

PSIA in Practice

An insight into the distributional impacts of policy making

EQUITY AND SOCIAL IMPACTS OF TAX REFORM IN URUGUAY

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Abstract: *This note* showcases a distributional study, or poverty and social impact analysis (PSIA), of the Uruguayan tax reform. The reform was comprehensive and revenue neutral, undertaken to enhance equity in Uruguay. A rapid partial equilibrium analysis found the new tax system to be progressive. Following the tax reform, the bottom 80 percent of workers faced a lower mean tax rate, and a greater tax burden on average was borne by only the top 20 percent of the workers. This example illustrates how PSIA can (i) use rapid analysis to successfully inform country policy and Bank operations, (ii) strengthen country capacity, and (iii) facilitate ownership of a reform among various country stakeholders.*

The Poverty and Social Impact Analysis (PSIA) showcased here examined the impact of the Uruguayan tax reform on various income deciles and occupational groups in the country. It was linked to a World Bank lending program,¹ and helped address concerns about rising inequity in the country after the 2002 economic crisis.² It is an example of how good use of rapid analysis can inform country policy dialogue and Bank operations, and is a possible model for using PSIA to build country capacity and encourage country ownership.

THEORETICAL BACKGROUND

The PSIA used David Coady's work (1997, 2002, and 2006) on indirect taxation and public pricing frame as its theoretical backbone.³ In his articles, Coady draws lessons from empirical work on tax reforms, trade liberalization and reform of public sector prices, and outlines various approaches to distributional analysis of tax and price reforms on household real incomes. A popular approach to distributional analysis, general equilibrium incorporates both the direct and indirect welfare

* This note is the second in a series of dissemination notes being prepared as part of the PSIA knowledge management program at the World Bank. Poverty and Social Impact Analysis (PSIA) is an approach to analyze the distributional impacts of policy reforms on different social groups, particularly the poor and vulnerable. These analyses provide empirical evidence on the poverty, social, and distributional effects of reforms; suggest changes to a proposed policy; and help identify alternative policy options to improve poverty reduction and distributional outcomes. PSIA is a flexible approach and takes various forms. Each *PSIA in Practice* note is intended to focus on examples of good PSIA practice conducted by the World Bank in a particular sector or theme, providing a snapshot of the process, methodology, and country-level impacts of specific PSIAs. The notes are aimed toward a general audience interested in knowing more about poverty, social, and distributional analysis as well as practitioners looking for concise descriptions of PSIA examples.

effects of reforms by examining all commodity-demand and factor-supply responses. It can be used to analyze reforms that involve significant changes in producer prices, such as trade liberalization. The limited general equilibrium approach looks at a subset of indirect effects, while the partial equilibrium approach focuses only on the direct effect of reforms on prices and household real incomes.

The tax-related PSIA completed in Latin America, including this PSIA, used simple **partial equilibrium** analyses. Constraints on data and available resources and the need for a straightforward methodology easily accessible to a policy maker limited the usefulness of employing a general equilibrium analysis or limited general equilibrium analysis.⁴

DISTRIBUTIONAL ANALYSIS OF TAX REFORMS IN LATIN AMERICA

Two studies on the impact of tax reform on poverty and distribution in Latin America are the PSIA on: (i) the Nicaraguan Fiscal Equity Law, passed in 2003, and (ii) the Honduran Tax Reform Laws approved in 2002 and 2003.

Distributional analysis of the Nicaraguan Fiscal Equity Law: The Nicaraguan Fiscal Equity Law aimed to increase government revenues, reduce distortions, improve accountability, and increase equity by implementing a new tax system in a country facing high income inequality. The PSIA analyzed the distributional impact of the new sales tax, excise tax, and income tax through the “shifting assumptions” methodology. It used preexisting data from the Living Standards Measurement Survey, 2001, on household income and consumption. The analysis found the reform slightly regressive when using income as

an indicator of welfare, and slightly progressive when using current consumption as the welfare indicator. The positive effect of the reform on equity was expected to increase if revenues generated by the new tax system were used for pro-poor public spending.⁵ The findings of this paper were used to revise the country’s Poverty Reduction Strategy and were disseminated to different stakeholders.

