Fiscal Policy, 'Fiscal Mobility,' the Poor, the Vulnerable and the Middle Class in Latin America[1]

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Abstract

This paper analyzes the impact of fiscal policy (taxes and transfers) on the poor, the vulnerable and the middle-class in Argentina, Bolivia, Brazil and Peru. The paper introduces a distinction between "fiscal redistribution" and "fiscal mobility." Redistribution refers to the impact of fiscal policy on inequality and poverty: i.e., measures that re-rank households by "post-fisc" income. In contrast, we define "fiscal mobility" as the non-anonymous (upward and downward) movement in the socio-economic ladder of pre-defined income categories. Fiscal mobility is measured in two ways. First, we construct income transition matrices (*Fiscal Mobility Matrices*) from "pre-fisc" to "post-fisc" socioeconomic groups or deciles. Second, we construct (nonanonymous) fiscal incidence curves herewith called *Fiscal Mobility Profiles* (FMP) and compare them with traditional (anonymous) *Fiscal Incidence Curves*. The analysis reveals that the pattern of redistribution and fiscal incidence is quite heterogeneous across countries. Fiscal mobility is also very heterogeneous: it can range from very significant to almost nonexistent. In addition, fiscal redistribution and fiscal mobility can tell us different stories in particular for the poorest ten percent.

Keywords: *fiscal incidence, fiscal policy, inequality, poverty, redistribution, mobility, social policy, taxes, transfers; Latin America, Argentina, Bolivia, Brazil, Mexico and Peru;* ***JEL Codes:*** *D63, H11, H22, H5, I14, I24, I3, O15*

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Introduction

Multilateral organizations such as the World Bank have focused on the impact of policy on poverty. The fate of those living beyond the poverty line has generally not been on the radar screen. Thus, the school teacher, the secretary, the corner auto-mechanic, the bank teller, the nurse, the low-ranking civil servant, the policeman, the semi-skilled factory worker and so on, are often lumped together with the economic elites. It is not unusual to hear that some programs are regressive because a substantial portion of the benefits accrue to the nonpoor or the top 20 percent. It is also not unusual to hear that, for this reason, governments should stop subsidizing services (such as tertiary education or daycare facilities), and use the saved resources to help the poor. However, the "nonpoor" are an extremely heterogeneous bunch. The nonpoor include households and individuals who are vulnerable to fall back into poverty, the middle-class (lower, middle and upper-middle class), the rich and the super-rich. We may, therefore, be interested in learning how policy affects these groups as well. This paper does just that. In particular, it analyzes the impact of fiscal policy on the poor, the vulnerable, the middle-class and the rich in Argentina, Bolivia, Brazil and Peru.[3] Socioeconomic groups are defined based on the cut-offs proposed by Birdsall et al. (2011), Lopez-Calva and Ortiz (2011) and World Bank (2012).

Following Lustig (2011c) this paper introduces a distinction between "fiscal redistribution" and "fiscal mobility." The key difference is that fiscal redistribution refers to the impact of fiscal policy on indicators that comply with the principle of anonymity: i.e., the "pre-fisc" identity of a person ranked *k* in the "post-fisc" distribution is not known. Inequality and poverty indicators are the two most typically used for this purpose. In contrast, we shall define "fiscal mobility" as the non-anonymous movement in the socio-economic ladder of pre-defined income categories (e.g., the poor, the middle-class, or deciles).[4] Another way to think about the difference is that redistribution indicators (Ginis, headcount ratios, and so on) are calculated with households reranked by the

[3] Some of the results are also available for Mexico.

[4] Another way to think about it is that redistribution indicators (Ginis, headcount ratios, and so on) are calculated with households reranked by the relevant income concept whereas "fiscal mobility" is measured with respect to a fixed initial ranking (by market income, for example).

relevant income concept whereas mobility is measured with respect to a fixed initial ranking or status quo (by market income, for example).

Economists tend to think of mobility "in terms of the transformation of an income vector in an initial period into another income vector in a second period"[5] for the same households (or individuals) and/or their descendants. But the concept of mobility can be applied to any "before-after" or "situation A and situation B vs. status quo" comparison where the actual trajectory of individuals or households matters. For example, it can be used to identify the winners and losers of fiscal policy, trade reform or food price increases. Fiscal mobility, thus, refers to the transformation of a "pre-fisc" income vector into another "post-fisc" income vector for the same households (ranked by "pre-fisc" income or consumption per capita). In this sense, mobility doesn't have to occur over time. Fiscal mobility can occur within one period. The usefulness of the concept is that it allows us to identify actual winners and losers (in absolute terms or relative to others) of tax policy and transfers, something that standard (anonymous) redistribution analysis does not. Identifying winners and losers of fiscal interventions highlights (intended or unintended) horizontal inequities and can help us identify which groups might potentially favor or oppose particular policies or fiscal reforms. In the literature devoted to the social costs of adjustment, the social impact of reforms, incidence analysis, the impact of rising food prices, and so on, the two concepts—anonymous vs. nonanonymous changes--are often mixed-up or the difference (or its importance) is not sufficiently or explicitly acknowledged. Bourguignon (2011) points out that most standard welfare analysis of tax reforms does not take into account the "status quo" and proposes a formal framework to do so.[6] In practice, fiscal policy is more likely than not to violate the "Musgravian" principle of "equal treatment of equals."[7] The downward or upward positional mobility of households as a result of fiscal policy, thus, is likely to have implications on their welfare. Hence the analysis of what we define here as fiscal mobility can be illuminating, something we hope to show below.

In order to distinguish the redistributive from the mobility impact of fiscal policy, this paper presents estimates of standard "pre-fisc" and "post-fisc" inequality and poverty indicators and two measures designed to capture the extent of mobility induced by fiscal policy which we have decided to call fiscal mobility. Fiscal mobility is measured using income transition matrices (herewith called *Fiscal Mobility Matrices*) from "pre-fisc" to "post-fisc" socioeconomic groups and deciles. The status

[5] See World Bank (forthcoming). This succinct definition is attributed to Gary Fields.

[6] Bourguignon (2011) compares the anonymous and nonanonymous effects of tax reform and applies it to an ongoing debate in France concerning the treatment of family size.

[7] Musgrave (1959).

quo is households ranked by per capita market income by socioeconomic group or decile; these same households are subsequently re-classified based on their "post-fisc" income using the same socioeconomic grouping or by decile.[8] Fiscal mobility is also measured by comparing the incidence of transfers and taxes with "post-fisc" incomes re-ranked (anonymous) and not re-ranked (nonanonymous). The latter are analogous to the Income Mobility Profiles proposed by Van Kerm (2009) and will be called *Fiscal Mobility Profiles* (FMP). The anonymous fiscal incidence curves shall be called *Fiscal Incidence Curves* (FIC); the latter measure the anonymous redistribution induced by fiscal policy along the entire income distribution.

Typical programs that generate high fiscal mobility for some groups are noncontributory pensions for the elderly poor or conditional cash transfers to poor families with children. Noncontributory pensions can induce substantial fiscal mobility of people who without them would have meager incomes. Conditional cash transfers can move out of extreme poverty households with young children but leave behind equally poor households without children. These are examples of intended "horizontal inequity" in the sense that equally poor individuals are treated differently depending on their age and the age of their descendants, for example. They are intentional because policy treats the elderly, children and pregnant women differently from young able bodied men even if they are equally poor in the income space.

Our results reveal that the pattern of redistribution and fiscal incidence is quite heterogeneous across the four countries analyzed here. Fiscal mobility is also very heterogeneous: it can range from very significant to almost nonexistent. In addition, fiscal redistribution and fiscal mobility can give us very different insights. In particular, the comparison of results reveals strikingly different income changes for the poorest ten percent. In some countries, there is also significant downward mobility into extreme and moderate poverty.

Our analysis relies on standard benefits and tax incidence analysis, and uses the Commitment to Equity Assessment (Lustig, 2011a and 2011b)[9] as a framework. As is always the case with this type of exercise, some caveats are in order. Since household surveys do not always include information on transfers from specific programs, their incidence was sometimes estimated by inference, imputation or simulation (explained in more detail below and in Appendix A). Second, because we look at the average incidence effects, we leave out potential systematic differences

[8] When market income is unavailable, households are ranked by net market income.

[9] Lustig (2011a).

between average and marginal incidence.[10] Last but not least, our analysis does not take into account general equilibrium effects, redistribution over the life-cycle or differences in the quality of public spending. In fact, we are assuming that the "post-fisc" total income is the same as the "pre-fisc" one (that is, we are not measuring losses—or gains for that matter—in efficiency induced by fiscal policy).

The paper is organized as follows. Next section defines the five socioeconomic categories used here. Section 2 presents a brief description of concepts, definitions and methodology underlying the fiscal incidence analysis. Section 3 describes the indicators of mobility used here. Section 4 summarizes the results of the fiscal redistribution and fiscal mobility analysis. The main conclusions are presented in Section 5.

1. Defining Socioeconomic Categories: the Extreme Poor, the Moderate Poor, the Vulnerable, the Middle-class and the Rich

While a "poverty line" defined in the income (or consumption) space is a well-established concept, the notion of a "vulnerability line," a "middle-class line" or a "rich line" are not. This paper uses the cut-offs proposed by Birdsall et al. (2011), Lopez-Calva and Ortiz (2011) and World Bank (2012)[11] to assess the impact of monetary and in-kind education transfers (and, when feasible, of direct and indirect taxes) on the poor, the vulnerable and the middle-class. According to these authors, socio-economic categories in mostly middle-income Latin America are defined as follows. The *extreme poor* are households whose income per capita is below the international poverty line of US$2.50 per day (in purchasing power parity). The *moderate poor* includes households whose income per capita is between US$2.50 and below US$4 per day; the *vulnerable* group is comprised of households whose income per capita is between US$4 and less than US$10 per day; and, finally, the *middle-class* includes households with an income per capita between US$10 and less than US$50 per day. The rationale for selecting these "cut-offs" can be found in Birdsall et al. (2011) and Lopez-Calva and Ortiz (2011). There are other definitions of middle-class (and middle stratum) in the literature. Tables 1a and 1b present a sample of alternative middle-class "cut-offs" proposed (by economists) in the literature and the definitions of socioeconomic groups used here, respectively.

[10] Using average costs to impute the incidence of transfers in kind, for example, may under-estimate the true costs of closing the human capital gaps because marginal costs for the poor may be higher than the average.

[11] World Bank *From Opportunity to Achievement: Socio-Economic Mobility and the Rise of the Middle Class in Latin America and the Caribbean*, Vicepresidency of Latin America and the Caribbean, forthcoming.

Table 1.a

ECONOMIC DEFINITIONS OF THE MIDDLE CLASS

Percentiles of the income distribution (a)		
Birdsall*et al*. (2000)		0.75 (p_{50}) ≤ y_i≤ 1.25 (p_{50})
Blackburn and Bloom (1985)		0.60 (p_{50}) ≤ y_i≤ 2.25 (p_{50})
Davis and Huston (1992)		0.50 (p_{50}) ≤ y_i≤ 1.50 (p_{50})
Alesina and Perotti (1996)	i middle class	$p_{40} \geq y_i \leq p_{80}$
Barro (2000) and Easterly (2001)		$P_{20} \geq y_i \leq p_{80}$
Partridge (1997)		$p_{40} \geq y_i \leq p_{60}$
Solimano (2008)		$P_{20} \geq y_i \leq p_{90}$
Absolute Middle Class Lines (in PPP US$ per day) (b)		
Banerjee and Duflo (2008)		2 to 10
Birdsall et al. (2011)		10 to 50
Kharas (2010)		10 to 100
Milanovic and Yitzhaki (2008)		12 to 50
Ravallion (2010)		2 to 13

Table 1.b

SOCIOECONOMIC GROUPS USED IN THIS PAPER

Absolute Lines	
Ultra Poor	<1.25
Extreme Poor	1.25 to 2.5
Moderate Poor	2.5 to 4
Vulnerable	4 to 10
Middle Class	10 to 50
"Rich"	> 50

Source: Authors' construction based on: for (a) Hertova et al. (2011) as cited by Birdsall et al. (2011); for (b) Birdsall et al. (2011).

Note: The socioeconomic groups were defined based on the following. The extreme poor group includes households whose income per capita is below PPP US$2.5 per day. The moderate poor includes households whose income per capita is PPP US$2.50 and more and below PPP US$4 per day. The two thresholds correspond to the international poverty lines used by the CEDLAS and World Bank database to define extreme and moderate poverty, respectively. The group in the PPP US$4 and PPP US$10 per day range is the lower-middle class also called the "vulnerable" group (determined by its vulnerability to fall into poverty); the upper bound cut-off is based on the analysis by Lopez-Calva and Ortiz-Juares (2011) who found that the households are very unlikely to fall into poverty when their income per capita reaches PPP US$10 per day. The group in the PPP US$ 10 to PPP US$50 per day range is the "middle class" as defined by Birdsall et al. (2011).

2. Concepts, Definitions, Methodological Issues and Data[12]

[12] For more details on methodology see Lustig (2011a).

The literature on incidence analysis does not have established conventions on some key aspects pertaining incidence analysis. In order to avoid misunderstandings, this section presents concepts, definitions, methodologies and data used in our study.

i. Market, Net Market, Disposable, Post-fiscal and Final Income: Definitions

The starting point of any incidence study must be a measure of household income. In an ideal world, we would use permanent comprehensive household per capita income before taxes and government transfers as the basic measure of income. Such a measure should include monetary and nonmonetary income such as gross wages and salaries, fringe benefits, income from capital (rents, interests, dividends, profits, and so on), self-employed gross income, government transfers, social security pensions (individual accounts or pay-as-you-go), remittances, income in-kind (free or quasi-free education and health services, for example), income from owner occupied housing (also known as imputed rent), auto- or self-consumption (important in societies with a significant proportion of peasant farming), retained earnings, plus corporate taxes and property taxes that reduce returns. Ideally, we would have this information for several years in order to estimate a "permanent" measure of income. In this study, the information on income is obtained from household surveys and the analysis is carried out for a specific year: the most recent year available when the study was launched.[13] Depending on the country, household surveys include some but not all the income categories just defined. In what follows we describe the definitions of income used here. A more detailed description of the household surveys and the methods (and sources) used to generate each income concept and its components appear in Appendix A.

