Commitment to Equity in Fiscal Policy
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Contributory Pensions and other benefits

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Commitment to Equity Background

- In the joint CEQ effort we have dealt with the first steps to identify "current" fiscal policy effects on poverty and inequality of income

- We have assumed basic incidence facts, no behavioral effects, much less general equilibrium, and no long-term effects.

- "Real economists" do impact evaluation, also lacking usually behavoral responses and general equilibrium

- On the expenditure side, we have included different types of transfers that have an impact on poverty and inequality and that can be identified from household data.

- On the tax side, we should have included most taxes, including social security contributions, since most (if not all) affect poverty and inequality.

How to deal with pensions within and "outside" this framework.

- One of the methodological challenges when conducting fiscal incidence is how to deal with pensions:

- Contributory pensions are sometimes treated as part of market income and other times as government transfers.

- Arguments exist for treating them as part of market income because they are deferred income and treating them as a government transfer.

What we know about pension incidence

- Public pension systems partly insulate workers against economic and financial market risks by sharing these risks across workers, retirees, and taxpayers in multiple generations

- Incidence is complex, redistribute resources between individuals of different generations or between individuals belonging to the same generation. There are transfers to the old from taxes to the young, so we have a generational incidence problem.

- While social security taxes might not be that regressive on the young today they might be quite "injust" to them when old since they might not receive the PV of their contributions if aging takes place and governments do not fulfill the pay as as you go promises.

- In the current methodology, however we do not analyze long-term incidence, growth or generational incidence

What CEQ does until now

- Just asking, is the current public pensions increasing redistributing income and decreasing poverty compared to today's older people in the absence of pensions?

- SS differs from most government transfers in that it has its own earmarked payroll tax.

- Sometimes, this tax goes into trust funds that finance benefit payments. Initially thought to be self-financing today in most countries fund is exhausting and running deficits financed with other taxes or even debt.

- Social security programs usually provide insurance and redistribute income.

- Instead of separating pensions from contributions, should we consider them together-net- for individuals?

- Problem is that in static analysis, we only observe workers when working and not when retired and retired when not working, not all their previsional history

Continuing with this, is there a difference between contributory and non contributory pensions?

- Governments in LAC with high rates of informality have moved to cover retirees in the informal sector or workers in the formal sector with insufficient years of contribution with non-contributory pensions.

- Difference with CP is that they do not have a earmarked tax. But of course they are financed through taxes, let's say in LAC they are financed mainly through VAT.

Classification of pensions according to three dimensions Feldstein and Liebman(2002)

- Firstly, they can adopt either a Pay-As-You-Go(PAYG) or a fully funded structure.

- Secondly, pension systems can have either a defined-benefit or a defined contribution structure. A pension system has a defined-benefit structure if it is the tax rate which adjusts itself to changes in the economic and demographic environment. Conversely ,it has a defined contribution organization if it is the replacement rate which adjusts itself.

- Third, pension systems can be more Beveridgian or more Bismarkian. A pension system is purely **Beveridgian** if every agent receives the same pension. It is purely Bismarkian if pensions depend completely on the wages of agents. In general, Bevmark.

Public system becoming more Beveridgian

- Payroll contributions more likely to be perceived as taxes
- Considered them as transfers and PT as taxes
- In this case, also there are "behavioral" effects

Are SS "contributions" taxes or not? Simplest model

- Since T are payroll taxes that supposedly give benefits to the workers in the form of pensions, health, unemployment insurance, they might "value" them and hence be willing to work at a lower net wage, W

- If α is the valuation made by workers of the benefits they perceive as a proportion of taxes, with $0 \leq \alpha \leq 1$, t $\alpha = 1$, full valuation as savings

- $D = D(W + T),$ $D' < 0$

- $S = S(W + \alpha T),$ $S' > 0$

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Are SS "contributions" taxes or not? Simplest model

