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# Evaluating the effect of IMF lending to low-income countries

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## Abstract

The purpose of this paper is twofold: to apply to a group of low-income borrowers from the IMF, the most commonly used technique for measuring the independent effects on economic developments of IMF support; and to develop a minimum set of diagnostic tests for determining whether necessary conditions for using the methodology exist. The modified control-group methodology is used to measure the effect of IMF support on three key variables — output growth, inflation, and the external debt/service ratio. The sample comprises adjustment programs begun during 1986–1991 supported by the IMF's Enhanced Structural Adjustment Facility (ESAF). The distinguishing feature of the modified control-group approach is the estimation of a policy counterfactual — policies that would have been followed in the absence of IMF support against which to compare actual policies and resulting outcomes. Using this approach for the ESAF, the sample reveals statistically significant beneficial effects of IMF support on output growth and the debt/service ratio but no effects on inflation. Diagnostic tests of these results, rarely if ever reported in the literature, are shown to be critical in interpreting the validity of the results of assessments of adjustment lending. For this sample, at least, the diagnostic tests cast doubt on the reliability of estimates of the effects of IMF-supported programs using panel data in a modified control-group model. The most obvious and manageable modifications to the

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model do not overcome its basic weaknesses. © 2000 Elsevier Science B.V. All rights reserved.

## 1. Introduction

Evaluations of macroeconomic programs supported by international financial institutions (IFIs) do not all address the same question. Some look at the design of such programs to see if they represent ''best practices'' for correcting countries' macroeconomic problems. Others examine whether programs are effectively implemented. Another question that has attracted attention recently is whether IFI support has significant independent effects; i.e., does it bring about developments significantly different from those that would have occurred in the absence of support from the IFI in question? This is a difficult question to address because it requires the construction of a counterfactual indicating what policies and outcomes would have been in the absence of IFI support. The independent effects are then calculated as the difference between outcomes that would have occurred in the absence of IFI support and actual outcomes.

Since the mid-1980s, several papers have considered how to construct a counterfactual for such exercises and how to address other problems in identifying independent effects of IFI-supported programs. In particular, differentiating the effects of the counterfactual policies from exogenous developments, initial conditions and IFI support. The methodology that has been most widely applied was developed by Goldstein and Montiel (1986) by adapting techniques from the literature on labor training evaluation. Essentially, this technique, referred to as the General Evaluation Estimator (GEE) or modified control group, involves using policy reaction functions estimated for countries that did not have support from a particular IFI to approximate the counterfactual for countries that did have IFI backing for their program. [1] The GEE is a potentially powerful technique, although, as Goldstein and Montiel point out, it entails many restrictive assumptions; e.g., it must be possible to characterize macroeconomic policy choices in a relatively simple reaction function based on quantifiable data, and it must be credible that the reaction functions estimated for countries that do not receive IFI support describe the counterfactual for countries that do receive such support.

The purpose of this paper is both to apply the GEE methodology to data for low-income countries eligible for the IMF's Enhanced Structural Adjustment

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[1] Applications of the GEE can be found in Greene (1989), Khan (1990), Faini et al. (1991), Corbo and Rojas (1992) and Conway (1994).