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Commitment to Equity Handbook

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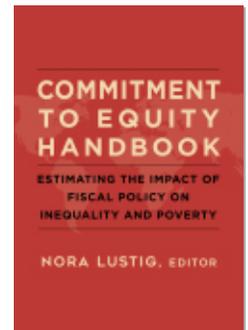
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ABSTRACTS

This Handbook is a unique manual that explains in detail the theory and practical methods of fiscal incidence analysis. It also includes multiple new contributions developed by the Commitment to Equity (CEQ) Institute for determining the impact of fiscal policy on inequality and poverty. Policymakers, social planners, and economists are presented with a step-by-step guide to applying fiscal incidence analysis as well as country studies, or *CEQ Assessments*, that illustrate the process. The Handbook has four parts. Part I, “Methodology,” describes what a *CEQ Assessment* is and presents the theoretical underpinnings of fiscal incidence analysis and the indicators used to assess the distributive impact and effectiveness of fiscal policy. Part II, “Implementation,” presents the methodology on how taxes, subsidies, and social spending should be allocated to households. It includes a step-by-step guide to completing the *CEQ Master Workbook (MWB)*, a multi-sheet Excel file that houses detailed information on the country’s fiscal system and the results used as inputs for policy discussions, academic papers, and policy reports. Part III, “Applications,” presents applications of the CEQ framework to low- and middle-income countries and includes simulations of policy reforms. Part IV, “The *CEQ Assessment Tools*,” available online only, contains the *CEQ Master Workbook* (a blank version), a completed *CEQ Master Workbook* for Mexico as an example, an example of “do files” in Stata for constructing the income concepts with information from Mexico, and the *CEQ Stata Package* with user-written software to complete the results section of the *CEQ Master Workbook*. It also contains guidelines for the implementation of *CEQ Assessments*, including the data and software requirements, recommendations for the composition of the team, and a thorough protocol of quality control.

Part I. Methodology

Chapter 1. The *CEQ Assessment*: Measuring the Impact of Fiscal Policy on Inequality and Poverty

Nora Lustig and Sean Higgins

This chapter presents key analytical insights in fiscal redistribution theory. The chapter also discusses the basics of fiscal incidence analysis used in *CEQ Assessments*. The chapter describes the set of indicators used to answer the following four key questions: How much income redistribution and poverty reduction is being accomplished through fiscal policy? How equalizing and pro-poor are specific taxes and government spending? How effective are taxes and government spending in reducing inequality and poverty? What is the impact of fiscal reforms that change the size and/or progressivity of a particular tax or benefit? Finally, the chapter illustrates how these questions may be answered with examples from existing *CEQ Assessments*.

JEL Codes: H22, D31, D63, I32, I38

Keywords: handbook, taxes and transfers, fiscal incidence, poverty, inequality

Chapter 2. Analytic Foundations: Measuring the Redistributive Impact of Taxes and Transfers

Ali Enami, Nora Lustig, and Rodrigo Aranda

This chapter provides a theoretical foundation for analyzing the redistributive effect of taxes and transfers when the ranking of individuals by prefiscal income remains unchanged. Typically, the redistributive effect is measured by the so-called concentration curve or the Kakwani coefficient. We show that in a world with more than a single fiscal instrument, however, the simple rule that progressive taxes or transfers are always equalizing does not necessarily hold, and offer alternative rules that survive theoretical scrutiny. In particular, we show that the sign of the marginal contribution unambiguously predicts whether a tax or a transfer is equalizing or not.

JEL Codes: H22, D31, A23

Keywords: marginal contribution, progressivity, inequality, multiple taxes and transfers

Chapter 3. Measuring the Redistributive Impact of Taxes and Transfers in the Presence of Reranking

Ali Enami

This chapter provides a theoretical foundation for analyzing the redistributive effect of taxes and transfers when the ranking of individuals by prefiscal income changes as a result of fiscal redistribution. Through various examples, this chapter shows how

reranking—a common feature in all actual fiscal systems—reduces the predictive power of simple measures of progressivity in assessing the actual effect of taxes and transfers on inequality.