- D (W*(T) +T) - q*(T) ≡ 0
- S (W*(T) +αT)- q*(T) ≡ 0

- Hence, the comparative statics

$$\frac{dW}{dT} = \frac{\begin{pmatrix} -\dfrac{dD}{dT} & -1 \\ -\alpha\dfrac{dS}{dT} & -1 \end{pmatrix}}{\dfrac{dS}{dW} - \dfrac{dD}{dW}} = \frac{\dfrac{dD}{dT} - \alpha\dfrac{dS}{dT}}{\dfrac{dS}{dW} - \dfrac{dD}{dW}}$$

$$\frac{dq}{dT} = \frac{\dfrac{dS}{dW}\dfrac{dD}{dW}(1 - a)}{\dfrac{dS}{dW} - \dfrac{dD}{dW}}$$

- If α =1, q does not change W falls in amount of T

Are payroll contributions savings?

- Forced "saving" induced by government, is the same "saving" I would have done if government absent?
- In such a case, if contribution equal to the desired amount of savings, and expected pensions, equal to my expected returns from my savings, then it should be considered "market" income and the contributions as saving (not taxes)
- Otherwise, the part that is substituting my saving should enter market income and the part considered "forced saving" would be considered a transfer and the forced contribution a tax.

Some LAC public pensions becoming more Beveridgian...

- The more Beveridgian the system the less the connection between payroll contributions and pensions and more pensions are regarded as transfers and payroll as taxes. LAC is getting more Beveridgian when increasing moratorium, and other explicit or implicit non-contributory pensions.

- Moreover, the amount of benefit in many countries is converging to those of contributory pensions.
So the link is very loose today and more sure to be considered as redistributive transfers.

- Payroll taxes loosing the appeal, if no connection why not use VAT instead of payroll tax?

- Problem remains: if all pensions are considered transfers, hence poverty rates much greater, not the case in LAC.

Private Pension Systems

- Chile (1981), Perú (1992), Colombia (1994) and Argentina (1995), Uruguay (1995), México (1997), Bolivia (1997), El Salvador (1998), Costa Rica (2000) y República Dominicana (2001).

- Argentina nationalized in 2008 and Bolivia in 2010

- a) el modelo sustitutivo, en el que el sistema de capitalización individual y con contribuciones definidas reemplaza al sistema de reparto y de beneficios definidos Chile (1981) y México (1997); b) el modelo paralelo o dual, en el que conviven de forma excluyente el sistema de reparto y el sistema de capitalización individual; Perú (1993) y Colombia (1994), y (iii) el modelo mixto, en el que se complementaban los dos sistemas de manera no excluyente. Argentina (1994), Uruguay (1996).

- HOW TO CONSIDER THEM IN INCIDENCE ANALYSIS?

How to classify between CP and NCP: administrative vs. economic

- In Argentina, moratorium pensions legally part of CP, but they are mostly NC
- In Uruguay, low legal NC, but they assign CP "loosely", converting part of them in NC, how to divide them?
- Use inference to "separate" them (age, amount of subsidy, …)
- Peru introduced NC after study

Government Spending and Revenue (as a % of GDP)	Argentina (2009)	Bolivia (2009)	Brazil (2009)	Mexico (2010)	Peru (2009)	Uruguay (2009)
	Total	Total	Total	Total	Total	Total
Total Pensions	**10.0%**	**4.9%**	**9.6%**	**3.9%**	**0.9%**	**9.2%**
Contributory Pensions (CP)	7.2%	3.5%	9.1%	3.7%	0.9%	8.7%
Non Contributory Pensions (NCP)	2.9%	1.4%	0.5%	0.2%	-.-	0.5%
Concentration Coefficients						
CP	-0.14	0.12	0.06	0.26	0.58	-0.11
NCP	-0.27	0.01	-0.48	-0.10	ne	-0.53