Distributional analysis of the Honduran Tax Reform: The Honduran Tax Reform aimed to achieve fiscal balance by changes to the sales tax, excise tax, and income tax. It expected to promote tax equity, expand the tax base, reduce fiscal fraud, and improve tax administration. Again, a “shifting assumptions” methodology was applied using preexisting data on income and spending taken from the National Survey on Household Income and Spending, 1998, and the Permanent Survey on Multipurpose Households, 2002, to evaluate the distributional impact of tax reforms on income and consumption.

The method selected different assumptions for each tax, analyzed the distribution of the taxes in question, and summed taxes for each quintile to determine the overall impact. The overall tax system was projected to be progressive when considering consumption as a welfare indicator, but entirely regressive when using income, except in the case of the income tax.

While the Nicaraguan reform was predicted to reduce the Gini coefficient by one percentage point, the Honduran reform, if it met its revenue targets and additional funds generated were assigned in a full and equitable manner, was estimated to reduce the Gini coefficient for the distribution of equivalent consumption from 45.4 to 42.8. As in the case of the Nicaraguan Fiscal

Equity Law, targeted interventions using increased revenues were projected to reduce the poverty gap.⁶

URUGUAY COUNTRY CONTEXT

Uruguay is a somewhat atypical country in Latin America. In a continent known for high levels of inequality, it is a country with high literacy rates; a large urban middle class; strong advanced education, health, and social security systems; and a relatively equal income distribution.⁷ In October 2004, when the country was still recovering from the effects of a deep economic crisis in 2002, the *Frente Amplio–Encuentro Progresista–Nueva Mayoría* (FA-EP-NM) coalition was elected to power. The FA-EP-NM was a broad front of various left-to-center parties and movements. Its electoral platform included a commitment to fostering social development (*Uruguay Social*)⁸ and implementing policies to bring sustained growth at higher than historical rates.

THE REFORM

Tax reform was central to the government's policy agenda. The proposed reform aimed to enhance equity, expand the tax base, promote investment, and reduce the risk of tax evasion. It was also expected to increase efficiency by eliminating low-yield distortive taxes.⁹

The key feature of the new tax regime was the introduction of a dual personal income tax system (*Impuesto a la Renta de las Personas Físicas*, IRPF), combining a progressive tax schedule for labor income with a low flat tax rate on capital income. Value-added tax (VAT) rates were reduced, and its tax base broadened.¹⁰ Other direct and indirect taxes, such as COFIS,¹¹ were

eliminated. Efforts were also made to strengthen tax administration.¹²

A distinguishing feature of the Uruguayan tax reforms compared to those of other Latin American countries at that time was that the reform was designed to be **revenue neutral**: the new tax system was not aimed at increasing revenues, but simply at maintaining government revenue levels.¹³ The main concerns motivating the reform, thus, were efficiency and equity.¹⁴ Yet, despite the reform's emphasis on equity, there was some resistance from groups that perceived themselves as adversely affected. One of the more vocal groups in this regard was that of the pensioners.

THE ROLE OF THE WORLD BANK AND PSIA

The Uruguayan tax reform, which became effective in July 2008, was supported by the first Programmatic Reform Implementation Development Policy Loan (PRIDPL I). This single-tranche US\$100 million loan was given to the Ministry of Economy and Finance to support the implementation of the tax reform, help improve the business climate, support capital market reform, and strengthen the social protection system. The reform was consistent with both the broader reform agenda set out in the 2005–10 country strategy, and the cornerstone of the government's tax administration and tax policy reforms.¹⁵

The PSIA was initially undertaken to inform the lending program, which requires an assessment of whether supported reforms are likely to have significant equity impacts. Later it evolved from an addendum to the Development Policy Loan (DPL) into a self-standing report. The PSIA completed by the Bank complemented an earlier piece of work conducted by the government. This

work considered the potential impact of the tax reform on income deciles.¹⁶ The World Bank's due diligence PSIA work (initiated in June 2006 and completed by January 2007) was a more detailed sensitivity analysis that looked at the impact of the reform on inequality and poverty incidence, in addition to the impact on different income deciles.¹⁷ These reports and the Inter-American Development Bank's (IDB) public expenditure study¹⁸ were both key inputs to a parliamentary debate on the draft legislation of the tax reform. This discussion continued from October to December 2006.