JEL Codes: H22, D31, A23.

Keywords: marginal contribution, vertical equity, reranking

Chapter 4. Can a Poverty-Reducing and Progressive Tax and Transfer System Hurt the Poor?

Sean Higgins and Nora Lustig (*reproduced from Journal of Development Economics*)

To analyze anti-poverty policies in tandem with the taxes used to pay for them, comparisons of poverty before and after taxes and transfers are often used. We show that these comparisons, as well as measures of horizontal equity and progressivity, can fail to capture an important aspect: that a substantial proportion of the poor are made poorer (or non-poor made poor) by the tax and transfer system. We illustrate with data from seventeen developing countries: in fifteen, the fiscal system is poverty-reducing and progressive, but in ten of these at least one-quarter of the poor pay more in taxes than they receive in transfers. We call this fiscal impoverishment, and axiomatically derive a measure of its extent. An analogous measure of fiscal gains of the poor is also derived, and we show that changes in the poverty gap can be decomposed into our axiomatic measures of fiscal impoverishment and gains.

JEL Codes: I32, H22

Keywords: poverty, horizontal equity, progressivity, fiscal impoverishment

Chapter 5. Measuring the Effectiveness of Taxes and Transfers in Fighting Inequality and Poverty

Ali Enami

This chapter introduces new indicators that measure the effectiveness of the elements of a fiscal system in reducing inequality and poverty. The new indices are generally divided into two families—impact effectiveness (IE) and spending effectiveness (SE) indicators—and are applicable in any context (i.e., inequality and poverty). Moreover, a variation of the former, known as the fiscal impoverishment and gains effectiveness indicator (FI/FGP), which is applicable only in the context of poverty, is separately introduced. IE and SE indicators are similar in that they both compare the performance of a tax or transfer in reducing inequality or poverty with respect to its theoretically maximum potential. For IE indicators, we keep the amount of money raised (or spent) constant and compare the actual performance of a tax (or transfer) with its potential performance. For SE indicators, we keep the impact of a tax (or transfer) on inequality

or poverty constant and compare the actual size of a tax (or transfer) with the theoretically minimum amount of tax (or transfer) that would create the same impact.

JEL Codes: D31, H22, I38

Keywords: inequality, poverty, fiscal incidence, marginal contribution, effectiveness indicator

Part II. Implementation

Chapter 6. Allocating Taxes and Transfers and Constructing Income Concepts: Completing Sections A, B, and C of the *CEQ Master Workbook*

Sean Higgins and Nora Lustig

This chapter presents a step-by-step guide to applying the incidence analysis used to prepare *CEQ Assessments*. We define income concepts before and after taxes, transfers, and subsidies; discuss the methodological assumptions used to construct them; explain how taxes, transfers, and subsidies should be allocated at the household level; and suggest what to do when information on who paid or received certain taxes and/or transfers, or how much they paid or received, is not included in the household survey. This chapter is the basis for completing sections B and C of the *CEQ Master Workbook*.

JEL Codes: H22, D31, D63, I32, I38

Keywords: handbook, taxes and transfers, fiscal incidence, poverty, inequality

Chapter 7. Constructing Consumable Income: Including the Direct and Indirect Effects of Indirect Taxes and Subsidies

Jon Jellema and Gabriela Inchauste

This chapter presents a step-by-step guide to applying the incidence analysis of indirect taxes and subsidies used in *CEQ Assessments*. We define the Consumable Income concept as Disposable Income plus the benefits received when subsidized items are purchased minus the taxes paid when taxed items are purchased. We discuss how the direct effects of indirect taxes and subsidies on either welfare or purchasing power can be estimated. We review a “price-shifting” model for estimating the magnitude of the indirect effects of indirect taxes and subsidies and demonstrate how to use an input-output matrix together with a household expenditure survey to allocate the indirect burden across households. The methods in this chapter form the basis for constructing the *CEQ Assessment’s* Consumable Income concept.