Contributory Pensions Considered as Market Income or Transfer

	Argentina (2009)	Bolivia (2009)	Brazil (2009)	Mexico (2010)	Peru (2009)	Uruguay (2009)
	Total	Total	Total	Total	Total	Total
GINI						
GINI NMI PENSION Not Transfer	0.489	0.503	0.563	0.498	0.498	0.478
GINI NMI PENSION Transfer	0.506	0.503	0.591	0.494	0.496	0.510
Poverty $4 PPP						
NMI Benchmark	21.9%	32.5%	26.9%	24.9%	28.6%	11.7%
NMI Sensitivity	26.6%	33.1%	34.8%	26.4%	29.3%	19.0%
Poverty $2.5 PPP						
NMI Benchmark	13.0%	19.6%	15.5%	12.6%	15.2$	5.1%
NMI Sensitivity	16.8%	20.0%	21.8%	13.5%	15.5%	9.0%

Non Contributory (PNC) and Contributory (PC) Pensions

	Argentina (2009)	Bolivia (2009)	Brazil (2009)	Mexico (2010)	Peru (2009)	Uruguay (2009)
	Total	Total	Total	Total	Total	Total
Coverage and Leakage						
PNC Share < $4 PPP	42.6%	34.7%	43.2%	39.9%	0.0%	35.6%
PNC Coverage 2.5	33.2%	19.2%	5.07%	10.2%	0.0%	19.7%
PNC Coverage 2.5<y<4	19.2%	14.3%	3.39%	6.1%	0.0%	12.6%
PNC Coverage all	16.7%	18.4%	1.60%	4.5%	0.0%	4.9%
PNC Benefit p/c daily PPP2005 y<2.5	3.87	0.98	2.26	0.66	0.00	2.30
PNC Benefit p/c daily PPP2005 2.5 <y<4	2.06	0.87	2.27	0.77	0.00	2.20
PNC Benefit p/c daily Average	2.84	0.83	2.26	2.34	0.00	2.33
PC Share < $4 PPP	0.7%	0.5%	1.3%	2.2%	0.7%	20.4%
PC Coverage 2.5	1.0%	0.0%	14.7%	2.5%	0.5%	73.6%
PC Coverage 2.5<y<4	3.1%	0.0%	19.5%	8.1%	1.4%	54.8%
PC Coverage all	12.9%	0.8%	29.6%	37.8%	6.9%	31.3%
PC Benefit p/c daily PPP2005 y<2.5	1.38	2.57	0.74	1.02		7.68
PC Benefit p/c daily PPP2005 2.5 <y<4	2.18	2.19	1.60	0.67		7.25
PC Benefit p/c daily Average	8.54	6.51	8.94	18.53		8.52

