the monetarists propose, as an alternative, a simple reduced form model in which the determination of national income is explained in terms of a distributed lag on the money supply and government expenditures.

³) A corresponding issue of disagreement is the degree of effectiveness of monetary policy. While neo-keynesians would not deny that monetary policy is important, they hold the view that it is not the only effective stabilization tool. Econometric models in the keynesian tradition generally produce the result that monetary changes and changes in nominal GNP do not have a one to one relationship [see, for example, Bank of Canada and Department of Finance]. On the other hand, the reduced-form monetarist models do indicate a one to one relationship between changes in money and GNP [see, for example, Carlson, 1978]. One of the authors, Sheikh, 1982, has used the KEMO model presented in this paper to study the effectiveness of monetary policy. The model generates monetarist results of homogeneity under a specified set of assumptions.

⁴) In all of the large macro-econometric models of the Canadian economy, the real multiplier for expenditures on government goods and services is positive. It is even greater than one for the first four years in most of them, notably in RDX2, RDXF, QFS, TIM, CANDIDE, TRACE, QFM and DRI [see Hellwell/Maxwell/Waslander; Department of Finance; Bank of Canada and Department of Finance]. In the long run, there is a progressive decline in the real multiplier in these models, but in no case is there a decline in the nominal multiplier. In this context it is worth noting that the monetarist hypothesis of no impact of fiscal policy on nominal output is, under certain conditions, inconsistent with the stability of the system. This has led such authors as Blinder/Solow [1973] and Tobin/Buiter [1976] to conclude that fiscal policy is even effective in the long-run.

⁵) A number of econometric models produce the result that real fiscal multipliers tend towards zero in the long run. However, zero multipliers in the long run still represent non-zero cumulative impacts of fiscal policy on real output. For example, for the relevant period of analysis, say five years after the shock, all Canadian econometric models produce positive multipliers. These models include QFS (of the Department of Finance), RDXF (of the Bank of Canada), CHASE (of Chase Econometric), DRI (of Data Resources Inc.), FOCUS (of the University of Toronto), TIM (of the Informetrica Ltd.), CANDIDE (of the Economic Council of Canada) and MACE (of the University of British Columbia) [see Bank of Canada and Department of Finance for details]. Even after 10 years, all these models produce positive multipliers, with the exception of CHASE, which produces zero multipliers, and FOCUS and MACE which produce slightly negative multipliers not large enough to offset the positive impacts in earlier years.

⁶) The monetarists stress, among other things, the interaction between the financial and real sectors. The influence of financial variables in Keynesian models is, according to them, both too restrictive and too indirect: too restrictive because they do not take into account substitution between money and financial assets; and too indirect because they are limited to a transmission through interest rates and do not allow for wealth effects [see Carlson, 1974; Carlson/Spencer].