In what follows we present the definitions of market, net market, disposable, post-fiscal, and final income(and final income*) that were used in our analysis. *Market* (also known as *primary*) *income* is defined as earned plus unearned market incomes before government taxes and transfers of any sort. It includes net private transfers, net remittances, and net alimony payments. Ideally, it should also include imputed rent for owner-occupied housing and auto-consumption.[14]*Net market income*

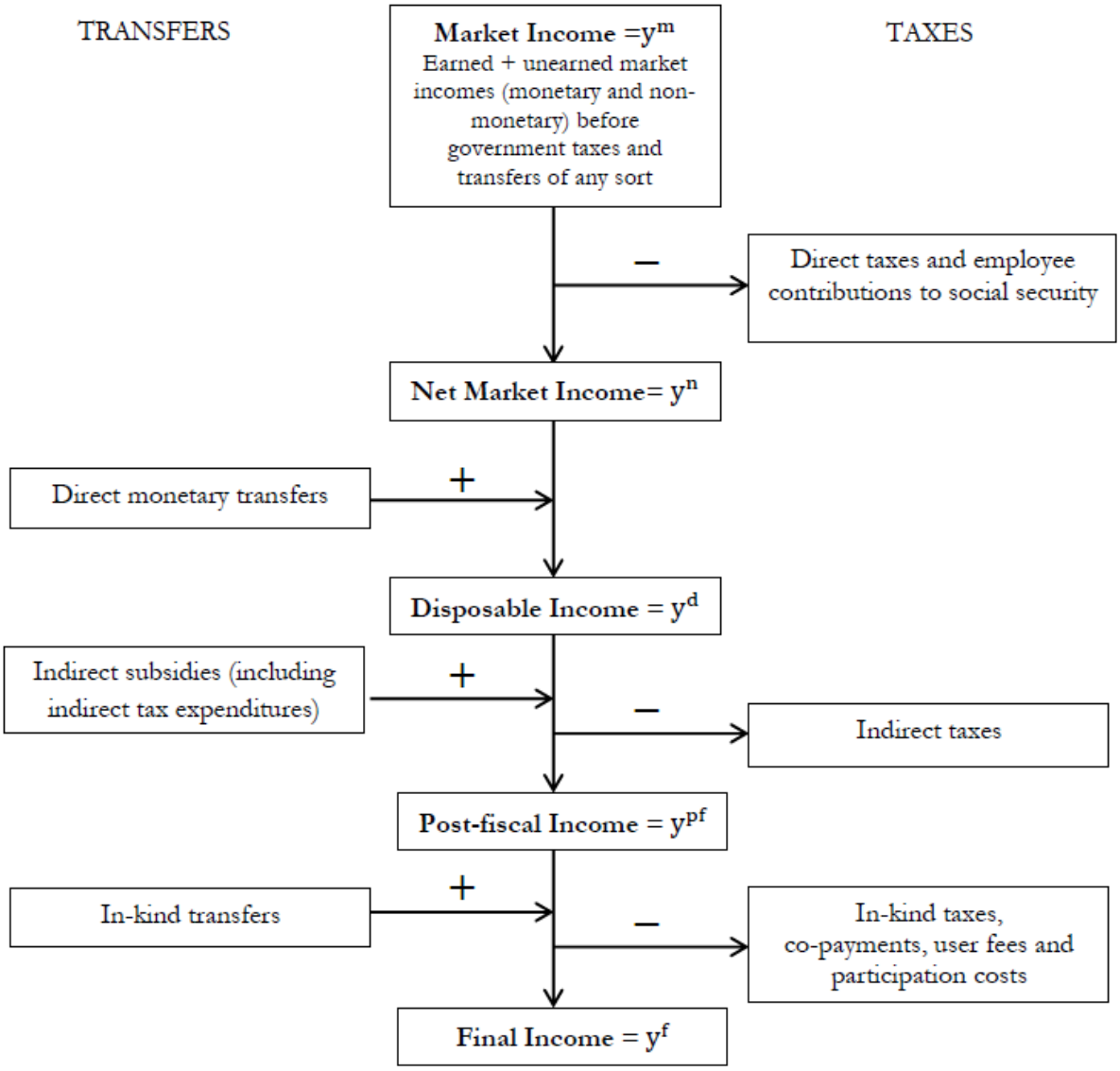
[13] This is not uncommon in incidence analysis. See, for example, See Alleyne et al. (2004).

[14] In our analysis, Bolivia, Brazil and Peru's market income includes them. Argentina does not because there were no questions on these in the respective surveys. This means that Argentina's and Bolivia's market income underestimates

equals market income minus direct taxes and employee contributions to social security. *Disposable income* equals net market income plus direct monetary transfers. *Post-fiscal income* equals disposable income plus indirect subsidies and minus indirect taxes. *Final income* equals post-fiscal income plus in-kind transfers (e.g., the imputed value of free or quasi-free government services particularly in education and health), minus in-kind taxes, co-payments in cash or in-kind (e.g., when beneficiaries of anti-poverty programs are required to contribute with inputs such as labor inputs), user fees and participation costs (e.g., transportation costs, opportunity costs). (Diagram 1) Because some countries do not have data on indirect subsidies and taxes, we defined *final income** as disposable income plus in-kind transfers.

the "true" market income. Rankings by market income might have also been different if we could have added autoconsumption and imputed rent to market income in Argentina and Bolivia.

Diagram 1 – Definitions of Income Concepts: A Stylized Presentation



A very important decision when constructing income categories is where to put *social security pensions*. On this, the literature is divided: some authors include public contributory pensions with market income while others add them to government transfers. The Microsimulation and Public Policy Analysis Unit project in the Paris School of Economics[15] includes social security pensions as part of market (primary) incomes. Breceda et al. (p. 5) say their paper "makes the deliberate choice of excluding pensions from the main analysis, as their intertemporal nature, and the mix of pay-as-you-go and fully funded systems, makes it difficult to assess their redistributive nature." In contrast,

[15] http://microsimula.parisschoolofeconomics.eu/

OECD (2008 and 2010) and Goñi et al. (2011) include social security pensions in government transfers.[16]Although treatment of pay-as-you-go contributory pensions in incidence analysis varies, strictly speaking, one should take into account the life-long contributions and benefits of the participants to estimate the "true" redistributive component. Pay-as-you-go systems tend to show "solidarity" in that the pensions of high-income people are usually capped (and thus what they receive is below their contribution for a large number of them) while low-income eligible individuals tend to receive more than what they contributed.[17]Measuring the redistributive impact of social security pensions accurately is very complex. However, our view is that including them in full with the rest of the government transfers grossly distorts results by making social spending look much more regressive than it is.In this study we decided to follow the same approach as the "Microsimulation" project and included contributory pensions in market income.

If the social security system (pensions component) showed a deficit in the year of the survey, we called that the "subsidized portion of social security pensions" and we presented some estimates of the incidence of this component whenever relevant. Peru had a deficit in the year of the survey.[18] Argentina, Bolivia, and Brazil did not. Although Argentina has a pay-as-you-go system, there was no deficit in 2009 (i.e., contributions to the system exceeded payments). Although the "Pension Moratorium" is administered by the formal social security entity, strictly speaking these pensions are non-contributory by definition.[19] In Bolivia, due to the Reforma del Estado (the pay-as-you-go system was abolished in 1996) there were essentially no contributions to the system in 2007, and thus the system effectively functioned as a non-contributory system. In Brazil, while total payments from the entire system exceeded contributions, benefits paid to social security ("regular" pensions for the elderly and disabled) did not. In the latter case, "special circumstances pensions", which are intended to smooth idiosyncratic shocks such as hospitalization, loss of wages due to an accident at work, or the death of a spouse, are considered to be (100% subsidized) direct government transfers, while the benefits paid to the remaining "regular" pensions amounted to less than contributions to the system.

ii. Progressive and Regressive Revenues and Spending: Definitions

[16]In Goñi et al. (2011, p. 16, n. 30), despite choosing to treat pensions as government transfers, they note that "if pensions are viewed as an intertemporal transfer for an individual rather than as an intergenerational transfer at a point in time, the benefits of each household should be treated as deferred consumption."
[17] Of course, this depends on life expectancy as well. If the rich live longer than the poor, the redistribution is mitigated.
[18]We included a separate incidence analysis of the subsidized portion for Mexico and Peru in Lustig (2011b).
[19] See Table 9 for details on the "Pension Moratorium" program.

Given that there is no unique convention in the definition of progressivity and regressivity as it relates to taxes and transfers, we also present the definitions used here in order to avoid ambiguities. Progressivity can be measured in absolute terms: i.e., by comparing transfers/taxes per capita among quantiles; or in relative terms: i.e., by comparing transfers/taxes as a share of each quantile's income.

A convention often followed in the literature is to call transfers progressive when they are progressive in absolute terms and to call taxes progressive when they are progressive in relative terms.[20] This is a bit strange as it leaves us with different criteria for taxes and transfers; how would we use the terminology in the case of net transfers? Here, we shall call net transfers *progressive (regressive)* if the post-taxes and transfers distribution of income is *more (less) equal* than the market income distribution.

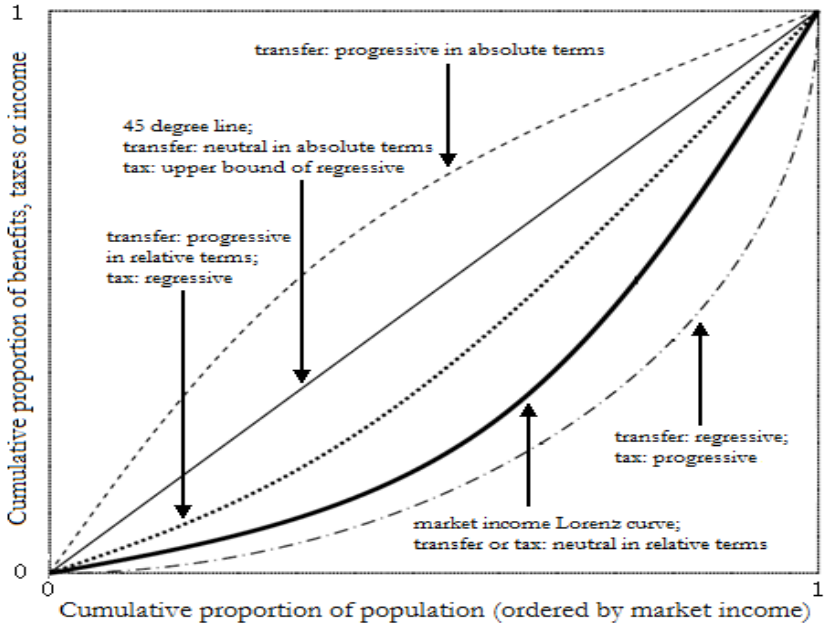
On an individual basis, transfers will be *progressive in absolute terms* when their per capita value declines with market income. The corresponding concentration coefficients are negative. The latter is very typical of, for example, conditional cash transfer programs (CCTs) (such as *Asignacion Universal por Hijo* (AUH) in Argentina, *Bono Juancito Pinto* in Bolivia, *Bolsa Familia* in Brazil, and *Juntos* in Peru) and public spending on primary education, as well as other social assistance programs targeted to the poor. Transfers will be *progressive in relative terms* when while their per capita value increases with market income, their relative value with respect to market income declines. The concentration coefficient is positive but smaller than the market income Gini. The latter is very typical of general price subsidies (including VAT exemptions on food as in Mexico, for example) and public spending on tertiary education. A transfer that implies the same benefit in per capita terms (in proportion to market income) for everyone is *neutral* in absolute (relative) terms. The concentration coefficient is zero (equal to the market income Gini coefficient). An example of a transfer that is neutral in absolute terms is Bolivia's *Bonosol*, the non-contributory pension established from privatization proceeds.[21] Of course, it is better (for equality, that is) if a transfer is progressive or neutral in absolute (as opposed to relative) terms. Transfers will be *regressive* when their relative value with respect to market income goes up. The corresponding concentration coefficient is positive and higher than the market income Gini. Regressive transfers are uncommon or nonexistent within social spending. However, subsidies to certain industries and producers as well as

[20] See Lambert (2002).
[21] The actual concentration coefficient is not exactly zero but very close.

consumption subsidies on items purchased primarily by the non-poor have been found to be regressive.[22] For a graphical description of this classification see Diagram 2.

Taxes will be *progressive in absolute terms* when their per capita value increases with market income. However, practically all existing taxes (except for a poll tax; i.e., everyone pays the same amount of the tax) are progressive in absolute terms. Thus, we are interested in relative progressivity: taxes (and social security contributions) will be *progressive in relative terms* when not only their per capita value rises with market income but when their relative value with respect to market income does too. For purposes of the analysis, we will call this tax *progressive* and omit the qualifier since it is really unnecessary. The majority of income tax systems (on paper but not necessarily in practice) have this characteristic. A tax will be *regressive* whenever its relative value with respect to market income declines as income rises. Value Added Taxes (VAT) are broadly regressive. A flat tax in absolute terms (a poll tax) is *regressive.* An example of this is the implicit tax paid by Mexican citizens if we assume each person is entitled to his/her per capita share of the revenues of PEMEX, the state-owned oil company. When everybody pays the same tax rate in proportion to their income, the tax is called *neutral.* For a graphical description see Diagram 2.

Diagram 2 - Concentration Curves for Progressive and Regressive Transfers (Taxes)



[22] If a transfer is progressive (regressive) in absolute (relative) terms, it follows by definition that it must be progressive (regressive) in relative (absolute) terms, but the converse is not true. If a tax is progressive (regressive) in relative (absolute) terms, it follows by definition that it must be progressive (regressive) in absolute (relative) terms. However, the converse is not true.

iii. Allocating Taxes and Transfers at the Household Level

As mentioned above, unfortunately the information on direct and indirect taxes, transfers in cash and in-kind and subsidies cannot always be obtained directly from household surveys. When it can be obtained, we call this the *Direct Identification Method*. When the direct method is not feasible, one can use the inference, simulation or imputation methods (described in more detail below). As a last resort, one can use secondary sources. Finally, if none of the options exist, the analysis for that category will have to be left blank.

Direct Identification Method

On some surveys, questions specifically ask if households received benefits from (paid taxes to) certain social programs (tax and social security systems), and how much they received (paid). When this is the case, it is easy to identify transfer recipients and taxpayers, and add or remove the value of the transfers and taxes from their income, depending on the definition of income being used.

Inference Method

Unfortunately, not all surveys have the information necessary to use the direct identification method. In some cases, transfers from social programs are grouped with other income sources (in a category for "other income," for example). In this case, it might be possible to infer which families received a transfer based on whether the value they report in that income category matches a possible value of the transfer in question.

Simulation Method

In the case that neither the direct identification nor the inference method can be used, transfer benefits can sometimes be simulated, determining beneficiaries (tax payers) and benefits received (taxes paid) based on the program (tax) rules. For example, in the case of a conditional cash transfer that uses a proxy means test to identify eligible beneficiaries, one can replicate the proxy means test using survey data, identify eligible families, and simulate the program's impact. However, this method gives an upper bound, as it assumes perfect targeting and no errors of inclusion or exclusion. In the case of taxes, estimates usually try to make assumptions about evasion.

Imputation Method

The imputation method is a mix between the direct identification and simulation methods; it uses some information from the survey, such as the respondent reporting attending public school or receiving a direct transfer in a survey that does not ask for the amount received, and some

information from either public accounts, such as per capita public expenditure on education by level, or from the program rules.

The four methods described above rely on at least some information directly from the household survey being used for the analysis. As a result, some households receive benefits, while others do not, which is an accurate reflection of reality. However, in some cases the household survey analyzed lacks the necessary questions to assign benefits to households. In this case, there are two additional methods.

Alternate Survey

When the survey lacks the necessary questions, such as a question on the use of health services or health insurance coverage (necessary to impute the value of in-kind health benefits to households), an alternate survey may be used by the author to determine the distribution of benefits. In the alternate survey, any of the four methods above could be used to identify beneficiaries and assign benefits. Then, the distribution of benefits according to the alternate survey is used to impute benefits to all households in the primary survey analyzed; the size of each household's benefits depends on the quantile to which the household belongs. Note that this method is more accurate than the secondary sources method below, because although the alternate survey is somewhat of a "secondary source," the precise definitions of income and benefits used in CEQ can be applied to the alternate survey.

Secondary Sources Method

When none of the above methods are possible, secondary sources that provide the distribution of benefits (taxes) by quantile may be used. These benefits (taxes) are then imputed to all households in the survey being analyzed; the size of each household's benefits (taxes) depends on the quantile to which the household belongs.

The method used by each country and for each component of fiscal policy is mentioned in Appendix A.

iv. Data

The data on household incomes, taxes and transfers comes from the following surveys: Argentina: Encuesta Permanente de Hogares, 1st semester of 2009; Bolivia: Encuesta de Hogares,

2007; Brazil: Pesquisa de Orçamentos Familiares, 2008-2009; Peru: Encuesta Nacional de Hogares, 2009. (see Appendix A) When household surveys did not include questions on certain items, the values were imputed following the methodology described above (and summarized in Table 3 and Appendix A). Data on government revenues and spending come from the country's National Accounts (details in Appendix B).

3. Measuring Fiscal Mobility

Mobility is a slippery concept as there are many definitions, measures and interpretations. This is not the place to discuss the well-endowed list of definitions and their properties. A useful summary is provided by Fields (2008). For our purposes we shall use two measures of mobility.[23] The first one consists of a *Fiscal Mobility Matrix* (FMM) where the ij-th entry is the probability of being in income group j (for example, the moderate poor) after taxes and transfers if you were in group i (for example, the extreme poor or the second decile) before taxes and transfers.[24] The second measure is a *Fiscal Mobility Profile* or FMP. The FMP is analogous to Van Kerm's (Van Kerm, 2009) income mobility profiles. A FMP is a graphical tool to portray income mobility from "pre-fisc" to "post-fisc" status and identify the association between actual individual movements and initial or "pre-fisc" status. The FMP are compared to the anonymous *Fiscal Incidence Curve* or FIC.[25] The latter are the usual incidence curves where households are re-ranked by "post-fisc" income and the changes are estimated for each household based on their rank and not their actual trajectory as in the case of FMP. Using Fields taxonomy, both measures are intra-generational by definition: they compare the same households "pre-fisc" and "post-fisc." The indicator of status is per capita household market income (and when the latter is not available, the indicator is net—of direct taxes and employee contributions to social security—market income).[26] The measures address what Fields calls "macro-mobility."[27]

[23] See Lustig (2011c).