JEL Codes: H22, H24, H26, D31, D63, I32, I38

Keywords: handbook, indirect taxes, subsidies, fiscal incidence, poverty, inequality

Chapter 8. Producing Indicators and Results, and Completing Sections D and E of the *CEQ Master Workbook* Using the *CEQ Stata Package*

Sean Higgins

This chapter describes the indicators and results used in a *CEQ Assessment*, describes sections D and E of the *CEQ Master Workbook*, and describes how the indicators and results can be produced and exported to the *CEQ Master Workbook* using the *CEQ Stata Package*.

JEL Codes: H22, D31, D63, I32, I38

Keywords: handbook, taxes and transfers, fiscal incidence, poverty, inequality

Chapter 9. Analyzing the Impact of Fiscal Policy on Ethno-Racial Inequality

Rodrigo Aranda and Adam Ratzlaff

An important element of inequality in nearly every country derives from circumstances that are outside an individual's control. These include gender, place of birth, and, particularly important in many countries, race or ethnicity. This chapter expands on the CEQ analysis by examining how to measure fiscal incidence across ethno-racial lines in an effort to determine if governments effectively reduce ethno-racial inequalities. The chapter examines how to measure ethno-racial inequality and what indicators are useful in determining the impact of fiscal interventions across groups. Additionally, this chapter provides information on Section F of the *CEQ Master Workbook* and instructions on how to use the `ceqrace.ado` Stata command to complete the CEQ analysis across ethno-racial lines.

JEL Codes: H22, D31, D63, I32, I38

Keywords: handbook, taxes and transfers, fiscal incidence, poverty, inequality, ethnic and racial inequality

Part III. Applications

Chapter 10. Fiscal Policy, Income Redistribution, and Poverty Reduction in Low- and Middle-Income Countries

Nora Lustig

Using comparative fiscal incidence analysis, this chapter examines the impact of fiscal policy on inequality and poverty in twenty-nine low- and middle-income countries for circa the year 2010. Success in fiscal redistribution is driven primarily by redistributive efforts (share of social spending to GDP in each country) and the extent to which transfers are targeted to the poor and direct taxes are targeted to the rich. While fiscal policy

always reduces inequality, this is not the case with poverty. While spending on pre-school and primary school is pro-poor (the per capita transfer declines with income) in almost all countries, pro-poor secondary school spending is less prevalent, and tertiary education spending tends to be progressive only in relative terms (equalizing, but not pro-poor). Health spending is always equalizing except for in Jordan.

JEL Codes: H22, H5, D31, I3

Keywords: fiscal incidence, social spending, inequality, poverty, developing countries

Chapter 11. Argentina: Taxes, Expenditures, Poverty, and Income Distribution

Dario Rossignolo

Using standard fiscal incidence analysis, this chapter estimates the impact of tax and expenditure policies on income distribution and poverty in Argentina with data from the National Household Survey on Incomes and Expenditures 2012–13. The results show that fiscal policy has been a powerful tool in reducing inequality and poverty, but that the unusually high levels of public spending may make the programs unsustainable.

JEL Codes: H2, I3, D3

Keywords: taxes, public expenditures, inequality, poverty

Chapter 12. Brazil: Fiscal Policy and Ethno-Racial Poverty and Inequality

Claudiney Pereira

Fiscal policy played an important role in reducing poverty and inequality in Brazil over the last fifteen years, but how much redistribution and poverty reduction is being accomplished across ethnic groups? How was the ethno-racial divide affected by fiscal policy? We estimate the effects of taxes and social spending on inequality and poverty among ethnic groups using a household survey. We find that direct transfers have similar effects on inequality across ethnic groups, but that the reduction is larger for pardos after adding monetized in-kind benefits (health and education). However, the income ratio between whites and non-whites is virtually unchanged. Poverty is reduced after direct transfers, but the reduction is higher for whites despite the prevalence of poverty being at least twice as high among pardos, blacks, and indigenous peoples. The positive effects on poverty are tempered by a deleterious effect from indirect taxes. In addition, per capita transfers are on average higher for whites, and benefits can be twice as large as those for non-whites. Fiscal interventions

did not have a significant impact in reducing the divide between whites and non-whites in Brazil.