Poverty $4 PPP with Contr. Pensions as NMI or Transfer
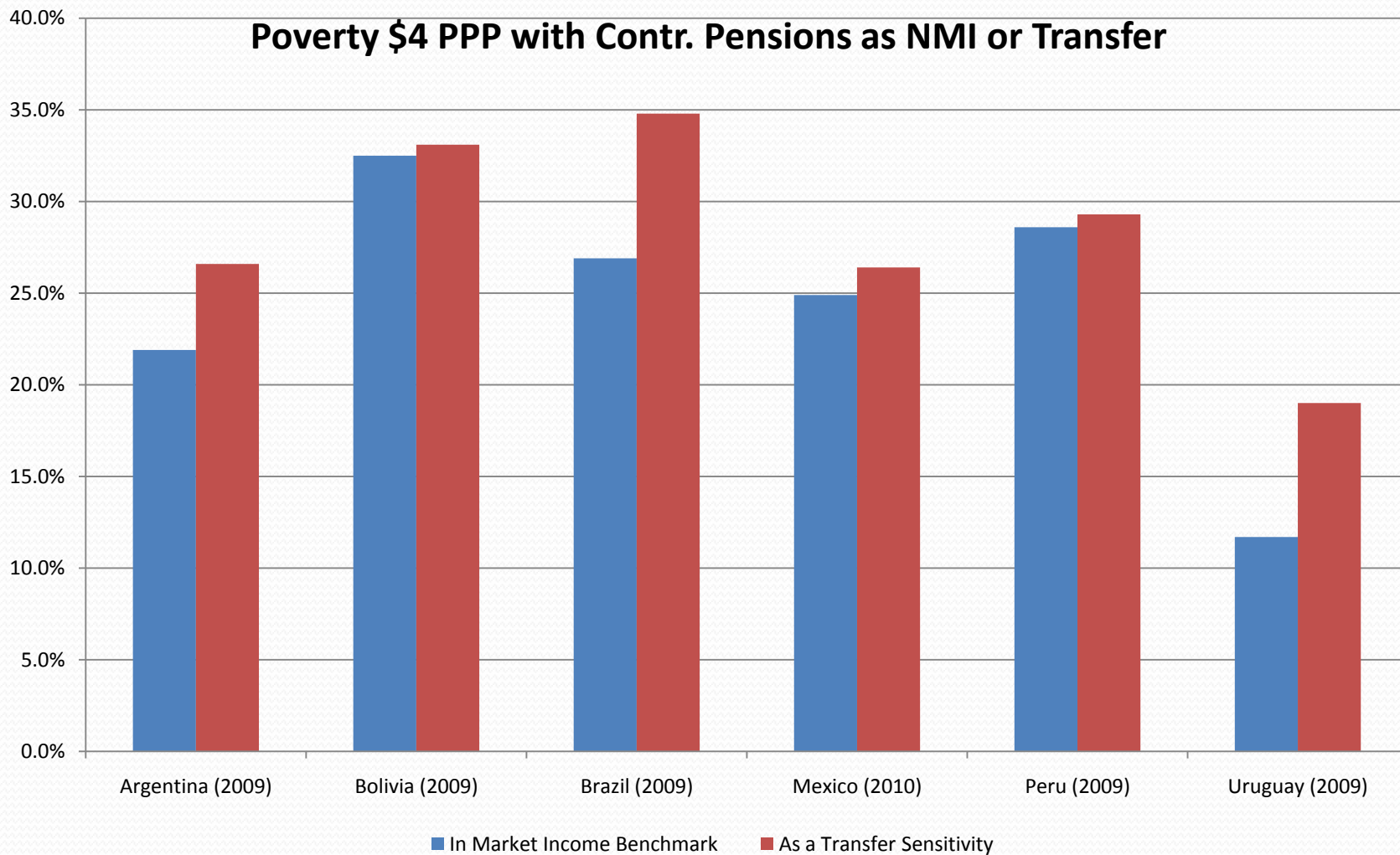
Evolution of Pension Spending in Argentina 2003-2009

	2003	2006	2009	Change 2009-2003 (% pts)	Share of the increase (in %)
Memo item:					
TOTAL Pensions	6.8%	6.9%	10.0%	3.2%	23.9%
Contributory	6.2%	5.7%	7.2%	1.0%	7.4%
Non-Contributory	0.7%	1.2%	2.9%	2.2%	16.6%