[24] This can be interpreted as a Markovian or probability matrix of income transitions.

[25] This exercise has some similarities to Bourguignon's (Bourguignon, 2011) comparisons of anonymous and nonanonymous tax incidence curves between alternative reforms and the status quo. Bourguignon, however, compares anonymous and nonanonymous incomplete mean income curves.

[26] For more details on how these status measures are defined/constructed see Appendix A.

[27] According to Fields (2008) "macro-mobility" asks, for example, what percent of people move up, down or stay in the same level of the socioeconomic ladder? "Micro-mobility" wants to know, for example, what are the correlates or determinants of mobility for specific individuals?

Our measures are definitely in the camp of "mobility as movement" (as opposed to time independence) by definition. They can be used to analyze positional and share movements as well as directional and non-directional movements. Since we are interested in comparing how different socioeconomic groups fare when they are placed in the hands of the "fisc," we will not attempt to generate summary indicators. Our value judgments (or "axioms" if you wish) are very simple. They are definitely in the directional camp. We judge fiscal mobility as "bad" when the moderate poor (vulnerable) people are moved into extreme (moderate) poverty as a result of fiscal policy. We also judge it as bad if fiscal policy moves people out of the middle-class and into the rich. We say fiscal mobility is "good" when fiscal policy moves people out of extreme and moderate poverty (in that order). We also say it is good, when fiscal policy moves people out of the top socioeconomic group into the middle-class. (This can be seen as analogous to the position expounded by a series of authors where mobility is seen as welfare enhancing when it equalizes longer term incomes except that in our terminology "post-fisc" replaces "longer term").[28]

In terms of comparing two situations or two countries, the larger the movement out of extreme and moderate poverty, the more fiscal upward mobility there is; likewise, the larger the movement into extreme and moderate poverty, the more downward fiscal mobility there is. A country can have large amounts of both. Under such circumstances, the recommendation would be to preserve the upward fiscal mobility and reduce if not eliminate the downward fiscal mobility. Obviously, all these apply assuming that the efficiency losses generated by redistribution and mobility are the same across the states under comparison.

What about fiscal-induced downward movements from the middle-class to the vulnerable group or vice-versa? If you want a "robust" middle-class, the former are bad and the latter are good. However, what about if such movements are at the expense of generating more upward mobility for the extreme and moderate poor? The answer depends on the school of moral philosophy that one embraces. If you are a politician, the answer depends on what policy generates the largest number of votes.

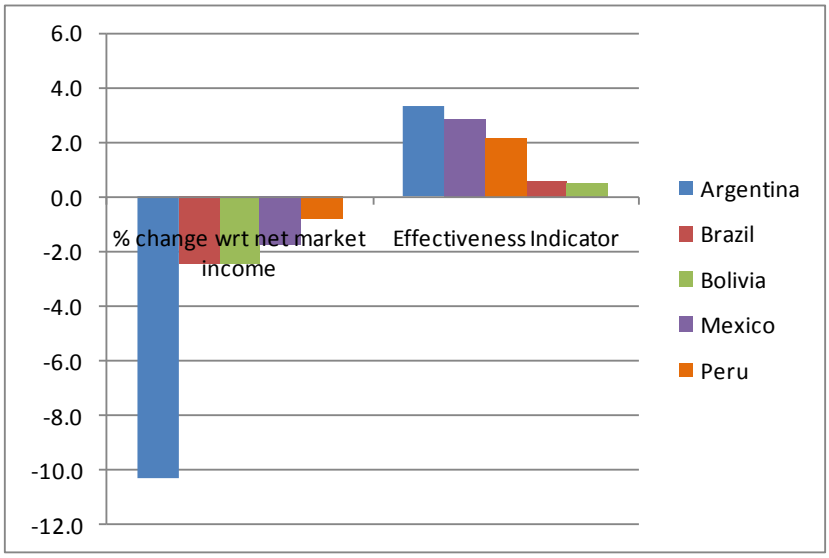
[28] As Fields (2008) mentions, this view of mobility as an equalizer is well established in the literature Schumpeter, 1955; Shorrocks, 1978b; Atkinson, Bourguignon, and Morrisson,1992; Slemrod, 1992; Krugman, 1992; Jarvis and Jenkins, 1998. Fiels (2002) proposed a class of measures for this.

4. Fiscal Redistribution and Fiscal Mobility: Argentina, Bolivia, Brazil and Peru

i. Impact of Fiscal Policy on Inequality and Poverty

The impact of fiscal policy on inequality and poverty is analyzed in a companion paper (Lustig et al., 2011a). In that paper we address the following questions: How much redistribution (inequality and poverty reduction) do the countries accomplish through fiscal policy? Does the extent of redistribution and redistributive effectiveness vary significantly across countries? Is the extent of redistribution directly correlated with the size of government, social spending and spending on direct transfers as stated by existing research? Our main results are shown in Figures 1 (for changes in the Gini) and 2 (changes in the extreme and total poverty headcount ratios) and are analyzed in detail in Lustig (2011b).

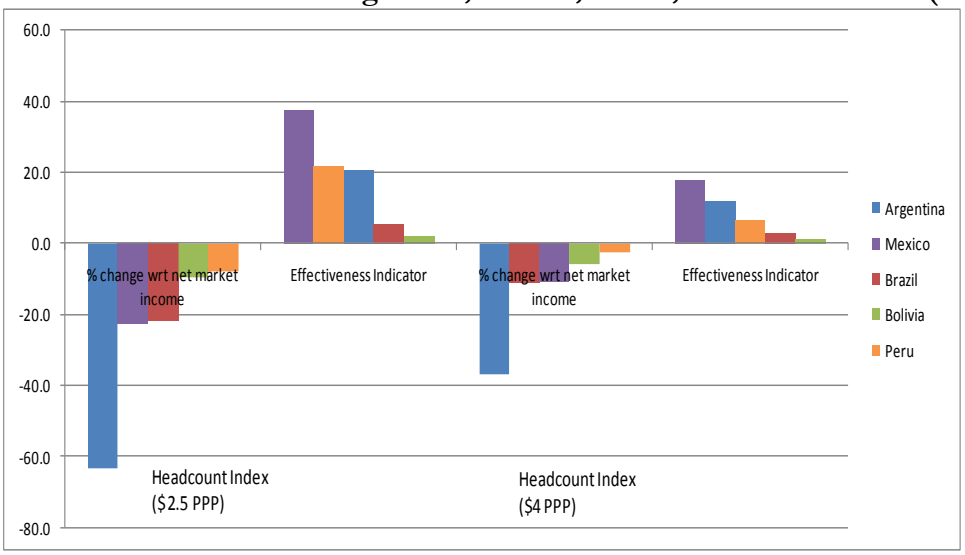
Figure 1 – Decline in Disposable Income (wrt Net Market Income) Gini and Redistributive Effectiveness: Argentina, Bolivia, Brazil, Mexico and Peru (in percent)



Source: Lustig, coordinator, 2011.

The Effectiveness Indicator is defined as the redistributive effect of the taxes or transfers being analyzed divided by their relative size. Specifically, it is defined as follows: For the net market income Gini, it is the fall between the market income and net market income Gini as a percent of the market income Gini divided by the size of direct taxes and employee contributions to social security as a percent of GDP. For the disposable income Gini and headcount index, it is the fall between the net market income and disposable income Gini/headcount index as a percent of the net market income Gini/headcount index, divided by the size of direct transfers as a percent of GDP. For the final income* Gini, it is the fall between the net market income and final income* Gini as a percent of the final income* Gini, divided by the size of the sum of direct transfers, education spending, health spending, and (where it was included in the analysis) housing and urban spending, as a percent of GDP.

Figure 2 – Decline in Disposable Income (wrt Net Market Income) Headcount Ratio and Poverty Reduction Effectiveness: Argentina, Bolivia, Brazil, Mexico and Peru (in percent)



Source: Lustig et al. (2011a).

The Effectiveness Indicator is defined as the redistributive effect of the taxes or transfers being analyzed divided by their relative size. Specifically, it is defined as follows: For the net market income Gini, it is the fall between the market income and net market income Gini as a percent of the market income Gini divided by the size of direct taxes and employee contributions to social security as a percent of GDP. For the disposable income Gini and headcount index, it is the fall between the net market income and disposable income Gini/headcount index as a percent of the net market income Gini/headcount index, divided by the size of direct transfers as a percent of GDP. For the final income* Gini, it is the fall between the net market income and final income* Gini as a percent of the final income* Gini, divided by the size of the sum of direct transfers, education spending, health spending, and (where it was included in the analysis) housing and urban spending, as a percent of GDP.

The main findings in Lustig (2011b) challenge "conventional wisdom" which states that fiscal policy redistributes little in Latin America (compared to OECD countries in particular) because of lower tax revenues and – above all – lower and less progressive transfers have been identified as the main cause.[29] "First, the extent and effectiveness of income redistribution and poverty reduction, revenue-collection, and spending patterns vary so significantly across countries that speaking of 'Latin America' as a unit is misleading. The (after direct taxes and transfers) Gini, for example, declines by over 10 percent in Argentina but by only 2.4 percent in Bolivia. In Argentina, Brazil and Bolivia government revenues are close to 40 percent of GDP, whereas in Mexico and Peru they are around 20 percent. Social spending (excluding contributory pensions) as a share of GDP ranges from 17 percent in Brazil to 5.2 percent in Peru. Second, social spending does not accrue to the richest quintile. On the contrary, concentration coefficients for social spending are highly negative (progressive in absolute terms) for Argentina and slightly so for Bolivia and Mexico. In Brazil and Peru social spending is progressive in relative terms only. Third, there is no obvious correlation between the size of government and the size of social spending, on the one hand, and

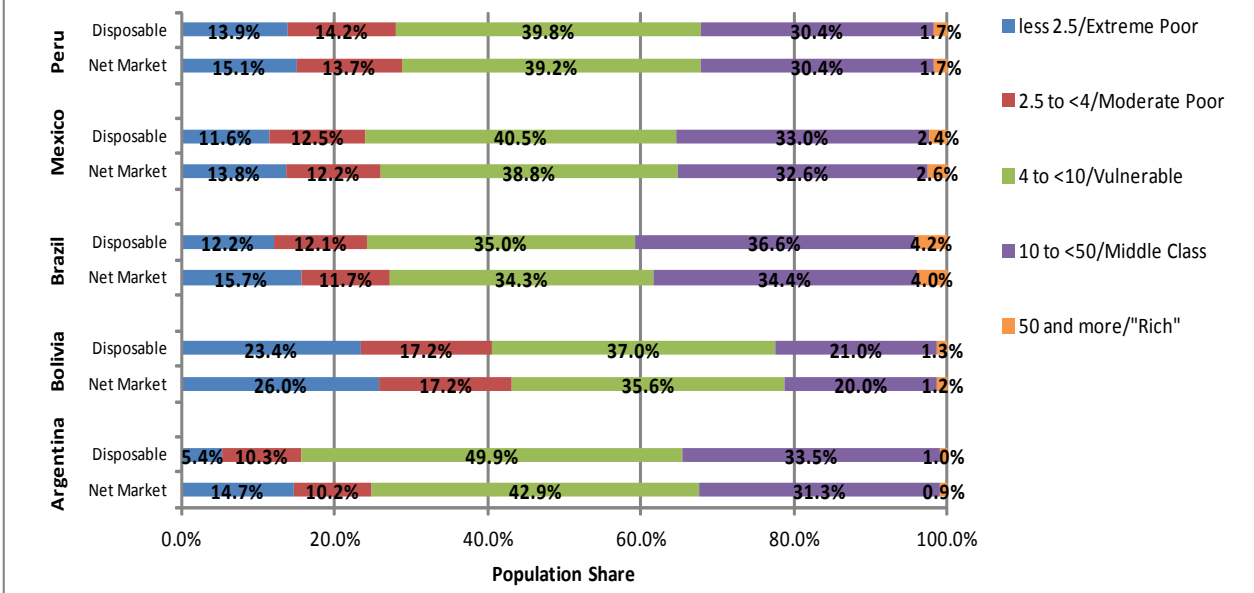
[29] See Breceda et al. (2008) and Goñi et al. (2011), for example.

the extent and effectiveness of redistribution, on the other: government size is similar for Argentina and Bolivia but they are on opposite sides in terms of the extent of redistribution.Fourth, due to indirect taxes households are net payers to the "fisc"beginning in the third decile in Bolivia and Brazil; for Argentina, Mexico and Peru this happens in the fifth decile."[30]

ii. Impact of Fiscal Policy on the Distribution of Income Among Socioeconomic Groups

Figure 3 shows the population shares by socioeconomic groups by net market (after taxes but before government transfers) and disposable income (after government transfers) for Argentina, Bolivia, Brazil, Mexico and Peru. As expected, Bolivia—the poorest country of the five—has a higher share of people living in poverty and a smaller middle-class. Brazil is the country with the largest middle-class and largest elite (those earning more than US$50 per day in PPP): 36.6 and 2.4 percent, respectively. In Argentina, Mexico and Peru, the largest group is the vulnerable. In Bolivia, the vulnerable and the poor are roughly the same size. In Brazil, the vulnerable and the middle-class are approximately equal.

Figure 3. POPULATION SHARES BY SOCIOECONOMIC GROUP



With the exception of Argentina, the population shares by socioeconomic category do not change much after government transfers. In Argentina, there is significant reduction of the

[30] From abstract in Lustig et al. (2011).

population living in extreme poverty while the share of the other groups increases. The largest increase occurs for the vulnerable. This means that cash transfers in Argentina are moving large numbers of people out of extreme (moderate) poverty into moderate poverty (vulnerable group). Notice that in all countries but Peru [WARNING: Mexico needs to be corrected] the share of the elite rises after transfers. Based on Lustig (2011b) this is probably due to noncontributory pensions (or pension-like programs) as well as errors of inclusion and leakages-by-design in some of the flagship transfer programs.

In Table 2 we show the income shares, headcount ratio, the ratio of the average income to the overall average income and the approximate deciles for each socioeconomic category. One thing to notice is that cutting-off the upper bound of the middle-class at less than US$50 PPP dollars per day, puts the high end of the middle class in the top five percent of the income distribution. In fact, in Argentina, Bolivia and Peru, all the socioeconomic groups except for the elite can join their voices with the "Occupy Wall Street" movement and chant "we are the 99 percent" (give or take a few decimals). Another thing to notice is that only in Argentina and Bolivia, the "post-fisc" distribution yields a higher (than the average for the entire population) income per capita for the extreme poor. At the other end of the spectrum, the average income of the middle-class and the elite (in relation to the average for the population as a whole) declines everywhere, with the largest decline occurring in Argentina.

