Econometric Methods for Analyzing Economic Development

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A volume in the Advances in Finance, Accounting, and Economics (AFAE) Book Series

BUSINESS SCIENCE Reference
An Imprint of IGI Global

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high inflation regimes. Further investigation suggests that for the WAEMU countries, but not for the CEMAC countries, the level of investment is the channel through which inflation nonlinearly affects economic growth. One of the main contributions of this chapter is to enable the policymakers, specifically central bankers in each zone, to concentrate on those policies that keep the target of inflation, which may be helpful for the achievement of sustainable economic growth. Low inflation is also helpful for minimizing the uncertainties in the financial market, which in turn boost the investment in the country.

In South Africa, as elsewhere, economists have not reached an agreed upon model for the Phillips curve, despite its importance for understanding the process of inflation and its relevance for policy makers. It has been a particular challenge to identify the role of aggregate economic activity in the inflationary process in the South African literature, since the breakdown of a reasonably traditional Phillips curve, which had existed until the early seventies. A comparatively new model of the Phillips curve, often called the New Keynesian Phillips Curve (NKPC), has recently received considerable interest and support from monetary economists. The South African literature is exceptional in that these models have not yet been applied locally, despite their close association with forward looking and rules-based monetary policy regimes such as the inflation-targeting regime of the South African Reserve Bank. This chapter takes a first step towards introducing the NKPC in the South African debate, by estimating standard, hybrid, and open economy versions of the model and comparing the results with the international literature as well as South African precedents. The authors find encouraging, though tentative, evidence that research along these lines might help to identify the impact of aggregate economic activity in the domestic process of inflation.

Section 2
Development and Equity

Data from two Household Budget Surveys in 1991-1992 and 2000-2001 in Tanzania indicate that there is no change in inequality between the two surveys. In spite of this finding, and impressive macroeconomic gains, there is growing discontent throughout the country because of the belief that the change from socialist to market policies has worsened income inequality. In this chapter, the authors argue that the Gini index fails to capture some inconspicuous trends in the income distribution, particularly the problem of polarization across space. Using polarization measures based on point density estimation of alienation and identification, they analyze changes in the distribution of household income in Tanzania in the 1990s. Unlike analyses that rely on the Gini index, the authors find that polarization increased significantly between 1992 and 2001. They also find evidence of increased spatial variability across regions and lack of spatial convergence of household incomes.

Income inequality and poverty in Nigeria are closely related. This chapter analyzes the contributions of income sources and socio-economic factors to income inequality, and estimates the contributions of income redistribution and growth to poverty reduction. Household survey data obtained from the National Bureau of Statistics (NBS) are used. Results show that in 2004, income inequality was higher in rural than in urban areas. Wage and non-farm income made the largest contributions to urban income inequality, while agricultural and wage incomes contributed most to rural inequality. Household size, urbanization, and education significantly increased income inequality, while age, paid/salaried jobs, and non-farm enterprises decreased it ($p<0.05$). Between 1998 and 2004, income redistribution reduced poverty but income growth increased it. The authors therefore recommend that welfare enhancing programs that benefit the poor should be identified and that better economic opportunities should be created for those in rural areas.

This chapter proposes a new class of inequality indices based on the Gini coefficient (or index). The properties of the indices are studied and are found to be regular, relative, and to satisfy the Pigou-Dalton transfer principle. A subgroup decomposition is performed, and the method is found to be similar to the one used by Dagum when decomposing the Gini index. The theoretical results are illustrated by case studies, using Cameroonian data.

Although studies on health care demand have previously been conducted in Kenya and elsewhere in Africa, it has hitherto not been shown how health seeking behavior conditional on illness is affected by information on health care quality and by quality variation conditional on that information. This study develops and tests the hypothesis that the information available on service quality at a health facility significantly affects demand for health care, and therefore, parameter estimates that ignore information available to patients about service quality might be biased. The authors highlight the need for public provision of such information. They also draw attention to a potential limitation of demand analysis in the design and implementation of health care financing policies.

sifications such as the BEA Regions, Crone's (2005) Economic Regions, the Census Regions, and the Federal Reserve Districts. Looking specifically at the empirics of regional growth both in a traditional β-convergence setting as well as a dynamic panel setting, the author examines the explanatory power of regional differences in economic structure such as industry concentration, employment specialization, and sectoral diversity.

Section 4
Technology, Natural Resources, Energy, and Growth

Kenya is a small open economy that depends on energy for growth. Since independence in 1963, it has experienced tremendous urban and rural population growth, placing an increasing strain on energy resources and economic development. Therefore, in this chapter the relationship between urban and rural populations, economic development, and energy use is studied. The empirical analysis uses a vector autoregression framework. The Granger Causality test results suggest unidirectional causality running from urban population to GDP. The vector error decomposition results imply that urban growth will continue to play a major role in energy consumption in Kenya.

Input-output analysts are often confronted with requests for impacts assessments for economic shocks that stretch uncomfortably the assumptions of standard input-output modeling. This chapter presents an approach to confronting a subset of these challenges straightforwardly in a way that ameliorates some of the more restrictive input-output assumptions, maintains the inter-industry detail of the input-output model, and enhances the representation of certain economic behaviors without the additional complexities of moving to more complex computable general equilibrium or conjoined econometric input-output models. The authors conclude with the observation that direct changes to the input-output framework most often necessitate further modifications requiring additional behavioral assumptions and decisions on the part of the modeler.

Sub-Saharan Africa (SSA)'s natural resource base constitutes the sub-continent's greatest asset. These Natural Resources (NRs), both renewable and non-renewable, are the backbone of the continent as they play very critical functions in the livelihood strategies of the people. There are a wide range of questions and issues concerning the proper management of these NRs. One of the issues relates to the economics of resource preservation, which includes questions associated with the quantifiable benefits of resource preservation, the environmental costs and benefits of Soil and Water Conservation (SWC) strategies, the economic impact of land use changes, and valuation of ecosystem goods and services. The other