Percentage of People 65 and Older Receiving Any Kind of Pensions: 2003, 2006 and 2009
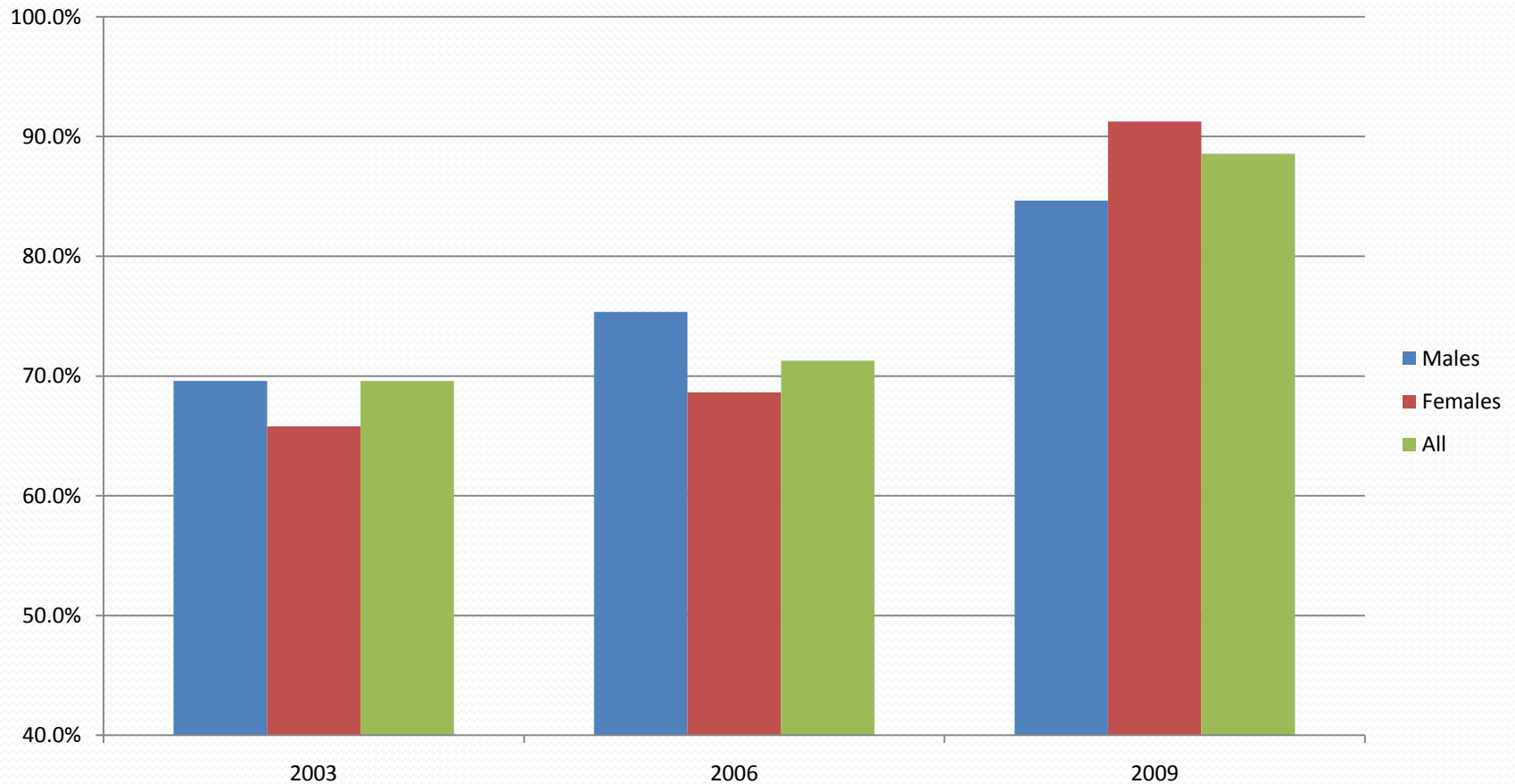
Evolution of Contributory, Noncontributory