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ESTIMATING THE VOLUME OF THE HIDDEN ECONOMY IN YEMEN, 1995-2009:
EVIDENCE FROM ARDL APPROACH OF COINTEGRATION

By
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ABSTRAK

Knowing the size of the hidden economic activities is very important for economists as well as policy makers for economic development and planning. The expansion of the activities in hidden economy has become a competing economy with the official activities. This study aims to shed light on the hidden economy’s phenomena in Yemen as a one of the least developing countries. It attempts to measure the size of the hidden economy based on the size of tax evasion by measuring the currency in circulation and the ratio of newly-printed banknotes to the public expenditure. The study uses quarterly data over the period of 1995Q1 to 2009Q4. In this study, the ratio of newly-printed banknotes to the public expenditures which are issued increasingly by monetary authorities over the period are as indicative a wrong monetary policies in Yemen. The study investigates whether there is a long-run relationship in the money demand function which is used as a measurement of the Yemen’s hidden economy. The ARDL bound testing approach for cointegration test is adopted in this study. The empirical results show that there is a unique and stable long-run relationship among currency in circulation and its determinants, which indicates a growing activities of hidden economy in Yemen. It confirmed that the growing of the hidden economy is associated with the weakness in the tax system and corruption in Yemen. The average volume of the hidden economy related to the official GDP has grown steadily from 78.25% in 1995 to 94.1% in 2009. The results also reveal that after incorporating the CUSUM and CUSUMSQ tests, the Yemen’s money demand function is stable between 1995:1 and 2009:4.

**Key words:** Hidden Economy; Currency Demand Approach; ARDL Technique of Cointegration
Dedication

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LIST OF ABBREVIATIONS

ADF  Augmented Dickey-Fuller procedure for a unit root-testing
ARDL  autoregressive distributed lag model for cointegration
CBY  Central Bank of Yemen
CDA  Currency Demand Approach
CUSUM  Cumulative Sum of Recursive Residuals
CUSUMSQ  Cumulative Sum of Squares of Recursive Residuals
DAC  Development Assistance Committee
DWDurbin--Watson statistic for autocorrelation or serial correlation
GDP  Gross Domestic Product
GNP  Gross National Product
GNI  Gross National Income
HE  Hidden Economy
IMF  International Monetary Fund
JBJarque-Bera statistic for normality
LDC  Least Development Countries
LNGP  liquid natural gas project
LMBreuschi-Godfrey of Lagrange Multiplier test for autocorrelation
MIMIC  Multiple indicator multiple cause method
OECD  Organisation for Economic Co-operation and Development
SBC  Schwarz Bayesian Criterion
RESET  Ramsey RESET Regression Equation Specification Error Test
USA  United States of American
WH  White-test for heteroscedasticity
WBIDA  World Bank’s International Development Agency
YNIA  National Income Account of Yemen
YNIC  National Information Center of Yemen
CHAPTER ONE

BACKGROUND OF THE STUDY

1.1 Introduction

During the last two decades hidden economic activities have held an interest among economists and academic researchers. The hidden economy has been increasing from year to year and the expansion of hidden economy has become a competitor to the official economy for each economy around the world. The sizes of these hidden economies of some developing countries are quite large compared to the volumes of its official economies (Schneider & Enste, 2000). In this context, as one of the least developing countries, Yemen is one of the poorest countries in the world under the Development Assistance Committee (DAC) categories of the Least Developed Countries (LDC) has a large hidden economy. The high population growth, slow economic development, declining oil resources, very low water resources, poor standard of public health, education and widespread poverty in particular among rural population are the main obstacles for the economic development of Yemen (Nonneman, 1995; Diehl, 2008).

In addition, the expansion of a corruption is a major problem in Yemen, and is in particular so in the overstuffed and underpaid government bureaucracy. Chief illicit practices include soliciting bribes, evading taxes, and nepotism (favoring relatives, particularly in hiring). Despite the government has taken a tough stand against corruption, but with little success (Nations encyclopedia, 2011). Therefore, by referring to this economics environment, increasingly Yemen suffers from a growing of the hidden economic activities from year to other (Nonneman, 1995).
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Ministry of finance. (2009). *Bulletin of Government Finance Statistics /Quarter 4, 2009*. Retrieved on Sep. 2, 2011, from: http://www.yemen.gov.ye/portal/finance/%d8%a7%d9%84%d8%a5%d8%b5%d8%af%d8%a7%d8%b1%d8%a7%d8%aa/tabid/2577/defaul t.aspxpdf.


