UNANTICIPATED MONEY, OUTPUT, 
EMPLOYMENT AND PRICES IN A DEVELOPING ECONOMY: 
THE KOREAN CASE

YOUNG GEOL LEE 
Economic Planning Board 

BEN-ZION ZILBERFARB* 
Bar-Ilan University

This paper examines the effect of unanticipated money on output, unemployment and prices in Korea. The empirical results tend to reject the policy ineffectiveness proposition (PIP) in most cases. They show that both anticipated and unanticipated money affect output and prices, in contrast with the PIP. Mixed results are obtained for the effect of monetary variables on unemployment. The statistical results show that the regular OLS two step estimates yield t values which are upward biased by 0-27% as compared with the consistent estimates of the variance-covariance matrix that are obtained in this study. [E 51]

1. INTRODUCTION

The rational expectations revolution in macroeconomics has produced some far reaching conclusions about policy. Lucas (1973) and Sargent and Wallace (1975) have introduced the policy ineffectiveness proposition (PIP, hereafter) which argues that only unanticipated changes in monetary policy can affect real macro variables (output and employment). Barro (1978) extends the analysis to show that there is a one to one contemporaneous link between anticipated money and the price level. The empirical validity of the PIP has been the subject of many studies which have focused almost exclusively on the U.S. and other industrial countries, with mixed results.

Some of the crucial assumptions of the PIP are not necessarily valid for developing economies. A large degree of government intervention in these countries may hinder quick adjustment of wages and prices preventing market clearing. It is therefore quite surprising that relatively little attention has been given to developing countries. Again, the empirical results differ widely. However, virtually all of the studies of developing economies suffer from a bias in their variance-covariance estimates leading possibly to inappropriate inference.1 The present study attempts to correct this

*We would like to thank an anonymous referee for helpful comments and Joseph Deutsch of Bar-Ilan University for providing us with his computer program for the two-step estimation technique.

1This bias is extensively discussed in Pagan (1984).
problem and throw more light on the validity of the PIP in developing countries by examining for the first time the Korean case. It applies a two step estimation technique, recently proposed by Murphy and Topel (1985), to avoid the econometric problems in previous studies of developing economies and get consistent estimates of the variance-covariance matrix.

The organization of the paper is as follows: the second section summarizes briefly the existing evidence in developing countries. The econometric problems and the estimation technique are described in section three. The empirical results are provided in section four, followed by some concluding remarks.

2. THE EMPIRICAL EVIDENCE IN DEVELOPING COUNTRIES

Most of the studies of the PIP, in developing countries have focused on Latin American economies. The results have been quite mixed. Barro (1979) finds for the Mexican case that both anticipated and unanticipated money affect output, in contrast with the PIP. Similar results are obtained by Hanson (1980) for five Latin American countries, but his results are disputed by Edwards (1983). Seehey (1984), in his study of Latin American countries, finds that both anticipated and unanticipated money affect output in two countries, only anticipated money affects output in another two cases, and the PIP holds only for one country. Different results are reported by Attfield and Duck (1983), who find that unanticipated money affects output in four Latin American countries and the Philippines. Similar results for the Philippines are obtained by Chopra and Montiel (1986). The Greek case has been examined in two studies with extremely opposite results. While Alogoskoufis (1982) finds that only unanticipated money affects output, Paleologos (1986) finds that only expected money has an affect on output! A recent study by Beladi and Samanta (1988) rejects the PIP for the Indian case. This short summary reflects a wide difference in the empirical results and highlights the need for additional empirical evidence.

All of the above studies (with the exception of Attfield and Duck, 1983) implement a two step procedure which yield consistent estimates of second stage parameters, but incorrect standard errors. Some of these studies acknowledge this problem (e.g., Alogoskoufis, 1982 and Paleologos, 1986), but are unable to follow either Leiderman’s (1980) suggestion and use full information maximum likelihood estimates or Mishkin’s (1982) non linear least squares procedure because of lack of enough observations. More often the econometric problem is ignored and in some cases (e.g., Chopra and Montiel, 1986), the authors erroneously claim that the problem is merely one of efficiency. In this study a simple method, suggested by Murphy and Topel (1985), will be used to obtain consistent estimates for the variance covariance matrix of the second stage.