JEL Codes: D31, H22, I32, 054

Keywords: fiscal policy, great divide, Brazil, inequality, ethno-racial

Chapter 13. Chile: The Impact of Fiscal Policy on Inequality and Poverty

Sandra Martinez-Aguilar, Alan Fuchs, Eduardo Ortiz-Juarez, and Giselle Del Carmen

This chapter applies a comprehensive tax-benefit incidence analysis to estimate the distributional effects of fiscal policy in Chile in 2013. Four results are indicative of an overall positive net effect of fiscal interventions on poverty and inequality. First, subsidies exert a positive, yet modest effect on poverty and inequality, whereas direct transfers are progressive, equalizing, and reduce the poverty headcount by 4 to 5 percentage points, depending on the poverty line used. Second, although social contributions are unequalizing and poverty-increasing, direct taxes on personal income are equalizing and poverty-neutral, whereas indirect taxes are poverty-increasing but exert a counterintuitive, yet feasible equalizing effect known as Lambert's conundrum. Third, social spending on tertiary education is slightly equalizing but it is not pro-poor, contrary to the effects of social spending on basic and secondary education and health, which are not only equalizing but also pro-poor. Finally, the net effect of Chile's tax/transfer system leaves fewer individuals impoverished relative to the number of fiscal gainers, and the magnitude of monetary fiscal gains is significantly higher than that of fiscal impoverishment.

JEL Codes: D31, I32

Keywords: fiscal policy and inequality, income inequality, poverty, social assistance, taxation

Chapter 14. The Dominican Republic: Fiscal Policy, Income Redistribution, and Poverty Reduction

Jaime Aristy-Escuder, Maynor Cabrera, Blanca Moreno-Dodson, and Miguel E. Sanchez-Martin

This chapter assesses whether the limited redistributive effect of fiscal policy in the Dominican Republic has slowed improvements in poverty and inequality during a period of strong economic growth. Departing from the Commitment to Equity methodology for fiscal incidence analysis, this chapter introduces new methodological considerations and addresses the time gap between the current fiscal structure (2013)

and the latest available household survey (2007) by deflating public revenue and spending data to 2007 prices. Results show that fiscal policy in the Dominican Republic is overall progressive given that, compared to other countries, the fiscal system achieves intermediate levels of inequality reduction (5 Gini points) through direct and indirect taxes, transfers and subsidies, and that it generates very little horizontal inequality. At the same time, the impact of direct transfers on poverty reduction is modest, due to the limited cash amounts granted, and there seems to be scope for boosting revenue and enhancing progressivity by revising tax exemptions and indirect electricity subsidies.

JEL Codes: D31, H23, H32, I32

Keywords: fiscal incidence, income inequality, poverty, conditional cash transfers, taxation

Chapter 15. El Salvador: The Impact of Taxes and Social Spending on Inequality and Poverty

Margarita Beneke de Sanfeliu, Nora Lustig, and Jose Andres Oliva Cepeda

Using the CEQ's methodology, we conducted a fiscal impact study to estimate the effect of taxes, social spending, and subsidies on inequality and poverty in El Salvador. Taxes are progressive, but given their volume, their impact is limited. Direct transfers are concentrated on poor households, but their budget is small, so their effect is also limited; a significant portion of the subsidies goes to households in the upper income deciles, so although their budget is greater, their impact is low. The component that has the greatest effect on inequality is spending on education and health. Therefore, the impact of fiscal policy is limited and low when compared with other countries with a similar level of per capita income. There is room for improvement using current resources.

