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ESSAYS ON PUBLIC FINANCE AND ECONOMIC GROWTH USING DYNAMIC GENERAL EQUILIBRIUM MODELS

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ABSTRACT

This thesis comprises of six independent chapters, besides the introduction and conclusions, with the common theme of optimal public policies in dynamic general equilibrium models with different kinds of distortions. Broadly speaking, the issues considered are: tax evasion, bureaucratic corruption, costs of tax collection and endogenous probability of survival.

With financial repression being modeled via obligatory reserve requirements that banks in the economy need to hold, the second chapter analyzes whether financial repression can be explained by endogenous tax evasion. In this regard the chapter develops two dynamic monetary general equilibrium endogenous growth models. When calibrated to four southern European countries, we indicate that higher degrees of tax evasion emanating from higher corruption and lower penalty rates would result in financial repression as a welfare-maximizing outcome. The third chapter develops an overlapping generations monetary endogenous growth model characterized by tax evasion, and analyzes the effect of the nature of tax evasion on the growth maximizing policies. It is concluded that a growth-maximizing government has to take the behavioral nature of tax evasion into account, since failure to do so will lead to misalignment

in not only fiscal but also monetary policies. In fact, the government is found to repress the financial sector more than the optimal level if it treats tax evasion as exogenous. The fourth chapter develops a dynamic general equilibrium overlapping generations monetary endogenous growth model of a financially repressed small open economy characterized by bureaucratic corruption, and uses it to analyze optimal policy decisions of the government following an increase in the degree of corruption. We find that increases in the degree of corruption should ideally result in a fall in seigniorage, as an optimal response of the benevolent government. In addition, higher degrees of corruption should also be accompanied with lower levels of financial repression. Chapter five develops a production-economy overlapping generations model characterized by financial repression, purposeful government expenditures and costly tax collection, to analyze whether financial repression can be explained by the cost of raising taxes. It is shown that costs of tax collection cannot produce a monotonic increase in the reserve requirements, what are critical, in this regard, are the weights the consumer assigns to the public good in the utility function and the size of the government. Chapter six analyzes the same issues as in the previous chapter, but in a monetary endogenous growth model. We show that higher costs of tax collection produce a monotonic increase in reserve requirements. Moreover, the government tends to rely more on indirect taxation, compared to direct taxation as costs of tax collection increase. The seventh chapter develops a simple monetary pure-exchange two-period overlapping generations model characterized by financial repression and endogenous mortality. The probability of survival of the young agents is assumed to depend upon the share of government expenditure on health, education and infrastructure. In this setting, we analyze the

welfare-maximizing policy mix between explicit and implicit taxation for a benevolent government. We show that increases in the survival probability lead to an increase in the reliance on seigniorage as a welfare maximizing outcome. However, for our results to hold, the seigniorage tax base must be large enough for the benevolent planner to use the inflation tax.

Each of the chapters aims to provide the theoretical underpinnings behind the design of optimal fiscal and monetary policies under tax evasion, bureaucratic corruption, costs of tax collection and endogenous probability of survival. With each of the models based on proper microfoundations and calibrated to match features of developing economies, the six independent papers attempt to broaden our understanding on public policies in the presence of commonly observed distortions that characterize the developing world.

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Doctor of Philosophy Thesis

ESSAYS ON PUBLIC FINANCE AND ECONOMIC GROWTH USING DYNAMIC GENERAL EQUILIBRIUM MODELS

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2008

To my dearest daughter, Panashe Faith, this one is yours as I promised when you were born.

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paper in the ERSA working paper series (no. 99) and also in the Economic Notes-Review of Banking, Finance and Monetary Economics, volume 37 issue number 2, pages 141-154. In this regard, I would like to thank the respective anonymous referees for their valuable comments and suggestions. The preliminary results of chapter four were presented at the Economic Research Southern Africa (ERSA) macroeconomic workshop held in Cape Town in February 2008. For this, I am grateful to ERSA for their invitation and financial support. I also thank the participants at this workshop for their valuable comments and suggestions. I also want to thank the Department of Economics at University of Johannesburg for inviting me to present the seventh chapter of this thesis in their seminar series in September 2008.

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