The decision by the World Bank to conduct a PSIA, even if it was for the Bank's programmatic use, met with some initial apprehension from the government. The tax reform faced political resistance, and the government was unsure about the kind of impact the study could have on discussions in parliament and with civil society groups. To address this, the World Bank team encouraged **local ownership of the PSIA**. While stressing the importance of distributional analysis for the lending, they engaged a team of local researchers at the Universidad de La República in Uruguay whose objectivity and technical credentials were respected by the government of Uruguay. While **addressing political economy concerns**, this also **built local capacity** by soliciting analytical and procedural assistance from students at the Universidad de La República.

METHODOLOGY

What drove the success of this PSIA was the combination of technical simplicity and astuteness in the choice of methodology. Impact of the reform on equity and poverty was examined using a **microsimulation exercise** with preexisting data on individual and household

income from the 2006 Expanded National Household Survey (*Encuesta Nacional de Hogares Ampliada*, ENHA) and on consumption from the 1994–95 *Encuesta de Gastos e Ingresos de los Hogares* (EGIH).¹⁹

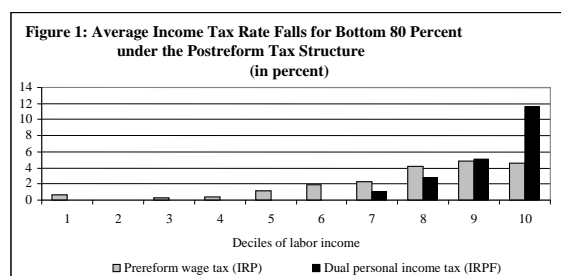
The partial equilibrium methodology was consistent with that of comparable PSIAs conducted in the region, as well as being similarly transparent and simple.²⁰ Data collection incurred limited costs. To look at the ex ante impact of the reform, indicators of tax incidence, poverty, and income inequality were compared before and after the reform. This approach allowed for the analysis to be completed in a relatively short amount of time. Since the assumptions of the study were clear, the results were easily accessible to a general audience. Yet, unlike the PSIAs in Honduras and Nicaragua, the Uruguay PSIA used income as its primary welfare indicator.

PSIA RESULTS

The PSIA supported the government's argument that the tax reform is progressive. A splitting of the population by deciles based on nominal income showed that the bottom 80 percent of workers faced a lower mean tax rate following the tax reform, and a greater tax burden on average was borne by only the top 20 percent of the workers (figure 1).

A separation by industry showed that construction workers and domestic servants in private households - typically low-paid professionals in Uruguay - gained most from the reform. In addition, pensioners' concerns were assessed. Simulations showed that in terms of income, the top 27 percent of pensioners were negatively affected, while the bottom 70 percent continued to pay no tax. Overall, the decline in

indirect taxes was found to compensate households for the increase in direct taxation.²¹



A simple mapping of the tax burden as a share of per capita pretax income revealed that under the prereform system, the tax burden was relatively constant, which made the taxation neutral from an inequality point of view. With a cut in indirect taxes, there was an across-the-board decrease in the Uruguayan population's tax burden that, when combined with a more progressive dual personal income tax system, made the entire system more progressive. Only the wealthiest 20 percent were projected to be negatively affected by the reform, while the rest were expected to have an increase in their disposable income by 2 to 3 percent. The reform was also projected to achieve a modest but significant reduction in the Gini coefficient, from 0.45 prereform to 0.44 postreform, and cause a small reduction in poverty.²²

One of the more politically charged issues around the tax reform was the new income tax for pensioners. The pension system in Uruguay is one of the most expensive in the Latin America and Caribbean region. Prior to the reform, nearly 7 out of 10 elderly Uruguayans received a pension benefit from the government, a proportion only matched by Brazil (at a similar fiscal cost) in the region.²³ It was found that pensioners negatively affected by the tax reform represented 27 percent of the total pensioners. The bottom 70

percent of pension earners continued to pay no tax.