JEL Codes: D31, H22, I14

Keywords: fiscal incidence, poverty, inequality, El Salvador

Chapter 16. Ghana and Tanzania: The Impact of Reforming Energy Subsidies, Cash Transfers, and Taxes on Inequality and Poverty

Stephen D. Younger

The chapter explains methods developed by the CEQ Institute to simulate policy changes and uses them to assess the distributional consequences of three types of policy reform in Ghana and Tanzania: removal of energy subsidies, expansion of conditional cash transfer programs, and shifts in the balance between indirect and direct taxation. The methods are simple to implement and provide a first-order approximation to the true distributional effects. In both countries energy subsidies are substantial and popular, but regressive despite the use of lifeline tariffs for electricity consumption.

Their removal would reduce inequality but also increase poverty by a nontrivial amount because the poor do garner some benefit from the subsidies. A simultaneous expansion of cash transfer programs could offset the poverty consequences at significantly lower fiscal cost than that of the energy subsidies. In both countries, direct taxes are more progressive than indirect taxes, yet shifting taxation from indirect to direct taxes has relatively little effect on inequality and poverty because the incidence of the two is not as different as, for instance, the difference between taxes and a strongly progressive expenditure like conditional cash transfers.

JEL Codes: D31, H22, I14

Keywords: fiscal incidence, poverty, inequality, subsidy reform, Ghana, Tanzania

Chapter 17. Iran: An Application of the CEQ Effectiveness Indicators

Ali Enami

This chapter provides an application of the new CEQ effectiveness indicators for the case of Iran. The impact and spending effectiveness indicators are used to assess the performance of the taxes and transfers in reducing inequality, while the fiscal impoverishment and gains effectiveness indicator is utilized to measure the performance of the components of the Iran's fiscal system with regard to the reduction in poverty (or not exacerbating it in the case of taxes). I find that in the case of Iran, transfers are relatively more effective in reducing inequality than taxes are. For example, direct transfers together realize about 40 percent of their potential to reduce inequality, while direct taxes together realize only about 20 percent of their potential. Direct and indirect taxes are especially effective in raising revenue without causing poverty to rise, which is a desirable property of fiscal systems. While transfers are not targeted toward the poor, they do reduce poverty significantly. The main driver is the Targeted Subsidy Program (TSP), a universal cash transfer program implemented in 2010 to compensate individuals for the elimination of energy subsidies. In spite of its large poverty-reducing impact, the effectiveness of TSP is rather low because of its universality.

JEL Codes: D31, H22, I38

Keywords: inequality, poverty, fiscal incidence, marginal contribution, effectiveness indicator, policy simulation, Iran

Chapter 18. Tunisia: Fiscal Policy, Income Redistribution, and Poverty Reduction

Nizar Jouini, Nora Lustig, Ahmed Moumami, and Abebe Shimeles

Using the National Survey of Consumption and Household Living Standards for 2010, this chapter estimates the incidence of the government's taxation and spending in

Tunisia. Taking into account the impact of direct taxes and transfers, indirect taxes and subsidies, and the monetized value of in-kind transfers in education and health services, the Gini coefficient falls from 0.43 (before taxes and transfers) to 0.35 (after taxes and transfers), mainly due to taxes (30 percent of the decrease) and in-kind services (30 percent of the decrease). Most of the equalization is produced by personal income taxes and contributions to social security. Direct taxes are progressive, and the VAT is regressive. Cash transfers contribute little to redistribution. Although direct transfers are strongly progressive and equalizing, their share in the budget remains very limited (only 0.2 percent). Subsidies are equalizing, though much less so than cash transfers, because benefits to the non-poor are higher than their population share (that is, subsidies are progressive but only in relative terms). Primary and secondary education are strongly redistributive and equalizing whereas tertiary education is progressive only in relative terms because the poor still have limited access. Health spending is progressive.