Table 2

Distribution of Income and Population Shares by Socioeconomic Group

	DISTRIBUTION OF INCOME BY SOCIOECONOMIC GROUP			POPULATION SHARES BY SOCIOECONOMIC GROUP			HEADCOUNT RATIO			Ratio Of Share of Income Divided by Population Share			Deciles by Net Mkt Income
Income Intervals ($PPP per day)	Market Income	Net Market Income	Disposable Income	Market Income	Net Market Income	Disposable Income	Market Income	Net Market Income	Disposable Income	Market Income	Net Market Income	Disposable Income	
ARGENTINA													
less 2.5/Extreme Poor	na	1.3%	0.7%	na	14.7%	5.4%	na	14.7%	5.4%	na	0.09	0.13	I, II
2.5 to <4/Moderate Poo	na	2.8%	2.7%	na	10.2%	10.3%	na	24.9%	15.7%	na	0.27	0.26	II, III
4 to <10/Vulnerable	na	27.7%	30.0%	na	42.9%	49.9%	na	67.7%	65.5%	na	0.65	0.60	III, IV, V, VI ,VII
10 to <50/Middle Class	na	60.2%	59.1%	na	31.3%	33.5%	na	99.1%	99.0%	na	1.92	1.76	VII,VIII, IX, X
50 and more/"Rich"	na	8.0%	7.5%	na	0.9%	1.0%	na	100.0%	100.0%	na	8.58	7.89	top 0.9%
Total	na	100.0%	100.0%	na	100.0%	100.0%				na	1.00	1.00	
GINI and Conc Coeff	0.479	0.480	0.431										
BOLIVIA													
less 2.5/Extreme Poor	not applic	3.2%	4.0%	not applic	26.0%	23.4%	not applic	26.0%	23.4%	not applic	0.12	0.17	I, II, III
2.5 to <4/Moderate Poo	not applic	5.7%	5.9%	not applic	17.2%	17.2%	not applic	43.2%	40.6%	not applic	0.33	0.35	III, IV, V
4 to <10/Vulnerable	not applic	28.3%	28.5%	not applic	35.6%	37.0%	not applic	78.8%	77.6%	not applic	0.80	0.77	V, VI , VII, VIII
10 to <50/Middle Class	not applic	47.6%	46.8%	not applic	20.0%	21.0%	not applic	98.8%	98.7%	not applic	2.38	2.23	VIII, IX, X
50 and more/"Rich"	not applic	15.2%	14.7%	not applic	1.2%	1.3%	not applic	100.0%	100.0%	not applic	12.32	11.15	top 1.2%
Total	not applic	100.0%	100.0%	not applic	100.0%	100.0%				not applic	1.00	1.00	
GINI and Conc Coeff	0.535	0.535	0.522										
BRAZIL													
less 2.5/Extreme Poor	1.6%	1.7%	1.4%	15.3%	15.7%	12.2%	15.3%	15.7%	12.2%	0.10	0.11	0.11	I, II
2.5 to <4/Moderate Poo	2.6%	2.9%	2.8%	11.3%	11.7%	12.1%	26.6%	27.3%	24.2%	0.23	0.24	0.23	II, III
4 to <10/Vulnerable	15.8%	17.2%	16.7%	33.6%	34.3%	35.0%	60.1%	61.6%	59.2%	0.47	0.50	0.48	III, IV, V, VI ,VII
10 to <50/Middle Class	49.7%	51.2%	51.7%	35.3%	34.4%	36.6%	95.5%	96.0%	95.8%	1.41	1.49	1.41	VII,VIII, IX, X
50 and more/"Rich"	30.4%	27.0%	27.3%	4.5%	4.0%	4.2%	100%	100%	100%	6.68	6.83	6.53	top 4.0%
Total	100.0%	100%	100%	100%	100%	100%				1.00	1.00	1.00	
GINI and Conc Coeff	0.572	0.560	0.546										
PERU													
less 2.5/Extreme Poor	2.1%	2.2%	2.3%	15.0%	15.1%	13.9%	15.0%	15.1%	13.9%	0.14	0.15	0.16	I, II
2.5 to <4/Moderate Poo	4.0%	4.4%	4.5%	13.3%	13.7%	14.2%	28.3%	28.8%	28.1%	0.30	0.32	0.32	II, III
4 to <10/Vulnerable	23.4%	25.6%	25.8%	37.6%	39.2%	39.8%	65.9%	67.9%	67.8%	0.62	0.65	0.65	III, IV, V, VI ,VII
10 to <50/Middle Class	55.1%	53.8%	53.5%	32.1%	30.4%	30.4%	98.0%	98.3%	98.3%	1.71	1.77	1.76	VII,VIII, IX, X
50 and more/"Rich"	15.5%	14.1%	14.0%	2.0%	1.7%	1.7%	100.0%	100.0%	100.0%	7.88	8.21	8.16	top 1.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%				1.00	1.00	1.00	
GINI and Conc Coeff	0.504	0.495	0.492										

Source: Authors' calculations. Gini and Concentration Coefficients come from Lustig et al., coord. (2011). For Bolivia and Peru, university tertiary and technical tertiary, respectively.

Notes:

a. For definitions of income concept see Diagram 1 in text. The methods used to estimate the various income concepts are described in Table A2.

b. The socioeconomic groups were defined based on the following. The extreme poor group includes households whose income per capita is below PPP US$2.5 per day. The moderate poor includes households whose income per capita is PPP US$2.50 and more and below PPP US$4 per day. The two thresholds correspond to the international poverty lines used by the CEDLAS and World Bank database to define extreme and moderate poverty, respectively. The group in the PPP US$4 and PPP US$10 per day range is the lower-middle class also called the "vulnerable" group (determined by its vulnerability to fall into poverty); the upper bound cut-off is based on the analysis by Lopez-Calva and Ortiz-Juares (2011) who found that the households are very unlikely to fall into poverty when their income per capita reaches PPP US$10 per day. The group in the PPP US$ 10 to PPP US$50 per day range is the "middle class" as defined by Birdsall et al. (2011).

c. na: Not available means that the corresponding figure could not be estimated based on the household survey being used. Not applicable indicates that market income is not applicable in Bolivia because there were negligible or no direct taxes on income and contributions to social security in Bolivia in the year of the survey.

d.The surveys used for each country are as follows. Argentina: Encuesta Permanente de Hogares, 1st semester of 2009; Bolivia: Encuesta de Hogares, 2007; Brazil: Pesquisa de Orçamentos Familiares, 2008-2009; Mexico: Encuesta Nacional de Ingreso y Gasto de los Hogares, 2008; Peru: Encuesta Nacional de Hogares, 2009.

iii. Fiscal Incidence by Socioeconomic Group

In Table 3 we present the concentration shares by "approximate socioeconomic groups" for direct taxes, direct transfers, net indirect taxes and in-kind transfers. We call the groups "approximate" because for some of the taxes and transfers this information was available by decile only.[31] As one can observe, in Argentina we have a "poster child" of progressivity: taxes are progressive in relative terms and direct and in-kind transfers are progressive in absolute terms. In Bolivia, the picture is mixed: although the poor receive per capita cash transfers that are higher in per capita terms, so does the richest 10 percent in detriment of especially the vulnerable who receive a lower amount in per capita terms. In-kind education transfers are higher in per capita terms for the vulnerable and the middle-class than for the bottom 40 and the top 10 percent. Brazil shows relative progressivity both in direct and (less so in) indirect taxes but the concentration shares for cash transfers and in-kind health transfers indicate that they are not progressive in absolute terms. In fact, the poor and the vulnerable receive less in per capita cash transfers than the middle-class and the rich. In the case of in-kind health, the largest per capita benefits occur for the richest ten percent and the smallest occur for the bottom 30 percent (the "poor"). In relative terms (with respect to the category's income), there is a "see-saw" pattern: the benefits are highest for the poor and the middle-class (in that order) and lowest for the vulnerable and the richest 10 percent (in that order). Finally, in the case of Peru, direct and (less so) indirect taxes are progressive in relative terms and direct cash transfers are highly progressive in absolute terms with the bulk of the benefits accruing to the bottom 30 percent. On the other end of the spectrum are in-kind health benefits and the subsidized portion of the social security pensions.[32] The former follows a similar pattern to that of Brazil.

[31] For the approximate mapping between socioeconomic groups and deciles, see Table 2.

[32] For more details on how these are estimated see Appendix A and Lustig (2011b).

Table 3

Concentration Shares of Taxes and Transfers by Socioeconomic Group

Approximate Socioeconomic Group	Deciles	Net Mket Income Share	Direct Taxes plus Employee Contributions to Soc. Sec.	All Direct Transfers	Net Indirect Taxes	In-kind Education	In-kind Health	Subsidized portion of contributory pensions[b]
ARGENTINA								
Extreme and Moderate Poor	30%	6%	10%	55%	na	40%	55%	N/A
Vulnerable	40%	28%	25%	32%	na	41%	36%	N/A
Middle-class (except those in X)	20%	30%	23%	10%	na	14%	7%	N/A
Top 9 % of middle class and rich	10%	35%	42%	3%	na	5%	2%	N/A
	100%	100%	100%	100%	na	100%	100%	N/A
BOLIVIA								
Extreme and Moderate Poor	40%	10%	N/A	45%	9%	36%	41%	N/A
Vulnerable	40%	33%	N/A	32%	31%	44%	41%	N/A
Middle-class (except those in X)	10%	16%	N/A	10%	16%	11%	11%	N/A
Top 9 % of middle class and rich	10%	41%	N/A	14%	44%	9%	7%	N/A
	100%	100%	N/A	100%	100%	100%	100%	N/A
BRAZIL								
Extreme and Moderate Poor	30%	5%	2%	27%	6%	41%	12%	N/A
Vulnerable	40%	24%	12%	34%	24%	37%	21%	N/A
Middle-class (except those in X)	20%	28%	21%	20%	28%	14%	34%	N/A
Top 6% of middle class and rich	10%	44%	65%	20%	42%	7%	34%	N/A
	100%	100%	100%	100%	100%	100%	100%	N/A
PERU								
Extreme and Moderate Poor	30%	7%	0%	65%	3%	40%	13%	1%
Vulnerable	40%	27%	9%	30%	23%	41%	31%	17%
Middle-class (except those in X)	20%	28%	23%	5%	30%	15%	29%	34%
Top 8% of middle class and rich	10%	38%	68%	1%	43%	4%	27%	48%
	100%	100%	100%	100%	100%	100%	100%	100%

Notes:

a. For Argentina, the distribution of indirect subsidies and housing and urban were taken from secondary sources that used quintiles; thus the incidence by socioeconomic group could not be calculated.

b. For information on what is included in each transfer or tax category by country see Appendix A and Table 3 in Lustig et al. (2011).

c. Numbers in red refer to the cases in which the poor receive (pay) transfers (taxes) that are lower (higher) than the average in per capita terms, and the cases in which the rich receive (pay) transfers (taxes) that are higher (lower) than the average in per capita (relative) terms. Numbers in green refer to the cases in which the poor receive (pay) transfers (taxes) that are higher (lower) than the average in per capita (relative) terms, and the cases in which the rich receive (pay) transfers (taxes) that are lower (higher) than the average in per capita terms.

N/A means not applicable. na means not available.

In Table 4 we zoom in to look at concentration shares for (the sum of) flagship cash transfers programs (described in Appendix C) and in-kind education transfers to separate tertiary from the rest. This time we were able to estimate by socioeconomic category (instead of "approximate socioeconomic categories"). The results for the flagship programs are similar to the findings for direct transfers in Table 3. In Argentina and Peru, flagship programs are progressive in absolute terms while in Bolivia and Brazil they are progressive only in relative terms. For education we can observe some differentiated patterns across countries. If we combine the extreme and moderate poor, in-kind tertiary education transfers are progressive in relative terms in all countries.

However, in Argentina and Peru the highest per capita levels accrue to the middle-class while in Bolivia and Brazil they go to the rich. One important thing to note is that in relation to their income, in-kind tertiary education transfers are higher for the poor, the vulnerable and the middle-class (in that order) than the rich for all four countries (this is what progressive in relative terms means). This implies that if the subsidy to tertiary education is eliminated or reduced, the suffering in terms of loss of "purchasing power" would be highest for the poor, the vulnerable and the middle-class (in that order) than for the rich.

Table 4

Concentration Shares of Flagship Cash Transfers Programs and Tertiary Education by Socioeconomic Group

	Share of benefits going to each income group					
Net Market Income Group	y < 2.5	2.5 < y < 4	4 < y < 10	10 < y < 50	y > 50	Total
ARGENTINA						
At least one flagship cash transfer progra	38.4%	12.7%	34.9%	13.7%	0.3%	100.0%
Education: All Except Tertiary	24.0%	16.9%	47.0%	12.0%	0.1%	100.0%
Education: Tertiary	5.9%	6.1%	42.4%	45.0%	0.6%	100.0%
Income Shares by Net Market Income	*1.3%*	*2.8%*	*27.7%*	*60.2%*	*8.0%*	*100.0%*
Population Shares	*14.7%*	*10.2%*	*42.9%*	*31.3%*	*0.9%*	*100.0%*
BOLIVIA						
At least one flagship cash transfer progra	26.9%	12.8%	32.2%	25.8%	2.2%	100.0%
Education: All Except Tertiary	27.3%	18.2%	38.6%	15.5%	0.3%	100.0%
Education: Tertiary	4.8%	9.8%	37.2%	44.2%	4.0%	100.0%
Income Shares by Net Market Income	*3.2%*	*5.7%*	*28.3%*	*47.6%*	*15.2%*	*100.0%*
Population Shares	*22.5%*	*15.2%*	*37.8%*	*22.9%*	*1.6%*	*100.0%*
BRAZIL						
At least one flagship cash transfer progra	15.3%	8.8%	28.1%	36.2%	11.5%	100.0%
Education: All Except Tertiary	27.7%	16.9%	36.6%	18.5%	0.3%	100.0%
Education: Tertiary	3.3%	3.0%	20.3%	57.5%	15.9%	100.0%
Income Shares by Net Market Income	*1.7%*	*2.9%*	*17.2%*	*51.2%*	*27.0%*	*100.0%*
Population Shares	*15.7%*	*11.7%*	*34.3%*	*34.4%*	*4.0%*	*100.0%*
PERU						
At least one flagship cash transfer progra	46.9%	23.6%	24.6%	4.9%	0.0%	100.0%
Education: All Except Tertiary	24.6%	19.6%	41.2%	14.6%	0.0%	100.0%
Education: Tertiary	3.5%	8.1%	37.0%	49.4%	2.0%	100.0%
Income Shares by Net Market Income	*2.2%*	*4.4%*	*25.6%*	*53.8%*	*14.1%*	*100.0%*
Population Shares	*15.1%*	*13.7%*	*39.2%*	*30.4%*	*1.7%*	*100.0%*

Source: Authors' calculations.

Notes:

a. For definitions of socioeconomic groups see text and Table 1b; for definitions of income concept see Diagram 1 in text and Appendix A; for a description of household surveys see Appendix A; for a description of flagship programs see Appendix C.

b. Brown (green) font refers to spending that is progressive in absolute (relative) terms. For definitions see section 2 and diagram 2. Yellow (light blue) highlight indicates the highest (smallest) per capita spending among the five categories.

iv. Fiscal Mobility by Socioeconomic Group

Table 5 presents Fiscal Mobility Matrices (FMM) for the four countries. Remember that in these matrices the ij-th entry can be viewed as the probability of being in income group j (for example, the moderate poor) after taxes and transfers if you were in group i (for example, the extreme poor or the second decile) before taxes and transfers. Note that in the case of Argentina, the "status quo"

Table 5

Fiscal Mobility Matrices by Socioeconomic Group

ARGENTINA

	Disposable Income groups					
Net Market Income groups	y < 2.5	2.5 < y < 4	4 < y < 10	10 < y < 50	y > 50	Total
y < 2.5	37%	39%	25%	0%	0%	100%
2.5 < y < 4	0%	46%	54%	0%	0%	100%
4 < y < 10	0%	0%	95%	5%	0%	100%
10 < y < 50	0%	0%	0%	100%	0%	100%
y > 50	0%	0%	0%	0%	100%	100%

not available

BOLIVIA

	Disposable Income groups							Post-fiscal Income groups					
Net Market Income groups	y < 2.5	2.5 < y < 4	4 < y < 10	10 < y < 50	y > 50	Horizontal sum	Net Market Income groups	y < 2.5	2.5 < y < 4	4 < y < 10	10 < y < 50	y > 50	Horizontal sum
y < 2.5	91%	7%	1%	0%	0%	100%	y < 2.5	95%	4%	2%	0%	0%	100%
2.5 < y < 4	0%	87%	12%	0%	0%	100%	2.5 < y < 4	9%	87%	4%	0%	0%	100%
4 < y < 10	0%	0%	96%	4%	0%	100%	4 < y < 10	0%	8%	91%	1%	0%	100%
10 < y < 50	0%	0%	0%	100%	0%	100%	10 < y < 50	0%	0%	15%	85%	0%	100%
y > 50	0%	0%	0%	0%	100%	100%	y > 50	0%	0%	0%	32%	68%	100%

BRAZIL

	Disposable Income groups							Post-fiscal Income groups					
Market Income groups	y < 2.5	2.5 < y < 4	4 < y < 10	10 < y < 50	y > 50	Horizontal	Market Inc	y < 2.5	2.5 < y < 4	4 < y < 10	10 < y < 50	y > 50	Horizontal sum
y < 2.5	79%	16%	5%	1%	0%	100%	y < 2.5	88%	8%	4%	0%	0%	100%
2.5 < y < 4	2%	80%	17%	1%	0%	100%	2.5 < y < 4	18%	72%	9%	1%	0%	100%
4 < y < 10	0%	2%	93%	6%	0%	100%	4 < y < 10	0%	13%	84%	3%	0%	100%
10 < y < 50	0%	0%	3%	96%	1%	100%	10 < y < 50	0%	0%	18%	82%	0%	100%
y > 50	0%	0%	0%	12%	88%	100%	y > 50	0%	0%	0%	35%	65%	100%

PERU

	Disposable Income groups							Post-fiscal Income groups					
Market Income groups	y < 2.5	2.5 < y < 4	4 < y < 10	10 < y < 50	y > 50	Horizontal sum	Market Income groups	y < 2.5	2.5 < y < 4	4 < y < 10	10 < y < 50	y > 50	Horizontal sum
y < 2.5	92%	8%	0%	0%	0%	100%	y < 2.5	92%	8%	0%	0%	0%	100%
2.5 < y < 4	0%	94%	5%	0%	0%	100%	2.5 < y < 4	1%	94%	5%	0%	0%	100%
4 < y < 10	0%	1%	99%	0%	0%	100%	4 < y < 10	0%	2%	98%	0%	0%	100%
10 < y < 50	0%	0%	6%	94%	0%	100%	10 < y < 50	0%	0%	8%	92%	0%	100%
y > 50	0%	0%	0%	13%	87%	100%	y > 50	0%	0%	0%	16%	84%	100%

Source: Authors' calculations.

