

Training Workshop on the Commitment to Equity Methodology
Commitment to Equity Institute, Tulane University and The Ministry of Finance, Ghana

February 7-10, 2017

Background

Most governments profess a desire to reduce poverty and inequality. Ghana is no exception. One of the ways that government influences the distribution of income, and thus poverty and inequality, is through its taxation and spending policies. This workshop presents methods to analyze the consequences of government taxation and spending for the distribution of income.

Common questions that are of interest to policy-makers and the public include: (i) What is the impact of taxes and transfers on inequality and poverty? (ii) Are the poor helped or hurt by the fiscal system? (iii) What is the contribution of specific fiscal interventions to the overall impact of public policy on poverty and inequality? (iv) How progressive is public spending on education and health? (v) How effective is the fiscal system in reducing inequality and poverty? (vi) How much additional fiscal and redistributive effort is required to end extreme poverty? (vii) What is the impact on inequality and the poor of fiscal policy reforms?

To help governments answer all of these questions, the Commitment to Equity Institute at Tulane University has developed a diagnostic tool to identify the main constraints that prevent effective poverty and inequality reduction via tax and benefit policies in a set of countries across different regions of the world.¹

The diagnostic tool—the *Commitment to Equity Assessment*—relies on a comprehensive fiscal incidence analysis designed to assess how taxation and public expenditures affect income inequality, poverty, and different socioeconomic groups. Assessing both sides of the fiscal ledger will give a clear picture of which groups are net beneficiaries of the fiscal system. Assessing the incidence of taxes is important because those who actually bear the burden of taxes (economic incidence) can be quite different from those who are legally liable to make payments to tax authorities (statutory incidence). Establishing the incidence of government expenditures is equally important as public spending benefits households to different extents. While conducting tax and benefit incidence analyses separately provides important insights, their combination makes for a powerful tool. Fiscal incidence analysis strives to determine the overall impact of the budget on inequality and poverty, and to identify the net contributors/ receivers of the entire fiscal system.

The CEQ Institute has conducted assessments in many countries around the world, including Ghana. A key goal of the Institute is to make its analytical tools readily available to users everywhere so that equity assessments become a regular part of public policy analysis.

¹ Launched in 2008, the Commitment to Equity (CEQ) project is designed to estimate the impact of fiscal policy on inequality and poverty. In May 2015, Tulane University created the Commitment to Equity Institute. The Institute has received the generous support of the Bill & Melinda Gates Foundation. For more information, visit www.commitmenttoequity.org.

Objective

In practice, fiscal incidence analysis is quite complex given the limitations in existing information, the importance of taking into account behavioral responses, and the ambiguity surrounding the definition of certain concepts. The objective of this workshop is to present the Commitment to Equity methodology, along with early evidence from recent studies.

Over the course of four days, the event will target Ministry of Finance staff. The first day of the course will feature presentations on theory and the methodological building blocks for the analysis. It will stress the strategic thinking in putting the pieces together and focus on the conceptual decisions that need to be made along the way. The remaining days will feature hands-on training with examples from the 2005/06 round of the Ghana Living Standards Survey (GLSS-5).

Pre-workshop Preparation

Participants need to prepare for the workshop in three ways:

1. they should have a good command of Stata skills as most of the work will involve a variety of hands-on exercises using this software along with GLSS-5 data. A Stata 13 or 14 license is required; earlier versions do not have some features used by the CEQ Stata commands;
2. they should read important sections of the CEQ Handbook beforehand; and
3. they should familiarize themselves with the GLSS-5 survey.

Without these skills and background, it will be very difficult to follow the training course.

Stata skills

Here are four websites with introductory material on Stata:

Carolina Population Center Stata Introduction:

http://www.cpc.unc.edu/research/tools/data_analysis/statatutorial/index.html

Germán Rodríguez' Stata Introduction:

<http://data.princeton.edu/stata/>

Christopher Baum's Stata Introduction:

<http://fmwww.bc.edu/GStat/docs/StataIntro.pdf>

Stata's documentation (also available on your pc as pdf's when you install Stata):

<http://www.stata.com/features/documentation/>

Stata's own documentation is comprehensive, as you would expect, but it can be difficult to navigate for a beginner. It may be better to start with the other sites. I recommend starting with Germán Rodríguez' introduction (you may skip the sections titled "Graphics" and "4.3 Writing commands"); then go to the Carolina Population Center's introduction (you may skip the sections titled "Reshaping," "Graphics," "Logistic Regression," "Dummy Variables," "Shrinking large files," "parmest command," and "loopwing with while.") Finally, review Christopher Baum's introduction (you may skip slides 78-96, 106-114, and 117 to the

end.) As you review these materials, focus on the data management aspects of Stata – how to load files from the disk; how to save files to the disk; how to merge files – and also the programming aspects – do files, log files, locals and globals.

CEQ Handbook

The CEQ Handbook gives a detailed explanation of how to conduct a CEQ assessment and how to interpret the results. The handbook is available at: <http://www.commitmenttoequity.org/publications/handbook.php> The full reference is:

Lustig, Nora, editor, *Commitment to Equity Handbook. A Guide to Estimating the Impact of Fiscal Policy on Inequality and Poverty*, CEQ Institute, Tulane University, forthcoming.