and Moratorium Pensions 2003-2009:   Millions of Individuals
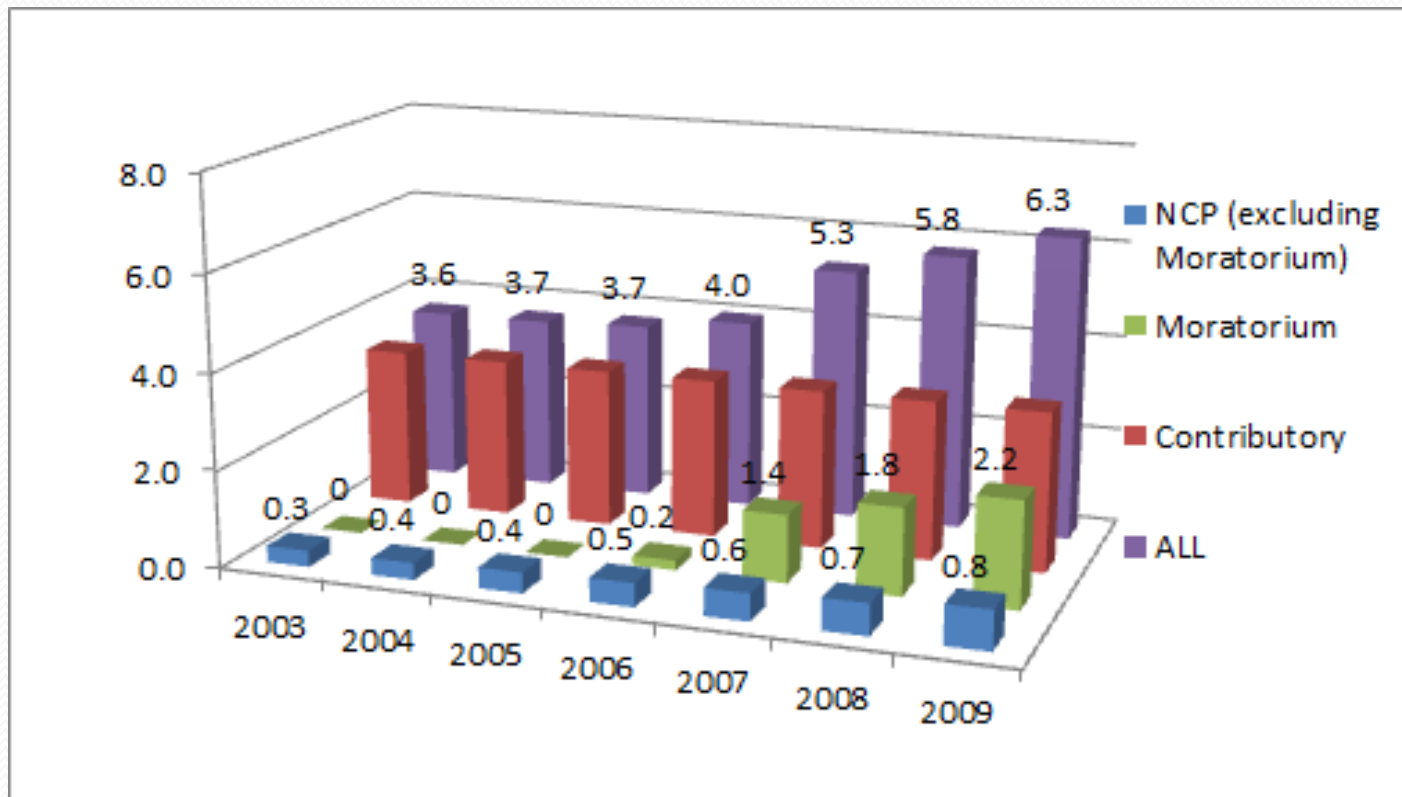
Relative Contributory and Non-Contributory Benefit over Time