Notes:

a. For explanation of mobility matrix see text and Lustig (2011c).For definitions of socioeconomic groups see text and Table 1b; for definitions of income concept see Diagram 1 in text and Appendix A; for a description of household surveys see Appendix A; for a description of flagship programs

b. For Argentina the population totals used to construct the mobility matrix uses absolute numbers from the household data expanded to urban areas covered by the survey but without expanding to whole country.

is net market income, while for Brazil and Peru, it is market income (before taxes). Bolivia has no direct taxes so market and net market income are essentially the same. The results show some interesting patterns. First, Argentina is the country with the highest fiscal mobility and Peru the country with the least. In Argentina, 25 percent of the extreme poor and 54 percent of the moderate poor are moved out of poverty (and into the vulnerable group) as a result of direct transfers. Unfortunately, there are no estimates of the impact of indirect taxes in Argentina so we cannot assess what happens when we compare net market income (or even better, market income) with post-fiscal income (after indirect taxes and subsidies). We can do this for Bolivia, Brazil and Peru. Again, the findings are illuminating. Indirect taxes generate significant downward mobility among the poor in Brazil and less so in Bolivia. As a result of indirect taxes, in Brazil 18 percent of the moderate poor become extreme poor, 13 percent of the vulnerable become moderate poor and 18 percent of the middle-class become part of the vulnerable. For Peru, the analogous numbers are 1 percent, 2 percent and 8 percent. In Brazil, indirect taxes are clearly anti-poor and anti-middle-class. In Peru, perhaps because of the VAT exemption for basic foodstuffs, indirect taxes are "pro-poor." Note how in Brazil the downward movements are partly cancelled out with upward movements for the same groups. This explains why we don't see so clearly the "anti-poverty" nature of indirect taxes when we rely on standard measures of incidence analysis such as concentration shares or the "post-fisc" measures of poverty.

Another measure of mobility proposed here is the Fiscal Mobility Profile (FMP) described in section 3. In Figures 4 and 5 we present the FMP (in deciles) for our four countries and compare them with the more typical Fiscal Incidence Curve (FIC). Remember that the FMP plots the changes in income (from "pre-fisc" to "post-fisc") without re-ranking (that is, households keep the ranking they have in the status quo or "pre-fisc" situation). In Figure 4 the comparison is country by country. In Argentina, Bolivia and Brazil, there is a much larger increase in the incomes of the poorest ten percent in the FMP indicating that a subgroup of the poorest receives significant transfers while another group does not. This is probably due to noncontributory pensions which give households with near zero incomes a transfer that is very significant in relative and absolute terms; that is, there is a group of beneficiaries that moves to higher deciles. In Peru the two curves overlap which is consistent with the low degree of mobility shown in the mobility matrix for Peru. Note that for the remaining three countries, the difference between the two curves is particularly striking for the bottom 10 percent. In the case of Brazil, the difference is visible (yet smaller) for

higher deciles than for the other two. Again, this is consistent with Brazil's showing much more mobility in the mobility matrix shown above. Finally, we can observe that when we add the effect of indirect taxes (post-fiscal income), people begin to be net payers to the "fisc" around the second decile in Bolivia and Brazil whereas this happens from the fourth decile onwards for Peru.

Figure 4 - Fiscal Incidence Curves (with reranking) and Fiscal Mobility Profiles (without reranking) for Disposable (left) and Post-fiscal Income (right)

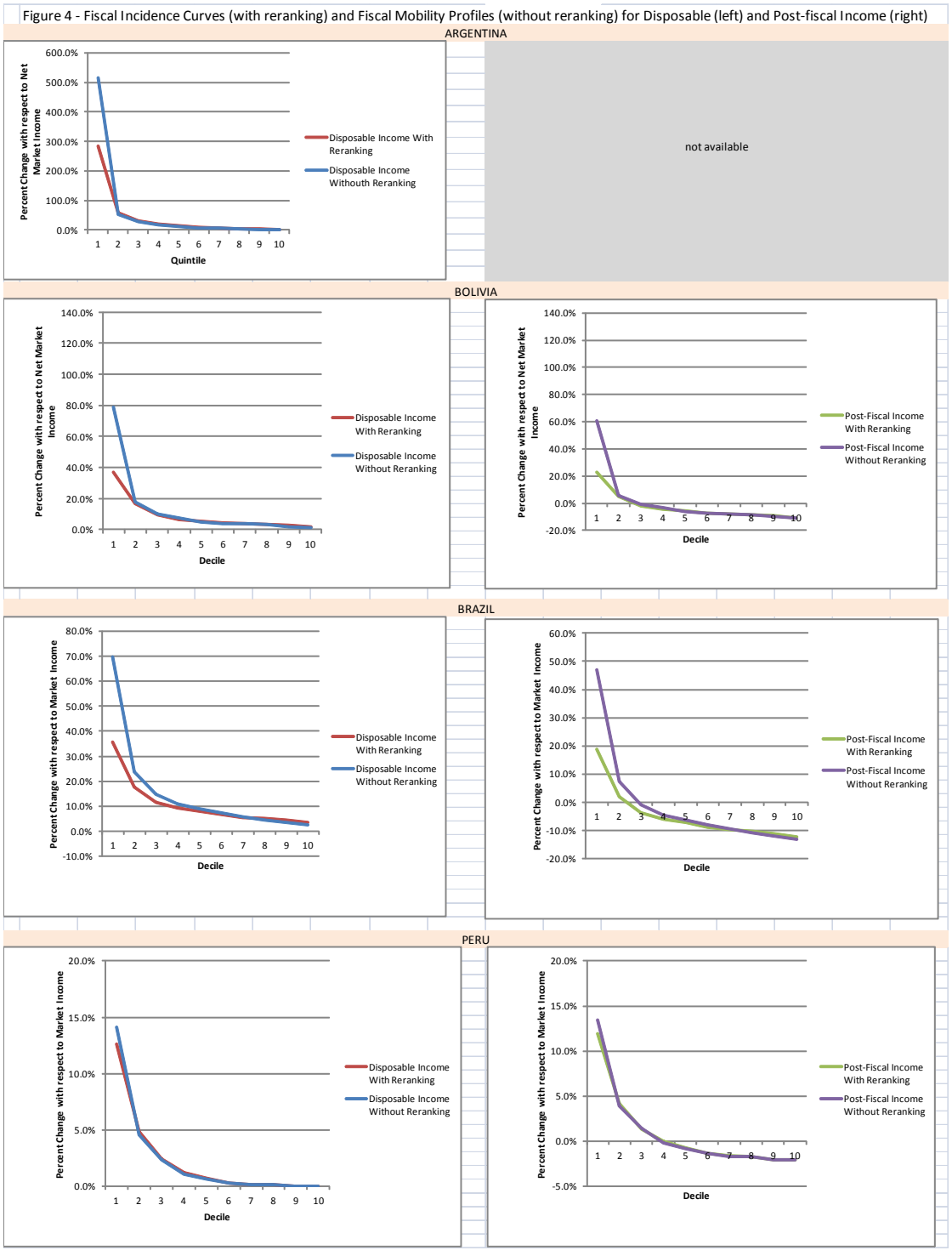
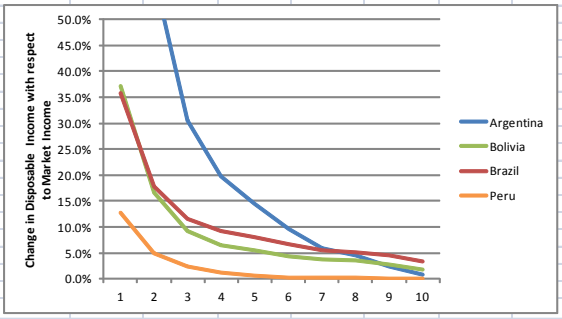


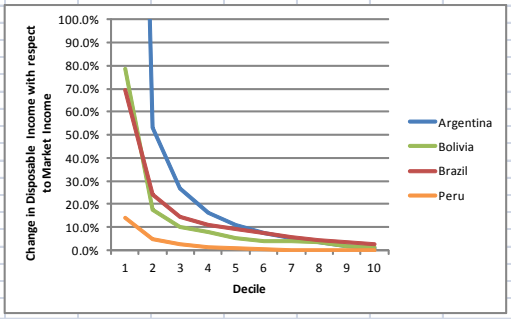
Figure 5 - Fiscal Incidence Curves (left) and Fiscal Mobility Profiles (right) for All Countries: Argentina, Bolivia, Brazil and Peru

CHANGES IN DISPOSABLE INCOME

WITH RERANKING (ANONYMOUS)

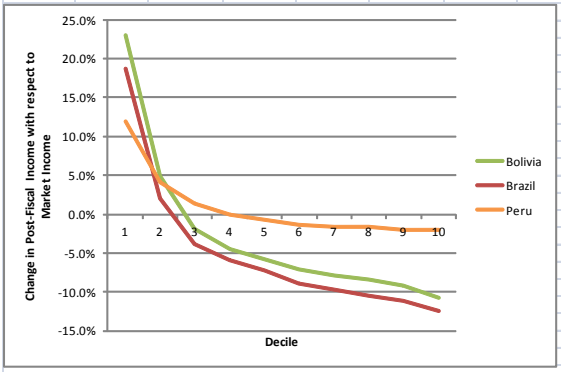


WITHOUT RERANKING (RANKED BY MARKET OR NET MARKET INCOME) (NONANONYMOUS)



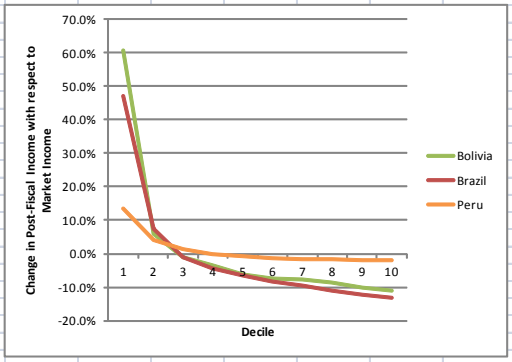
CHANGES IN POST-FISCAL INCOME

WITH RERANKING (ANONYMOUS)



Note: Bolivia is calculated with respect to Net Market Income, although in Bolivia, market income and net market income are essentially the same

WITHOUT RERANKING (RANKED BY MARKET OR NET MARKET INCOME) (NONANONYMOUS)



Note: Argentina and Bolivia are calculated with respect to Net Market Income although in Bolivia, market income and net market income are essentially the same

5. Conclusions (preliminary)

Our analysis shows that fiscal mobility can range from very significant to almost nonexistent. In Argentina, for example, non-contributory pensions and conditional cash transfers move 25 percent of the extreme poor and 54 percent of the moderate poor into the (higher) "vulnerable" socioeconomic group.[33] (Table 5) In contrast, in the case of Peru, the corresponding figures are zero and 5 percent, respectively. In addition, fiscal redistribution and fiscal mobility can tell us quite different stories.[34] For example, in Brazil the "pre-fisc" Gini coefficient equals .572 and the "post-fisc" (after direct and indirect taxes and cash transfers) equals .545, indicating an equalizing change. (Lustig, 2011b, Table 1) However, underneath this "equalization" there is significant downward fiscal mobility (caused primarily by the burden of indirect taxes): 18 percent of individuals move from being "pre-fisc" moderate poor to "post-fisc" extreme poor and 16.4 percent move from being "pre-fisc" vulnerable to "post-fisc" moderate poor. (Table 5) While extreme poverty reduction in Bolivia is rather limited ("pre-fisc" headcount ratio equals 26 percent and the "post-fisc" equals 23.4 percent; Lustig, 2011b, Table 1), the "pre-fisc" income of the nonanonymous bottom decile is increased by 79 percent (whereas the anonymous increase is half as large: 37 percent). Actually, with the exception of Peru where there is practically no difference between the anonymous and nonanonymous results, in the rest of the countries the differences are quite striking for the poorest decile only. For the rest of the deciles, the differences between anonymous (fiscal redistribution) and nonanonymous (fiscal mobility) changes in "post-fisc" income are small. These results are telling us that in some countries what the government "giveth" with cash transfers it might "taketh" away with indirect taxes for many of the poorest of the poor, something governments may want to address head-on.

[33] Note that the effect in Argentina may be "exaggerated" when compared with the other countries because market or primary income in Argentina does not include autoconsumption or, more importantly, imputed rent. The latter raises the income of those with very low monetary incomes by relatively more. Hence, all the results for Argentina should be viewed as an "upper bound."

[34] For an analysis of the redistributive impact of fiscal policy in the same five countries and using the same methodology see Lustig (2011b).

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Appendices: A, B and C

Appendix A: Description of Household Surveys and Methods and Sources to Construct Income Categories and their Components

	Argentina	Bolivia	Brazil	Mexico	Peru
	2009	**2007**	**2009**	**2008**	**2009**
Survey info					
Survey name	Encuesta Permanente de Hogares	Encuesta de hogares	Pesquisa de Orçamentos Familiares	Encuesta Nacional de Ingreso y Gasto de los Hogares	Encuesta Nacional de Hogares
Acronym	EPH		POF	ENIGH	ENAHO
Year	1st Semester 2009	2007 (from november the 1st to november 30th)	2008-2009	2008	2009
Observations	93168 individuals	4.148 households	190,159 individuals; 56,091 households (source: microdata)	35,146 households	22,640 households
Coverage	Urban	National	National	National	National
INCOME MEASURE USED IN INCIDENCE ANALYSIS					
Pre-incidence Analysis Income	Net Market Income	Net Market Income=Market Income (see description in "Direct Taxes" and "Employee Contributions to SS" below)	Market Income	Net Market Income	Market Income
INCOME CONCEPTS: DEFINITIONS, METHODS AND SOURCES					
MARKET INCOME					
Autoconsumption	Not included	Not included	Included; reported in survey	Included	Included
Imputed rent for owner occupied housing	Not included	Not included	Included; reported in survey ("What do you think you would be paying to rent this dwelling?")	Included	Included
Earned and Unearned Incomes of All Possible Sources Including Social Security Pensions and Excluding Government Transfers	Included but all incomes are assumed to be net of income taxes and employee contributions to social security	Included	Included	Included but all incomes are assumed to be net of income taxes and employee contributions to social security	Included
NET MARKET INCOME=MARKET INCOME - (DIRECT TAXES AND EMPLOYEE CONTRIBUTIONS TO SOCIAL SECURITY)					
Direct Taxes	Not reported in the survey and not included in the incidence analysis at the micro-data level. Argentina used Net Market Income as the pre-incidence income. Whenever results are reported on incidence of direct taxes they	Not applicable. There are no direct taxes applied to personal income. A tax that, in some way, substitutes a direct tax applied to personal income is the "Regimen Complementario al Valor Agregado (RC-IVA)". In 2007 this tax accounted for 1.4% of total tax revenues.	Subtracted from Market Income to generate Net Market Income. Direct Identification Method. For wages/salary, "imposto de renda" and for other sources of market income "deduções". If the person reports receiving an income tax refund that is subtracted out of taxes paid.	Not reported in the survey and not included in the incidence analysis at the micro-data level. Mexico used Net Market Income as the pre-incidence income. Whenever results are reported on incidence of direct taxes they come from Secondary Sources. Taxes not reported in survey. Estimates based on official estimates by the finance ministry (SHCP, 2010), imputed by	Subtracted from Market Income to generate Net Market Income. Direct Identification Method. Under "tax payments."

	come from Secondary Sources. The incidence is from Gasparini (1998). Where applicable, the amount is from Dirección Nacional de Investigaciones y Análysis Fiscal, Ministerio de Economía Argentina.	However this tax is not included in the analysis.		applying the tax law to the ENIGH data. Methodology used is consistent with imputations made for spending in present study.	