JEL Codes: H22, I38, D31

Keywords: fiscal policy, fiscal incidence, social spending, inequality, poverty, taxes, Tunisia

Chapter 19. Uganda: The Impact of Taxes, Transfers, and Subsidies on Inequality and Poverty

Jon Jellema, Nora Lustig, Astrid Haas, and Sebastian Wolf

This paper uses the 2012–13 Uganda National Household Survey to analyze the redistributive effectiveness and impact of Uganda’s revenue collection instruments and social spending programs on poverty and inequality. Fiscal policy, including many of its constituent tax and spending elements, is inequality-reducing in Uganda, but the impact of fiscal policy on inequality is modest. The reduction of inequality due to fiscal policy in Uganda is lower than in other countries with similar levels of initial inequality—a result tied to generally low levels of spending. The impact of fiscal policy on poverty is negligible, though the combination of very sparse coverage of direct transfer programs and nearly complete coverage of indirect tax instruments means that many poor households are net payers into, rather than net recipients from, the fiscal system. As Uganda looks ahead to increased revenues from taxation and concurrent investments in productive infrastructure, it should take care to protect the poorest households from further impoverishment from the fiscal system.

JEL Codes: H22, I38, D31

Keywords: fiscal incidence, poverty, inequality, fiscal policy, Uganda

Part IV. The CEQ (*Commitment to Equity*) Assessment Tools
Available only online at www.ceqinstitute.org, under “Handbook.”

1. Planning for a CEQ Assessment: Data and Software Requirements

CEQ Institute

This section includes a description of the data and software that are necessary to complete a *CEQ Assessment*.

2. Planning for a CEQ Assessment: Recommended Team Composition and Timeline

CEQ Institute

This section includes a description of a prototype team and timeline.

3. CEQ Assessment: *CEQ Master Workbook (MWB)*

CEQ Institute

The *CEQ Master Workbook (MWB)* is a multi-sheet Excel file that houses detailed information on the country’s economic, political, and social context, description of microdata and the country’s fiscal system, and the results of the fiscal incidence analysis used as inputs for policy discussions, academic papers, and policy reports. The *CEQ MWB* consists of six sections: section A, Country Context; section B, Data; section C, Methodology; section D, Summary of Results; section E, Output Tables; and section F, Results by Race and Ethnicity.

4. *CEQ Master Workbook: Example for Mexico, 2012*

John Scott, Sandra Martinez-Aguilar, Enrique de la Rosa, and Rodrigo Aranda

This section contains a completed *CEQ Master Workbook (MWB)* for Mexico (2012) as an example.

5. CEQ Do Files in Stata for Constructing Income Concepts: Example for Mexico, 2012

John Scott, Sandra Martinez-Aguilar, Enrique de la Rosa, and Rodrigo Aranda

This section includes an example of “do files” in Stata for construction of the income concepts with information from Mexico (2012).

6. CEQ Assessment: *CEQ Stata Package*

Sean Higgins, Rodrigo Aranda, and Ruoxi Li

The *CEQ Stata Package* is user-written software that computes the results of a *CEQ Assessment* and transfers them to sections E and F of the *CEQ Master Workbook*.

7. CEQ Assessment: Sample Stata Code for Measuring the Indirect Effects of Indirect Taxes and Subsidies

CEQ Institute, adapted from the IMF's "Distributional Analysis of Fuel Subsidy Reform (Stata Programs)," available for download from <https://www.imf.org/external/np/fad/subsidies/>

The Stata code in the accompanying Stata file ("IOexample.do") provides a real-world example of the calculation of the indirect effects of indirect taxes or subsidies following the method outlined in Chapter 7 of the Handbook.

8. CEQ Assessment: *Checking Protocol*

Sandra Martinez-Aguilar, Adam Ratzlaff, Maynor Cabrera, Cristina Carrera, and Sean Higgins

This section provides overseers with instructions on how to check the accuracy of the information contained in the *CEQ Assessment*, and in the *CEQ Master Workbook* in particular. It includes commonsense checking, cross-checking with publicly available data from administrative or other sources, automated checking, and technical checking.