The handbook is quite detailed and you will not need to read all of it before the course begins. You should, however, read these chapters: Introduction, chapter 1, chapter 5, and chapter 7.

GLSS-5 Survey Data

General information about the GLSS-5 is available in Ghana Statistical Service, 2008, “Ghana Living Standards Survey, Report of the Fifth Round (GLSS 5)” provided to you in glss5_report.pdf. You will also need to familiarize yourself with the questionnaire used to interview each household. The key parts of the questionnaire for our purposes are found in G5QPartA.pdf, G5QPartB.pdf, and G5Q10.pdf.

Training Workshop on the Commitment to Equity Methodology Agenda

Day 1: Introduction to Fiscal Incidence Analysis and the Commitment to Equity Assessment Tuesday, February 7

- 9:00 – 9:15 am** **Welcome and Introductions**
<someone from MOF should do this>
- 9:15 – 10:30 am** **Introduction to CEQ**
About the Institute and the CEQ Assessments; an example from Ghana; comparisons to other countries
- 10:30-11:00pm** **Coffee**
- 11:00–12:30pm** **Theoretical Highlights of Fiscal Incidence Analysis**
What is fiscal incidence analysis: measuring the impact of fiscal policy on inequality and poverty; measuring fiscal impoverishment; measuring marginal contributions; measuring effectiveness
- 12:30 – 2:00 pm** **Lunch**
- 2:00 - 3:30pm** **Introduction to Stata – Data Management**
Reading and writing datasets in different formats; merging datasets
- 3:30-3:45pm** **Coffee**
- 3:45 - 5:00pm** **Introduction to Stata – Programming**
Writing programs (“do-files”); keeping logs; locals and globals; loops
- After hours** **Installing Stata, CEQ Commands (“ado files”), and the GLSS-5 Data**
Help as needed

Day 2: Fiscal Incidence Analysis in Practice: The CEQ Master Workbook and Stata Training
Wednesday, February 8

- 9:00 – 10:30 am** **Introduction to the Ghana Living Standards Survey**
Overview of the survey; review of the questionnaires; review of data files and organization; basics of stratified and clustered survey data
- 10:30-11:00am** **Coffee**
- 11:00-12:30pm** **Construction of income concepts and their components – disposable income up to market income**
Writing the do files to create CEQ income concepts and their components
- 12:30 – 2:00 pm** **Lunch**
- 2:00 - 3:30pm** **Construction of income concepts and their components – disposable income up to market income - continued**
Writing the do files to create CEQ income concepts and their components
- 3:30-3:45pm** **Coffee**
- 3:45 - 5:00pm** **Construction of income concepts and their components – disposable income up to market income - continued**
Writing the do files to create CEQ income concepts and their components

Day 3: Fiscal Incidence Analysis in Practice: The CEQ Master Workbook and Stata Training
Thursday, February 9

- 9:00 – 10:30 am** **Construction of income concepts and their components – disposable income down to final income**
Writing the do files to create CEQ income concepts and their components; using a social accounting matrix (SAM) or input-output table to capture indirect effects of certain taxes
- 10:30-11:00am** **Coffee**
- 11:00-12:30pm** **Construction of income concepts and their components – disposable income down to final income - continued**
Writing the do files to create CEQ income concepts and their components; assigning monetary values to in-kind services like health and education
- 12:30 – 2:00 pm** **Lunch**
- 2:00 – 3:30 pm** **The CEQ Master Workbook – Overview**
Understanding how CEQ organizes a very large amount of information
- 3:30-3:45pm** **Coffee**
- 3:45 – 5:00 pm** **Generating Results – The CEQ Ado Files**
Running the ado files; initial checks of results
- After hours** **Running the Slower Ado Files**

Day 4: Fiscal Incidence Analysis in Practice: The CEQ Master Workbook and Stata Training
Friday, February 10

- 9:00 – 10:30 am** **Linking the D tabs of the MWB to the E tabs**
Finally, some results we can sink our teeth into!
- 10:30-11:00am** **Coffee**
- 11:00-12:30pm** **The CEQ Checking Protocols**
Cross-checking that our results are sensible internally and that they are consistent with administrative data
- 12:30 – 2:00 pm** **Lunch**
- 2:00 – 3:30 pm** **Policy Simulations**
How to use multiple CEQ analyses to simulate policy changes
- 3:30-3:45pm** **Coffee**
- 3:45 – 5:00 pm** **Wrapping Up**

Bibliographical References

Enami, Ali, Nora Lustig and Alireza Taqdiri. Forthcoming. “[Fiscal Policy, Inequality and Poverty in Iran: Assessing the Impact and Effectiveness of Taxes and Transfers](#),” Chapter 14 in *Commitment to Equity Handbook. A Guide to Estimating the Impact of Fiscal Policy on Inequality and Poverty*, edited by Nora Lustig (Brookings Institution Press and CEQ Institute, Tulane University). Available online by clicking [here](#).

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Younger, Stephen. Forthcoming. “The Impact of Reforming Energy Subsidies, Cash Transfers, and Taxes on Inequality and Poverty in Ghana and Tanzania,” Chapter 10 in *Commitment to Equity Handbook. A Guide to Estimating the Impact of Fiscal Policy on Inequality and Poverty*, edited by Nora Lustig (Brookings Institution Press and CEQ Institute, Tulane University). Available online by clicking [here](#).

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