Appendix A: Description of Household Surveys and Methods and Sources to Construct Income Categories and their Components cont.

Employee contributions to social security	Not reported in the survey and not included in the incidence analysis at the micro-data level. Argentina used Net Market Income as the pre-incidence income. Whenever results are reported on incidence of social security contributions they come from Secondary Sources. The incidence is from Gasparini (1998). Where applicable, the amount is from Dirección Nacional de Investigaciones y Análysis Fiscal, Ministerio de Economía Argentina.	Not applicable. Contributions to government-run social security in Bolivia were almost zero in the year of the survey.	Subtracted from Market Income to generate Net Market Income. Direct Identification Method. For wages/salary, "Previdência Pública" and "outras deduções". For other sources of market income it is assumed the deductions were direct taxes since there's only one category. If the person reports receiving a Previdência Pública tax refund that is subtracted out of contributions.	Not reported in the survey and not included in the incidence analysis at the micro-data level. Mexico used Net Market Income as the pre-incidence income. Whenever results are reported on incidence of contributions to social security they come from Secondary Sources. Estimates based on official estimates by the finance ministry (SHCP, 2010), imputed by applying the tax law to the ENIGH data. Methodology used is consistent with imputations made for spending in present study.	Subtracted from Market Income to generate Net Market Income. Direct Identification Method. Under legal deductions specified as "social security contributions."
DISPOSABLE INCOME = NET MARKET INCOME + DIRECT GOVERNMENT TRANSFERS					
Non-contributory pensions	Inference Method. The incidence is estimated from the EPH survey assuming that those reporting receiving the minimum pension or less under pensions on the survey are recipients of non-contributory pensions or moratorium pensions	Direct Identification Method. This transfer corresponds to the Sistema de Reparto Residual and is captured by the survey under "non labor income".	Direct Identification Method. Under other income Benefício de Prestação Continuada (BPC) is one of the categories.	For Mexico, non-contributory pensions were included in the column Targeted Monetary Transfers.	Not applicable. There are no non-contributory pensions in Peru.
Targeted monetary transfers	Direct Identification Method. For Argentina, targeted monetary transfers include Jefes y Jefas de Hogar, Familias, Becas, and unemployment insurance. These are reported on the survey.	Simulation Method. For Bolivia this column only includes Bono Juancito Pinto. All other transfers are under "other direct transfers". The method used was a simulation consisting of identifying eligible beneficiaries.	Direct Identification Method. For Brazil this column only includes Bolsa Familia; all other transfers are under "other direct transfers".	Direct Identification Method and Alternate Survey Method. The largest transfers are reported in the survey (direct identification method). Non-contributory pensions are also reported in the survey (direct identification method). Smaller transfers are imputed by the author, with the distribution being based on the micro-data of a special module of the equivalent 2006 survey (alternate survey method).	Direct Identification Method. Directly from survey under "JUNTOS transfer". In Peru targeted monetary transfers include only JUNTOS.

Appendix A: Description of Household Surveys and Methods and Sources to Construct Income Categories and their Components cont.

Other direct transfers	Simulation Method. For Argentina, this column includes Asignación Universal por Hijo (AUH), which was not captured by the survey (it was implemented later in 2009) but is simulated according to the program rules, assuming perfect coverage and targeting.	Direct Identification Method and Simulation Method. The direct identification method was used for the following monetary transfers: Bono de natalidad, Pago a Beneméritos, Pensions (Sistema de Reparto Residual) and Bonosol, and the following non-monetary transfers: Bono de lactancia. The simulation method was used for the following non-monetary transfers: D49Desayuno escolar	Direct Identification Method. Includes: PETI, Bolsa Escola, Bolsa de estudo, other scholarships (credito-educativo, auxilio-educação, auxilio-escola, auxilio-creche), special circumstances pensions (pensão do INSS, pensão da previdência pública, acidente de trabalho previdência pública, auxilio-doença da previdência pública), unemployment benefits (seguro desemprego, salário desemprego, auxílio desemprego, agente jovem - programa governamental para jovem desempregado), minimum income programs (programas de renda mínima, bolsa-renda), cesta básica, abono do PIS/PASEP, auxílio-gás, other government auxílios (estiagem, leite, comunicação, energia eletrica, a portadores de deficiência física, para plano medico, moradia, maternidade, natalidade, defeso, cartão cidadão)	Imputation Method and Alternate Survey Method. Employment subsidy is imputed to formal sector workers using the subsidy table as defined in the 2008 tax code. Opciones productivas is based on benefits reported in the 2006 survey, adjusted to total amount reported in Cuenta Publica Federal.	Direct Identification Method. Directly from survey under "food transfers". Includes: Vaso de Leche program and PRONAA.

Appendix A: Description of Household Surveys and Methods and Sources to Construct Income Categories and their Components cont.

POST-FISCAL INCOME = DISPOSABLE INCOME + INDIRECT SUBSIDIES - INDIRECT TAXES					
Indirect subsidies	Income-only survey and hence not included in the incidence analysis at the micro-data level; available by quintiles or deciles only. Whenever results are reported on incidence of indirect taxes and subsidies they come from Secondary Sources. Incidence is estimated using several secondary sources and assumptions: for energy we use quintile incidence on access and expenditure of electricity and natural gas (based on the ENGHO expenditure survey for 1996-1997) from Marchionni et al (2004) and Foster (2004). For transportation we use quintile incidence from Foster (2004) except the airlines subsidy (going entirely to Aerolineas Argentinas) where it is assumed that the entire subsidy accrues to the fifth quintile. For agricultural subsidies, it is based on administrative data from ONCCA (the government agency that administers agricultural subsidies) and Nogues (2008). Only few agricultural producers and agroindustries, and supposedly landowners, received these subsidies (see Scott (2008) on the incidence of agricultural subsidies--even targeted ones--in Mexico) and hence we assumed 75% goes to the upper quintile and the rest is divided evenly among the rest of quintiles. The same assumption is made for subsidies to manufacturing and communications.	Not included in the incidence analysis at the micro-data level; available by deciles only. Imputation Method. Subsidio al gas licuado (GLP). Imputations based on subsidized cost estimated for GLP unit consumed by household. (Medinacelli, sf).	Not included in the incidence analysis at the micro-data level; available by deciles only. Used Secondary Sources; the incidence and distribution in the columns for Indirect Taxes are actually the net effect of indirect subsidies and indirect taxes, based on secondary sources described under "indirect taxes."	Not included in the incidence analysis at the micro-data level; available by deciles only. Imputation Method and Alternate Survey Method. Imputed using household spending reported in the subsidized goods and services. In the case of residential electricity subsidies the imputation is based on a study of the 2006 survey which takes into account the complex tariff structure(Scott, 2009).	Not included.
Indirect taxes	Income-only survey and hence not included in the incidence analysis at the micro-data level; available by quintiles or deciles only. Whenever results are reported on incidence of indirect taxes and subsidies they come from Secondary Sources. The incidence is from Gasparini (1998).	Not included in the incidence analysis at the micro-data level; available by deciles only. Secondary Sources. Effective rates applied by consumption and income deciles based on Cossio (2006). The rates include the aggregation effect of the following indirect taxes: Impuesto al Valor Agregado (IVA), Impuesto a las Transacciones (IT), Impuesto Especial a los Hidrocarburos y sus derivados (IEHD)and Impuesto al Consumo Específico (ICE).	Not included in the incidence analysis at the micro-data level; available by deciles only. Secondary Sources. Based on the study Siqueira, Nogueira, and Souza (2005) who use POF 2002-2003 and calculate the decile incidence of indirect subsidies and taxes (broken up into 17 categories). In the future we will calculate directly from survey but the analysis is complex because of different tax rates for different items and in different states.	Not included in the incidence analysis at the micro-data level; available by deciles only. Secondary Sources. Taxes not reported in survey. Estimates based on official estimates by the finance ministry (SHCP, 2010), imputed by applying the tax law to the ENIGH data. Methodology used is consistent with imputations made for spending in present study.	Effective rates applied to consumption reported on the survey. Evasion of indirect taxes is considered through two main assumptions: (i) people who live in villages under 410 households do not pay taxes and (ii) all spending made on street vendors, "farmers markets" or other informal conditions does not pay taxes.

Appendix A: Description of Household Surveys and Methods and Sources to Construct Income Categories and their Components cont.

FINAL INCOME = POST-FISCAL INCOME + GOVERNMENT IN-KIND TRANSFERS/FINAL INCOME* = DISPOSABLE INCOME + GOVERNMENT IN-KIND TRANSFERS					
In-kind education	Imputation Method. The education benefit is based on cost per student by level and it is imputed for students who report attending public school. For those who report attending public school: if they attend primary school including pre-school for age 5 that is mandatory also until age 12, the benefit is 5484 pesos per year; for those between ages 13 and 17 (corresponding to secondary school) the benefit is 8528 pesos per year. For those that attend Tertiary/university the benefit is 8443 pesos per year. The latter category is used to impute education benefits but is not included in the calculation of the education coverage gap, in accordance with the CEQ Handbook.	Imputation Method. Imputations based on cost per student by level, for those who report attending public school. 58.57 bolivianos per capita; Primary Education: 122.49 bolivianos per capita; Secondary Education: 97.97 bolivianos per capita, University: 792.22 bolivianos per capita , Technical Superior Education: 630,69.bolivianos per capita.	Imputation Method. Per the CEQ Handbook, the education benefit is based on cost per student by level. This benefit is applied to students who report attending public school. For those who report attending public school: if they attend creche (early childhood) the benefit is 2276 reais per year; for those between ages 4 and 6 (corresponding to pre-school) the benefit is 2276 reais per year (note 2276 is the average government spending for initial which includes early childhood and pre-school); for those between ages 7 and 10 (corresponding to lower primary) the benefit is 3204 reais per year; for those between ages 11 and 14 (corresponding to upper primary) the benefit is 3342 reais per year; for those between ages of 15 and 18 (corresponding to secondary) the benefit is 2336 reais per year (unless the student reports attending tertiary); for students who attend tertiary the benefit is 15,582 reais per year.	Imputation Method. Imputed based on attendance of public school at each level reported in the survey and federal and local spending per student at the relevant level reported in the public accounts and education ministry (local spending). Spending is: Primary (ages 7-12): 11,400 pesos (per year); Lower Secondary (ages 13-15): 17,600; Higher Secondary (ages 16-18): 23,600; University: 53,900.	Imputation Method. Per the CEQ Handbook, the education benefit is based on cost per student by level. This benefit is applied to students who report attending public school. For those who report attending public school: if they attend elementary school, 1044 soles per year; if they attend primary school, 1254 soles per year; if they attend secondary school 1367 soles per year; if they attend university, 3914 soles per year; if they attend technical superior education, 2711 soles per year.

Appendix A: Description of Household Surveys and Methods and Sources to Construct Income Categories and their Components cont.

In-kind health	Imputation Method. Per capita government expenditure on health (PPP int. $ of 2006) from World Health Statistics 2009 (WHO 2009) actualized with Consumer Price Index until 2009, that amounts to 1190 pesos per capita per year in 2009. This cost was similar to the cost of one of the least expensive health insurance programs provided in the Province of Buenos Aires by IOMA, of 1200 pesos per capita per year in 2009. Instituto de Obra Médico Asistencial (IOMA) (the public health provider for Buenos Aires Province) which costs a little more than 1200 pesos per person a year, the health insurance for those that pay the Monotributo (equivalent to a simplified tax and social security regime for part of the self-employed who receive low incomes) (less than 600 pesos per person yearly), and the low end Prepagas, which offered plans starting at about 2100$ pesos per person a year. This shows that the cost estimated by WHO seems to be in between the costs of various providers that could offer health insurance to the poor, so we deemed it appropriate and adopted it for this study. To calculate the health gap after transfers, on the basis of the EPH question about the health insurance coverage, the poor without health insurance privately paid or discounted from their wage is considered uncovered (or what is similar, it is the population that would be attended at public hospitals or paying health privately).For the in-kind health benefits, individuals that declared not having health insurance (either private or from Obras Sociales) receive the imputed benefit	Imputation Method. Imputations based on average cost of basic health package, for those who report to have attended a public health service during the last month. Imputations based on normal child birth for first level, second level and private house attention. The average cost of basic health service is imputed monthly based on the annual per capita cost estimated by OMS in 343 bolivianos . For normal child birth attention, imputations are based on three different average costs: 72 bolivianos for first level health establishments, 97 bolivianos for second level health establishments, and 34 bolivianos for professional attention in private house.	Secondary Sources. In POF there are no questions about use of health services or health insurance coverage. We used a study (IBGE, 2009) on the distribution of use (*consultas* and *internações*) of public health facilities by income group from PNAD 2008. To impute the health benefit to households we assigned them a share of health spending corresponding to the distribution of use.	Imputation Method. Imputed based on affiliation to public health insurance institutions (IMSS, ISSSTE, PEMEX, Army, Seguro Popular) and use of public health services for the uninsured (SSA, IMSS-Oportunidades) identified by institution in the survey and federal and local public spending reported in the public accounts (federal) and health ministry (federal and local spending). The corresponding value of benefits are: IMSS-Oportunidades 2,151 pesos; SSA 2,394; Seguro Popular 1,787 (added to SSA); IMSS 4,218; ISSSTE 4,472; PEMEX, Army 10,774.	Direct Identification Method. Directly from survey under the amount of health spending covered by health insurance (contributive and non-contributive).
Housing and urban	Secondary Sources. The incidence is from Gasparini (2004), except in the case of housing, where Gasparini (2004) used the ECV 2001 to impute housing loans estimating a CC of -0.0761, slightly pro-poor. The EPH does not count with data on loans for housing; however since the year 2000, the funds for FONAVI are from "free disponibility" and provinces can assign expenditure to the purpose they want. According to different sources, housing construction and loans from these plans have been decreasing and hence we assume equal incidence by quintile with CC of zero. Where applicable, the amount is based on public accounts.	Not included	Not included	Imputation Method. Imputed based on beneficiaries reported in ENIGH, using spending on these programs reported in form Cuenta Pública.	Not included.

Appendix A: Description of Household Surveys and Methods and Sources to Construct Income Categories and their Components cont.