PSIA IMPACT

In addition to being an example of using an accessible and cost-efficient methodology effectively and helping to operationalize a theoretical and empirical discussion, this PSIA, through its solicitation of local talent from the Universidad de La República, also illustrates a way to build capacity. The report was also later disseminated to an academic audience for discussion. Further, as the results of this exercise became available, the government became involved in the work and provided important comments on the technical assumptions and methodological approach, which improved the final product.

In the context of the recent economic crisis that engulfed the Latin America and Caribbean region, special attention had been drawn to issues of equity at the Bank. Thus, when the follow-up to the Development Policy Loan was undertaken, the PSIA contributed to the analytical foundations of the next DPL and helped address internal concerns about the effects of the program. Having a strong analytical report showcasing the ex ante analysis of the reform assisted the project team in assuaging internal concerns and answering queries during the World Bank loan review process.

One of the more politically charged issues around the tax reform was the new income tax for pensioners. Despite the PSIA showing that the reform did not impact the bottom 70 percent negatively, the government had to make amends and respond to the political push-back. The government replaced the IRPF and the nonresident income tax (*Renta de No Residentes*,

IRNR) with a new social security tax (*Impuesto de Asistencia a la Seguridad Social*, IASS). The IASS was introduced in response to a Supreme Court decision in 2008 that application of the IRPF to pensions was unconstitutional. This ruling affected some 1,500 individual pensioners. Following a change in one of the five justices, the court subsequently ruled that taxation of pensions under the IRPF is in fact constitutional. To resolve the issue, Parliament approved the new IASS on July 4, 2008 (Law 18.314), in time for the new tax to become effective on August 1, 2008.

This example shows that a quantitative analysis of the winners and losers of a reform can be useful when combined with other approaches to build support among stakeholders. For example, rigorous poverty, social, and distributional analysis can be used to inform policy dialogue and/or communication campaigns. In this case, the team used its analysis to inform the public and to build a parliamentary consensus on the benefits of the reform. While there were attempts to overturn elements of the tax reform, in the end the reform endured and indeed the administration was elected to another term of office in 2009.

A follow-up study to the Uruguay PSIA was requested by the government of Uruguay to examine the ex post impact of the reform. The study used postreform data to explore modifications in individual behavior in response to changes in the tax structure.²⁴

This PSIA was instrumental in fostering country ownership: the government and Bank agreed that the PSIA is a useful tool for analysis. The most recent Country Partnership Strategy contains a analytical and advisory component for fiscal years 2011 and 2012 to analyze the impact of social

policies, particularly family transfer programs' impacts on social indicators.²⁵

CONCLUSION

The PSIAs showcased in this note evaluated the distributional impacts of the revenue neutral and comprehensive reform of the Uruguayan tax system. The assessment found the system progressive: the bottom 80 percent of workers faced a lower mean tax rate following the tax reform, and a greater tax burden on average was borne by only the top 20 percent of the earners.

This PSIA is an excellent example of the many innovative forms that PSIA can take. Rapidly conducting a strong quantitative distributional analysis created an opportunities to contribute to policy dialogue, build local capacity, and cultivate country ownership. The PSIA also aided the team within the Bank by informing the programmatic lending series and addressing internal concerns on the program's equity implications.

¹ The World Bank's Operational Policy 8.60 links PSIA to development policy operations (DPOs). The policy states: "The Program Document describes the main pieces of analytic work used in the preparation of the operation and shows how they are linked to the proposed development policy program. As appropriate, prior analytic work includes...analyses of the poverty and social impacts of proposed policies." For reforms, it is necessary to determine "whether specific country policies supported by the operation are likely to have significant poverty and social consequences...For country policies with likely significant effects, the Bank summarizes in the Program Document relevant analytic knowledge of these effects and of the borrower's systems for reducing adverse effects and enhancing positive effects associated with the specific policies being supported..." (OP 8.60, August 2004). However, in addition to informing DPOs, PSIA is used both by teams at the World Bank and in-country partner institutions in a range of contexts: as stand-alone products, inputs into larger pieces of analytical work, or technical assistance projects. This note highlights just one example of how PSIA can be used to further distributional analysis of reforms.

² The *PSIA in Practice* series highlight the variety of forms that PSIA can take. Other *PSIA in Practice* notes have highlighted a PSIA on the water sector in the Republic of Yemen that informed policy through a political economy analysis, and an upcoming note discusses the use of PSIA as nonending technical assistance.