Subsidized portion of social security (social security "deficit" as a percent of total social security spending)	Basically 0 in 2009	100% (negligible contributions to the social security system in 2007). Thus social security is considered a direct transfer in the case of Bolivia.	0% based on the following analysis: total federal INSS social security benefits paid in 2009 was 237,349 million reais. We divide this into two categories: regular contributory pensions (*aposentadorias* and *benefício mensal*, totaling 164,825 million reais) and special circumstances pensions (*pensões* and *outros benefícios* totaling 72,564 million reais). The latter are paid in the case of serious illness, hospitalization, accident at work, death of a spouse, etc.; i.e., they are intended to smooth idiosyncratic shocks. Because of their nature we consider these to be 100% government-subsidized and treat them as a direct transfer. The benefits paid for regular contributory pensions are less than contributions to social security (over 190,000 million reais), which means that there is no social security deficit for regular contributory pensions; they are entirely funded by contributions.	44.8% (49.7%)*; *Including state enterprises, assuming proportion subsidized is equal to ISSSTE, the principal social security institution serving public sector workers). For the analysis the proportion is allowed to vary by institution. Imputation Method. Subsidies to contributory social security pension systems are imputed based on reported pensions (which are not identified by source) combined with reported affiliation to the corresponding social security institutions. The proportion that is subsidized varies by institution.	56%. Imputation Method. From public accounts, we calculate that 56% of pensions are subsidized by the government. We impute this subsidy to households, using the amount of pensions they report receiving from the contributory system, and assuming that the subsidy is distributed equivalently to pensions themselves (i.e., the government subsidized 56% of each pension recipient's pension).
SCALED-UP INCOMES, TAXES AND TRANSFERS FOR INCIDENCE ANALYSIS INCLUDING GOVERNMENT IN-KIND TRANSFERS					
Scaling up factor and method	As EPH is Urban and does not even cover the whole Urban Population, EPH has first to be scaled to match up the population and then to match a comparable definition of income in National Accounts. Since only GDP is available in National Accounts, that definition is scaled down to Net Market Income and then compared to the expanded Net Market Income (for the whole population) from the EPH. The scaling up factor used was 1.414 uniform for all income	The scaling up factor value is 1.2648. Calculations are based on 2007 national accounts. However since there is no disaggregated information on income structure we use the average structure of years 2000, 2001, 2002 and 2003; for which the disaggregated structure was available.	1052/1049. Underreporting in POF is very low compared to an equivalent income definition in national accounts since the questions are so extensive. Barros, Cury, and Ulyssea (2007) compare total income in the 2002-2003 POF to a very comparable definition of income in national accounts for 2003 (they break it down by sub-category in their paper; see Table 4). Total income according to POF is 1049 billion reais and according to national accounts is 1052 billion reais. (Note: underreporting is much more prevalent in PNAD; total income according to the 2003 PNAD was 830 billion reais).	8,249,423/3,750,891. Underreporting of total current household income in ENIGH compared to the closest equivalent in NAs is large, a factor of 2.2. This factor is applied to all household income to ensure comparability between market income from the ENIGH and public taxes/spending form the federal public account.	Total household income in ENAHO tends to be underreported by a large margin (a factor of 1.63) when compared to the closest equivalent concept in the National Accounts. Income and transfers reported from survey were scaled up when they differed in more than 10% from closest public account estimation.

Source: Lustig (coordinator), 2011b.

Appendix B: Public Accounts and Other Country Information

	Argentina	Bolivia	Brazil	Mexico	Peru
	2009	2007	2009	2008	2009
Macroeconomic Data: GDP, GNI and Population					
GDP in LCU - yr of survey	1,145,458,336,366	103,009,182,446	3,185,125,000,000	12,200,100	392,565
Units	Pesos	Bolivianos	reais	millions pesos	million soles
GDP/cap. in LCU - yr of survey	28,544	10,482	16,718	83,963	13,475
GNI in LCU - yr of survey	1,110,233,876,588	109,775,035,955	3,121,048,000,000		369,195
GNI/cap. in PPP - yr of survey	14,030	4,069	10,140	14,530	8,349
GNI/cap. in current US$ (market exchange rates, Atlas method) - yr of survey	7,540	1,230	8,090	10,050	4,240
PPP conversion factor - yr of survey	1.965	2.745	1.712	8.136	1.700
Population - yr of survey	40,130,000	9,827,522	190,519,297	106,719,348	29,132,013
Government Spending info (millions of local currency units)					
Total spending (includes debt servicing)	459,961	43,144	1,629,853	2,894,807	79,304
Primary spending (without debt servicing (interests and amortizations))	430,401	41,799	1,173,831	2,667,694	74,293
Notes	Spending includes estimation of central government, provincial, and municipal spending from different sources and using 2007 spending for several projections	Resources include central government, departmental, and municipal spending and revenues.	Includes federal, state, municipal. Excludes debt refinancing (internal and external), *outros encargos especiais*, *outros encargos: demais subfunções.*	Includes federal, state and municipal spending financed from federal tax revenues, excludes state and municipal spending financed from local taxes or fees.	Includes the three levels of government spending: local, regional, national.
Government Revenues by Category (millions of local currency units)					
Direct Taxes	97,783.44	4,325.10	187,395.80	265,947.60	20,346.00
(Notes and source)	Includes federal and provincial direct taxes (Income Tax, Taxes on property, Wealth and Payroll Taxes) Source: Dirección Nacional de Investigaciones y Análisis Fiscal, Ministerio de Economia, MEyFP	Direct Taxes include: Impuesto a las Utilidades, Impuestos Municipales, Regimen Complementario al IVA (RC-IVA). Source: "Dossier semestral 2010". Ministerio de Economía y Finanzas Públicas & "Memoria de la Economia Boliviana 2010". Minsierio de Economia y Finanzas Publicas.	Includes federal, state, municipal. Source: Balanço do Setor Público Nacional (BSPN), Brazilian Treasury (STN), 2010.	Federal personal income tax. Source: Cuenta de la Hacienda Pública Federal 2008, Secretaría de Hacienda y Crédito Público (SHCP).	Source: Nota Tributaria, Superintendencia Nacional de Administración Tributaria (SUNAT), 2011.
Employee Contributions to Social Security	28,902.00	N/A	197,583.52	46,688.19	2,074.00
(Notes and source)	Source: Dirección Nacional de Investigaciones y Análisis Fiscal, Ministerio de Economia, MeyFP	N/A	Includes federal and sub-national social security systems. Source: BSPN, Brazilian Treasury (STN) and Anuario Estatistico da Previdencia Social, 2009.	Employee contributions to IMSS and ISSSTE. Source: Cuarto Inform de Gobierno, Presidencia de la República, 2010.	Source: Nota Tributaria, Superintendencia Nacional de Administración Tributaria (SUNAT), 2011.

Appendix B: Public Accounts and Other Country Information cont.

Indirect Taxes	144,669.11	10,762.40	350,987.97	531,626.10	33,768.00
(Notes and source)	Includes federal and provincial indirect taxes (VAT, Specific Consumption Taxes, Provincial Gross Receipts Taxes and Export and Import Taxes) Source: Dirección Nacional de Investigaciones y Análisis Fiscal, Ministerio de Economia, MEyFPThe amount is from Dirección Nacional de Investigaciones y Análisis Fiscal, Ministerio de Economía Argentina.	Indirect Taxes include: Impuesto al Valor Agregado mercado interno (IVA), Impuesto al Valor Agregado mercado externo (IVA), Impuesto a las Transferencias (IT), Impuesto a las Transacciones Financieras (ITF), Impuesto al Consumo Específico (ICE). Source: We aggregate the mentioned taxes using tax revenue information from "Dossier semestral 2010". Minsiterio de Economia y Finanzas Públicas.	Includes federal, state, municipal. Source: Balanço do Setor Público Nacional (BSPN), Brazilian Treasury (STN), 2010.	Federal VAT tax, IEPS, ISAN, and Tenencia Vehícular. Source: Cuenta de la Hacienda Pública Federal 2008, Secretaría de Hacienda y Crédito Público (SHCP).	Source: Nota Tributaria, Superintendencia Nacional de Administración Tributaria (SUNAT), 2011.
Government Social Spending (definition used by CEQ) by Category and Indirect Subsidies (millions of local currency units)					
Direct Transfers	35,285.00	5,222.74	132,069.68	74,233.00	1,423.00
(Notes and source)	Includes Jefes y Jefas de Hogar, Familias, Becas, unemployment insurance, Non-contributory pensions (including those estimated from Moratorium Pensions) and the Simulation of the Asignacion Universal por Hijo (AUH). Source: Estimated on the basis of Direccion de Analisis de Gasto Publico y Programas Sociales, MEyFP	Direct Transfers include two categories: i) Monetary transfers (Bono Juancito Pinto, Bonosol, Pensions (Sistema de Reparto Residual), Beneméritos y Bono de natalidad. Ii) Non Monetary transfers (Desayuno escolar, Bono de lactancia). Source: We aggregate many transfers which come from the information system Sistema Integrado de Gestión y Modernización Administrativa (SIGMA)of Minsiterio de Economía y Finanzas Públicas.	Includes all categories from Table 7 except the categories corresponding to health spending, education spending, and contributory pensions. Source: various (we aggregate many transfers which come from different parts of Brazil's public accounts).	Includes Oportunidades, Programa 70 y más, Procampo, Becas, Subsidio al empleo, and other smaller social programs. Source: Cuenta de la Hacienda Pública Federal 2008, Secretaría de Hacienda y Crédito Público (SHCP).	Source: Sistema Integrado de Información Financiera (SIAF), Ministerio de Economía y Finanzas (MEF), 2011.

Appendix B: Public Accounts and Other Country Information cont.

Health Spending	35,840.00	3,492.98	130,622.74	333,417.00	6,469.00
(Notes and source)	Health includes spending in public attention of health, which includes hospitals and other public health facilities' spending and public health campaigns, and it also includes PAMI-Health Coverage for Pensioners and Handicapped spending. Although this last spending is in theory financed by contributions from the active and passive (formal) population, it has traditionally run high deficits and its spending has been broadened to cover not only contributory individuals but also those without contributions and the handicapped. This definition of health spending does not include however, Obras Sociales spending that is fully contributed by workers and it is not subsidized by government. Source: Estimated on the basis of Direccion de Analisis de Gasto Publico y Programas Sociales, MEyFP	Source: We aggregate the following accounts: Health Service Administration, first, second and third levels of health services, Health Funds and Immunization Programs .Data comes from Sistema Integrado de Gestión y Modernización Administrativa (SIGMA) of Minsiterio de Economía y Finanzas Públicas.	Includes federal, state, municipal. Net of *demais subfunções;* including *demais subfunções* is 166,012.21. Source: Balanço do Setor Público Nacional (BSPN), Brazilian Treasury (STN), 2010.	Includes federal and state spending. Source: Cuentas Nacionales de Salud, SSA; Cuenta de la Hacienda Pública Federal 2008, Secretaría de Hacienda y Crédito Público (SHCP).	Source: Sistema Integrado de Información Financiera (SIAF), Ministerio de Economía y Finanzas (MEF), 2011.
Education Spending	58,787.00	6,669.07	125,036.71	599,447.00	12,257.00
(Notes and source)	Education includes spending in primary, secondary and tertiary education. It does not include spending or investment in Science and Technology and other educational expenditure not explicitly included in the above items. Source: Estimated on the basis of Direccion de Analisis de Gasto Publico y Programas Sociales, MEyFP	Source: We aggregate the following accounts: Education Service Administration, Initial Education, Secondary Education, University, Superior Technical Education and Literay Program "Yo si puedo". Data come from Sistema Integrado de Gestión y Modernización Administrativa (SIGMA) of Minsiterio de Economía y Finanzas Públicas.	Includes federal, state, municipal. Includes early childhood and pre-school (infantil), primary (fundamental), secondary (médio), tertiary (profissional and superior), additional (educação de jovens e adultos, educação especial); does not include demais subfunções. Net of demais subfunções is 169,190.49. Source: Balanço do Setor Público Nacional (BSPN), Brazilian Treasury (STN), 2010.	Includes federal and state spending on pre-school (preprimaria), basic (primaria & secundaria), high school (media-superior) and tertiary education. Source: Principales Cifras Ciclo ESCOLAR 2009-2010; SEP; Cuenta de la Hacienda Pública Federal 2008, Secretaría de Hacienda y Crédito Público (SHCP).	Source: Sistema Integrado de Información Financiera (SIAF), Ministerio de Economía y Finanzas (MEF), 2011.

Appendix B: Public Accounts and Other Country Information cont.

Housing and Urban	23,694.11	344.68	39,166.29	3,526	564.00
(Notes and source)	Housing and Urban includes spending in house subsidies, water and sanitation and other urban services. Source: Estimated on the basis of Direccion de Analisis de Gasto Publico y Programas Sociales, MEyFP	Source: We aggregate the following accounts: Urban Housing , Water and Basic Sanitation. Data come from Sistema Integrado de Gestión y Modernización Administrativa (SIGMA) of Minsiterio de Economía y Finanzas Públicas.	Includes rural and urban housing (habitação) and urban spending (urbanismo). Urban spending includes urban infrastructure, urban services, and collective urban transport. Both categories include *demais subfunções*; net of *demais subfunçoes* is 32,659.88. Source: Balanço do Setor Público Nacional (BSPN), Brazilian Treasury (STN), 2010. 39166.29+	Includes "Habitat" and "Tu Casa" progerams. Source: Cuarto Inform de Gobierno, Presidencia de la República, 2010.	Includes subsidies to mortgages (449 million) and urban improvement programs (115 million). Source: Sistema Integrado de Información Financiera (SIAF), Ministerio de Economía y Finanzas(MEF), 2009.
Indirect Subsidies	60,658.10	499.39	Not included in the analysis	319,699.90	Not included.
(Notes and source)	The amount of targeted monetary transfers is estimated from Direccion de Analisis de Gasto Publico y Programas Sociales, MEyFP, Minister of the Economy Argentina. Includes what is called "Subsidios Economicos" in Argentine fiscal accounts, and includes subsidies to energy, transportation and communications, agricultural and industrial firms	Includes liquefied gas (GLP), gasoline and diesel. Source: Sistema Integrado de Gestión y Modernización Administrativa (SIGMA) of Minsiterio de Economía y Finanzas Públicas.	N/A	Includes domestic electricity, gasoline and LP gas subsidies. Does not include implicit subsidies of fiscal spending on VAT. Including them it would be 530,698. Source: Cuarto Informe de Gobierno, Presidencia de la República; PEMEX; Informe de Gastos Fiscales, Secretaría de Hacienda y Crédito Público (SHCP).	N/A

Source: Lustig (coordinator), 2011b.

Appendix C. Description of Flagship Transfer Programs

Program Name	Type of Program	Target Population	Number of Beneficiaries (year of survey)	Year of First Implementation	Budget (year of survey, local currency per year)	Acting Mechanism	Estimated Impact
Argentina							
Jefes y Jefas de Hogar Desocupados (JJHD)	Cash transfer (theoretically conditional but not in practice)	Those formally deemed eligible to participate were unemployed household heads with dependents (children aged less than 18 or incapacitated), regardless of whether the family lived in poverty; contrary to its predecessor, Jefes did not have an explicitly stated poverty focus (Galasso and Ravallion, 2004).	450,000 approximately according to public accounts; the number continues to decrease as beneficiaries move to the labor force and other programs. The number according to the survey is not reported here because the survey only covers urban areas.	2002 (It evolved from the Programs Trabajar I, II and III, 1996-1999)	878 million pesos	In order to enroll, the potential participants had to request participation through the local municipality or through local offices of the Ministry of Labor. JJHD gives 150 pesos to each beneficiary. The co-responsibility or condition that must be met by the beneficiary could be related to work, skills-training, or education. Among the former, efforts related to productive or community projects run by municipalities or other public or private non-profit organizations stand out, as well as (to a lesser extent) the incorporation of beneficiaries into companies through formal employment contracts. The other possible co-responsibilities involve attending classes for skills-training or formal education at the primary or secondary level. The daily commitment to the co-responsibilities must be not less than four hours and not greater than six. Although the program originally required workfare in exchange for the transfer, it is not clear that the condition was fulfilled by most.	The aim of only targeting unemployed heads of households with dependents was clearly not realized; indeed, Galasso and Ravallion (2004) results suggest that a large share of participants were women who would have not otherwise have been in the labor force. About half of the employment gain due to the program came from unemployment and half from inactivity. We estimate that the program reduced Argentina's unemployment rate by about 2.5 percentage points. This is less than half of previous estimates that have assumed that all Jefes participants would have otherwise been unemployed. Factoring in the foregone incomes, the program had a small effect on the overall poverty rate, though a more sizeable impact on the incidence of extreme poverty (see Galasso and Ravallion (2004) for the early evaluation of the program). Most authors following this initial evaluation (see Bertranou and Paz (2007)) emphasize the increase in labor force participation brought about by this Program, especially from women. See Bertranou and Paz (2007) for a thorough review of other aspects in the evaluation of this program.
Familias para la Inclusion Social	Conditional Cash Transfer (CCT)	Poor families with children younger than 19 years old.	695,177 families according to public accounts. The number according to the survey is not reported here because the survey only covers urban areas.	2006 (successor of the Programa de Ingreso para el Desarrollo Humano (IDH) and a partial recipient of beneficiaries from Programa Jefes y Jefas de Hogar Desocupad	2,160 million pesos	The amount of the transfer depends on the quantity of children. The average beneficiary household had 2.9 children younger than 19 years old and received 215 pesos (in October 2007). The objective is to reduce the intergenerational transmition of poverty; the conditions are based on education conditions (minimum level of school attendance for children between 5 and 18 years old) and health (requirements for children and pregnant women).	In 2006 an evaluation of the impact of Plan Familias para la Inclusión Social was released, four years after the program was launched (see Rosas, 2007). The evaluation was supervised by SIEMPRO and carried out by the Universidad Nacional de Tres de Febrero. An increase in school attendance, especially in the initial levels (EGB1 and EGB2), is an important accomplishment of the program. However, it should be noted that among beneficiary adolescents between the ages of 15 to 17, the percent that are not a part of the education system is still significant (13%).

				os (JJHD))			More information can be found in the study mentioned.