³ D. Coady, “Indirect Tax and Public Pricing Reforms,” World Bank (2006), available at:

<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXT/OVERTY/EXTPSIA/0,,contentMDK:22187875~menuPK:1108036~pagePK:148956~piPK:216618~theSitePK:490130~isCURL:Y,00.html> Also see D. Coady, “Fiscal Reform in Developing Countries” in *Fiscal Reforms in the Least Developed Countries*, ed. C. Patel, 18–46 (Cheltenham, United Kingdom: Edward Elgar, 1997); and D. Coady, and J. Dreze, “Commodity Taxation and Social Welfare: The Generalized Ramsey Rule” (*International Tax and Public Finance* 9[3]: 295–316, 2002).

⁴ Ibid.

⁵ L. Gasparini and D. Artana, “The Distributional Impact of Nicaraguan Fiscal Equity Law,” World Bank (2003).

⁶ L. Gasparini and M. Montenegro, “Evaluation of the Distributional Impact of the Honduran Tax Reform,” World Bank (2004), available at: http://siteresources.worldbank.org/INTPSIA/Resources/490023-1120841262639/Honduras_PsIA_Fiscal_Reform.doc.

⁷ A description of Uruguay’s country context is given on the World Bank Web site:

<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/LACEXT/URUGUAYEXTN/0,,contentMDK:22256166~pagePK:1497618~piPK:217854~theSitePK:331609,00.html>

⁸ The Uruguay Social, as explained by the Minister of Finance, includes combating extreme poverty, poverty and exclusion, and ensures equitable access to opportunities for human progress. For more information, see “Aspectos Fundamentales de la Estrategia de la Conducción Económica,” a presentation by Danilo Astori, Minister of Economy and Finance, made to the ACDE, December 7, 2006.

⁹ World Bank, “Uruguay Poverty and Social Impact Assessment of the Tax Reform,” 2–3 (May 19, 2008).

¹⁰ The basic VAT rate was reduced from 23 percent to 22 percent and the reduced rate fell from 14 percent to 10 percent. The VAT base was broadened and various *Impuesto al Valor Agregado* exemptions eliminated. The base was expanded by incorporating formerly exempt tobacco products and financial services at the 22 percent rate, and fruits and vegetables, health services, public transportation, and the first sale of real estate properties at the 10 percent rate. VAT exemptions remained in place for certain agricultural products such as milk.

¹¹ The COFIS (Impuesto de Contribución al Financiamiento de la Seguridad Social, COFIS) was a consumption tax on industrial goods used to finance social security contributions.

¹² World Bank, “Uruguay Poverty and Social Impact Assessment of the Tax Reform,” 2–3 (May 19, 2008).

¹³ Ibid, 5.

¹⁴ The new tax system was expected to increase both horizontal and vertical equity by increasing taxation. The system intended to enhance vertical equity by making use of the labor income tax’s progressive nature and reducing the revenue share of indirect taxes. Horizontal equity was expected to increase as a result of the new system, which aims to treat more equally those of equal income.

¹⁵ World Bank, “Uruguay Tax Reform, Program document”, 1.

¹⁶ Ministerio de Economía y Finanzas, Proyecto de Ley de modificación del sistema tributario (2006).

¹⁷ World Bank, “Uruguay Poverty and Social Impact Assessment,” 1.

¹⁸ C. Flood, C. Perez, and Al. Melgar, “Uruguay: Análisis del Gasto Público Social,” IDB (2004).

¹⁹ Ibid, 6–10.

²⁰ Ibid, 7.

²¹ Ibid, 12–22.

²² Ibid.

²³ World Bank, “Uruguay Tax Reform, Program document”, 13.

²⁴ Poverty Reduction and Economic Management, World Bank, “Assessing the Use of Poverty and Social Impact Analysis in World Bank Development Policy Loans,” 11 (April 2009).

²⁵ The World Bank, *Country Partnership Strategy for the Republic of Uruguay*, 2010–15, p. 37.

http://siteresources.worldbank.org/INTLAC/Resources/CPS_ingles.pdf.

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