Appendix C.Description of Flagship Transfer Programs Cont.

Asignacion Universal por Hijo (AUH)	CCT	Boys, girls, and adolescents in families that are unemployed or in the informal sector and do not receive another form of family allowance. If employed in the informal sector the salary should be inferior to the minimum wage.	Goal: 1,650,000 families	December 2009	Budgetary goal: 7000 million pesos	The program is funded by the Fondo de Garantía de Sustentabilidad del ANSES. Among the characteristics of this program, it stands out that recipients of AUH cannot receive any other type of social plan and that the spirit of the program is to gradually phase out several others and replace them. The program explicitly excludes workers in the informal sector that earn more than the monthly minimum salary (Salario Mínimo Vital y Móvil). With respect to the health and education conditions, 20% of the benefit will be paid (credited to a bank account) at the beginning of each school year, as long as the beneficiary presents the required certification of vaccinations and school attendance. The current benefit is 180 pesos per month per child with a maximum of five children per family	N/A
Non-contributory pensions	Non-contributory pension	Various; see "Acting Mechanism"	In the year 2008, 117,936 beneficiaries of Pensiones Graciables (given by Congressmen), 204,680 beneficiaries from Special Laws and 365,964 given by the Ministry of Social Development. From 2004 to 2008 the latter increased from 393,700 beneficiaries to 688,580 beneficiaries.	1948	6093 million pesos (estimated using number of pensioners in 2008)	These pensions have a long history in Argentina and are regulated by special laws. A portion of them are called “Pensiones Graciables” and are given by Congressmen to whom they consider deserving (supposedly poor) , another part were instituted by different laws and given to ex-presidents, veterans of Malvinas, families of the disappeared, some bishops, and others, and the last part are social protection non-contributory pensions given by the Ministry of Social Development for the disabled, old age (more than 70), and mothers of seven or more children.	

Appendix C.Description of Flagship Transfer Programs Cont.

Moratoria Previsional	Non-contributory or partially contributory pension	Elderly who had not fulfilled the requirement to receive contributory pensions of 30 years of contributions to the system.	Approximately 2,000,000 beneficiaries at the end of 2009 (by mid-2010 there were reported 2,332,295 beneficiaries of the program).	2005	20540 million pesos	The moratorium law which is still in place allows an individual to pay its accumulated debt with the social security system at a discount as long as the debt was accumulated prior to 1993 and the amount is calculated between the year in which the individual was 18 years old and 1993. This moratorium law was enacted in 1995, but in 2005 it was transformed into a permanent entitlement. The number of beneficiaries will decline over time and eventually reach zero since it has a fixed date until when the moratorium is applied. For an eligible individual, he or she will receive 800 pesos per month (moratorium pension in 2009 equivalent to roughly 250 dollars per month) minus the moratorium contribution.	According to data from the Administración Nacional de Seguridad Social, since 2005, when the new moratoria of the Plan de Inclusión Previsional was implemented, a total of 2.5 million people were integrated into the pension system. The coverage rate of the pension system is 86.7%, reaching 6,326,543 beneficiaries, between retired people, national pensioners and non-contributory pension recipients. In 2003, before the moratoria previsional was introduced, the coverage rate of Argentina's pension system was only 57% (ANSES).
Bolivia							
Bono Juancito Pinto	Conditional Cash Transfer	Children between 6 and 17 years old attending public schools	1,324,000 individuals according to program reports; 1,317,522 according to the survey	2006	294 million bolivianos	The program gives 200 bolivianos to each student once a year conditioned on having attended school during the year.	Previous evaluations have found low effects in reducing poverty and inequality (Yañez, 2010).
Desayuno Escolar	Food Program	Population between 4 and 19 years old.	1,985,158 according to program evaluation report 2008, not available for 2007; 2,491,371 according to the survey	2006	8.1 million bolivianos	The program gives beneficiaries breakfast. It was initially financed by the international cooperation. It was executed and implemented by Central Government since 2005. Actually it is administrated by local governments, at department and municipal levels.	Nutrition effects must be improved by introducing new products oriented to each targeted group. Parents must be informed about the limits of the program since some results of the evaluation find that beneficiaries of the program receive less food at home that the received portion before the program. This substitution effect must be avoided in future interventions (FAM, 2008)
Programa de Atención a la Niñez (PAN)	In-kind transfer	Children less than six years old.	53,021 from program evaluation report 2008, not available for 2007; 89,288 according to the survey	1998	44.3 million bolivianos	The program is aimed at improving nutrition, health, education and protection conditions to children.	The lack of systematization of local practices has not permitted a consistent impact evaluation of the program.

Appendix C.Description of Flagship Transfer Programs Cont.

Bonosol	Non Contributory Pension	All citizens 65 or more years old	493,437 according to program reports; 502,820 according to survey	1994	888 million bolivianos	The program gives 1,800 bolivianos to citizens once a year. Note that the program was replaced by the Renta Dignidad in 2008.The amount of Renta Dignidad is 600 bolivianos higher than Bonosol.	Previous evaluations found distributive and reducing poverty effects (Jemio, 2006). This evaluation finds a small Gini reduction in household income from 0,5210 to 0,5168 for household survey 2003-04 data. The distribution of benefits of this transfer favors poorer households. 40% of the beneficiary households belong to the three poorest deciles, this percentage increases to 60% in rural areas; showing a huger distributive effect in these areas.
Maternity subsidy	Cash Transfer program	Children of public and private workers affiliated to Health Funds (Cajas de Salud)	35,325 according to survey	1956	111 million bolivianos	Administrated by Health Funds.	Lack of information did not allow previous evaluations.
Lactation Subsidy	In-kind transfer	Children of public and private workers affiliated to Health Funds (Cajas de Salud)	45,593 according to survey	1956	111 million bolivianos	Products assigned monthly through Health Funds (Cajas de salud).	Lack of information did not allow previous evaluations.
Brazil							
Bolsa Família	CCT	Poor families with children under 18 or pregnant women, and all extreme poor (the latter group is regardless of having children).	12.37 million households according to public accounts; 7,958,558 million households according to survey	2003	12.45 billion reais	Eligibility is determined through partially-verified means testing. Families in the program have an electronic card they can used to withdraw the monthly transfer at ATM machines. The transfer amount was, in September 2009, 22 reais per child 0-15 (up to three children), 33 reais per adolescent 16-17 (up to two adolescents) for families with income below 140 reais per capita per month and at least one child under 18 or pregnant woman (the "variable benefit"), and an additional 68 reais for households with income below 70 reais per capita per month, regardless of whether there are children (the "fixed benefit"). The conditions are	On poverty: Higgins (2011) finds that in 2009, Bolsa Família caused between a 12 and 18% decrease in the headcount index, between a 19 and 26% decrease in the poverty gap, and between a 24 and 31% decline in the squared poverty gap at the national level, and it should be noted that the impact was much higher in rural areas. On inequality: Barros et al (2010) find Bolsa Família and its predecessor programs were responsible for 13% of the observed reduction in inequality from 2001-2007; also see Soares, Ribas, and Soares (2010), Soares et al. (2009), and Barros, Carvalho, and Franco (2007). On adult labor supply: negligible or no impact (Foguel and Barros, 2010, Teixeira, 2008, Tavares, 2010). On child

						pre-natal and post-natal care sessions for pregnant women, adherence to a calendar of vaccinations for children 0-5, and a minimum level of school attendance for children ages 6-17. There are no conditions for the "fixed benefit" given to extremely poor households.	labor supply: some impact on decision to work (Kassouf, Ferro, and Levinson, 2010). Various studies show increased school attendance among recipient children; there is a lack of comprehensive evaluations of education outcomes. On health outcomes: no significant impact.

Appendix C.Description of Flagship Transfer Programs Cont.

Benefício de Prestação Continuada (BPC)	Non-contributory pension	Elderly poor (over 65 years old) and incapacitated poor deemed incapable of working	3,166,845 beneficiaries; 1,297,785 according to survey (note it has been documented that some households mis-report BPC under INSS pensions).	1995 (written into the 1988 constitution but effectively implemented in 1995 [Medeiro, Britto and Soares, 2008])	16.86 billion reais	Monthly monetary transfer of one minimum salary (465 reais per month in September, 2009) to elderly poor or incapacitated poor. Elderly means over 65 years old and incapacitated is determined by doctors based on ability to work. The definition of poor for BPC is household per capita income of less than one quarter minimum salary (116.25 reais per month in September, 2009).	On inequality: Barros et al (2010) find that BPC was responsible for 10% of the observed reduction in inequality in Brazil from 2001-2007.
Brasil Sem Miséria	Mixed	Extreme poor (household per capita income of 70 reais per month or less) who are excluded from the current safety net system	0	2011	0	Poverty mapping will be extensively used to identify areas with high concentrations of poor excluded from safety net system, and professional teams will be in charge of locating excluded extreme poor in assigned areas. One goal is that an estimated 800,000 extremely poor families eligible for Bolsa Família but not receiving benefits will be enrolled. In rural areas, the program will provide professional technical assistance to farmers, improve irrigation systems, assist in the production of food products and access to markets, provide improved seeds and other agricultural technology to poor farmers, and provide a biannual monetary transfer of 2400 reais to each eligible family for two years to buy inputs and equipment. In urban areas, the program will focus on the insertion of Bolsa Família recipients in the labor market. 200 types of free certification courses will be offered, along with free learning materials, lunch, and transportation. The government will produce an "opportunities map" to	N/A

						help locate labor market opportunities, and incentives will be provided for public and private companies that hire Bolsa Família recipients.	

Appendix C.Description of Flagship Transfer Programs Cont.

Mexico							
Oportunidades	CCT	Originally targeted at poor rural communities, and basic education in 2001 it was gradually extended to urban localities and higher education services. Social Development Ministry.	Administrative data: 5.0492 million families and 23.3 million beneficiaries in 2008. Survey: 20.9 million beneficiaries.	1997	41,361 million pesos	Provides direct monetary and in kind transfers conditional on school attendance and health visits. Targeted geographically and at the household level through a proxy-means test calibrated to match the official poverty measure in Mexico. Scholarships cover the last three years of basic education and high-school, with increasing values for higher levels, designed to approximate labor opportunity costs. Conditional on school inscription and attendance. Beneficiary households also receive a per household transfer conditional of attending health services, as well as nutritional supplements targeted at infants and pregnant woman.	Reduction of 8% in poverty due to program benefits in rural communities. Positive effect on school enrollment for primary and secondary education. Increase in probability of 42% and 33% of entering secondary education for children 12 and 14 years old in rural areas, respectively. Terminal efficiency of secondary education has increased 23% in areas where Oportunidades operates. Decrease in the proportion of dropout for 16 to 19 year old adolescents in urban areas. Increase of one year of schooling for adolescents (15 to 19 years old) who received program support for 5 years approximately in rural areas. Oportunidades families increased their preventive and curative visits up to 35% in rural areas. Adults increased preventive visits by 26% in urban areas. National maternal and infant mortality decreased by 11% and 2%, respectively. Increase of 1.42 cm in height for children under 2 years old in urban areas. Reduction of 20% of sick days for children under 5 years old in rural areas. More than 90% of children receiving nutritional supplements show adequate consumption levels of iron, zinc and A and C Vitamins.
Procampo	Delinked per hectare transfer to agricultural producers.	All producers cultivation one of nine basic crops in 1993, representing most of the agricultural producers in the country.	Administrative data: 2.39 million beneficiaries in 2008. Survey: 823,257.	1994	14,198 million pesos	Direct monetary transfer per hectare, originally set at close to 100 dollars per hectar to all beneficiaries identified in the original 1993 survey on the basis of cultivation of nine basic crops. Conditional on cultivation of the land, but after 1995 not conditional on	Significant multiplier effect on producer income.

						particular crops.	
Programa 70 y más	Universal rural non-contributory pension.	All the population of 70 years and older living in localities of less than 30,000.	Administrative data: 1.031 million beneficiaries in 2008. Survey: 991,795.	2007	9536.7 million pesos	All the population of 70 years and older living in localities of 30,000 or less are eligible for this universal rural non-contributory basic pension of 500 pesos (37 US dollars) per month.	N/A

Appendix C.Description of Flagship Transfer Programs Cont.

Peru							
Juntos	CCT	Poor and extremely poor families with children under 14 or pregnant women	409,610 households according to public accounts	2005	512 million nuevos soles	Juntos gives 200 soles to each family every two months conditioned to complying health and educational conditions. Families selected have to be poor or extremely poor according to the national poverty line. Geographical targeting and community assessments are used to identify beneficiaries.	Significant effects over: consumption and poverty indicators, school attendance, health checks and likelihood to seek medical help among children under 6, doctor assisted deliveries and the use of contraceptives among women of childbearing age
Programa Integral de Nutrición (PIN)	Food program (part of Programa Nacional de Asistencia Alimentaria [PRONAA])	Poor and extremely poor: children under 12, pregnant and lactating mothers and those at high nutritional risk	3,792,261 total beneficiaries: 567,920 children from 0-3; 555,572 children from 3-6; 2,467,216 children from 6-12; 201,853 pregnant and lactating mothers, according to public accounts	2006 (A fusion of 6 other food programs that started operating in 1992)	509 million nuevos soles	The program gives beneficiaries food baskets and food supplements through health posts, pre-schools and schools	Past evaluations of the programmes that now are part of the PIN found: i) PANFAR program: nutritional effects conditioned to proper attention; ii) School breakfast: improved dietary intake and short-term memory. Increased attendance to school was non-significant.
Programa de Complementación Alimentaria (PCA)	Food program (part of Programa Nacional de Asistencia Alimentaria [PRONAA])	Poor and extremely poor: children, people with TB, elderly, persons with disabilities, other vulnerable groups (victims of family violence, etc.)	306,762 public lunch recipients; 9,223 lunch recipients from benefic organizations; 6,957 lunch recipients at public shelters; 25,287 lunch recipients with TB, according to public	2003 (Programs operating since 1992 were transferred to local governments that year)	128 million nuevos soles	The program has been transferred to local governments. Beneficiaries receive food and supplements through kitchens, shelters, among others.	The program has not been evaluated.

			accounts				
Vaso de Leche	Food program	Poor and extremely poor: children between 0 and 13, pregnant mothers, elderly or those suffering from TB	3,215,100 beneficiaries according to public accounts	1985	363 million nuevos soles	Gives breakfast to beneficiaries 5 times a week. It is run directly by all provincial and district municipalities. It relies heavily on mothers' clubs.	The program has not been recently evaluated. Past evaluations found non-significant effects over nutritional variables

Source: Lustig (coordinator), 2011b.