Non-Contributory/Contributory benefit Argentina

2003	2009
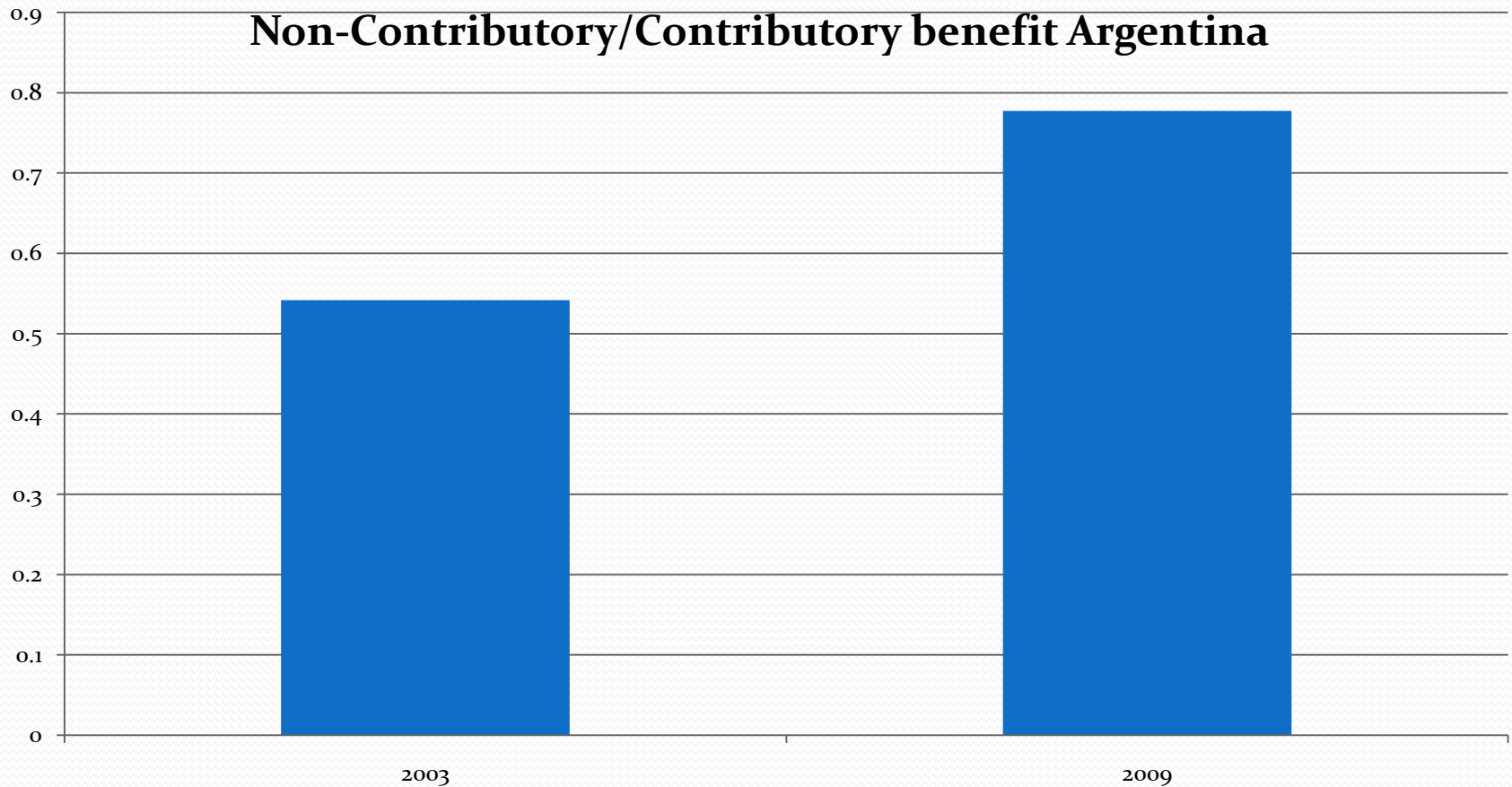
What options are available to take into account behavioral responses and general equilibrium effects?

- Basic incidence analysis, behavioral responses, general equilibrium and intergenerational incidence are each sufficiently complex as to pretend to do a complete analysis for each country on all the dimensions in one study.

- But, most of the behavioral responses, impact evaluations, intergenerational incidence and so on rely on **good and clean and upfront** previous incidence analysis which identify major programs, "static effects", first-order intra-generational effects.

	Concentration Coefficient (or Gini when specified)
Jefes y Jefas de Hogar Desocupados	-0.53
Program Familias/IDH	-0.50
Asignacion Univ. Hijo Simulated (AUH)	-0.50
Seguridad Alimentaria	-0.48
Primary Education	-0.39
Health Primary Attention	-0.36
Total Direct Transfers	-0.31
Moratorium/Non Contrib Pensions	-0.27
PAMI- INSSJyP - Social assistance	-0.26
Secondary Education	-0.24
Total Health Spending	-0.23
Total Education Spending	-0.20
Unemployment Insurance	-0.19
Obras sociales - Social	-0.16
Total CEQ Social Spending	-0.15
"Inclusion" Scholarships (Becas)	-0.13
Housing	0.00
Water and Sanitation	0.00
Other Social Protection Programs	0.00
PAMI Health	0.13
Other Urban Services	0.14
Transportation Subsidies	0.16
University Tertiary Education	0.20
Other Education	0.20
Energy Subsidies	0.22
Final Income* Gini	0.369
Disposable Income Gini	0.447
Net Market Income Gini	0.489
Agricultural Subsidies	0.55
Manufacturing Subsidies	0.55
Airline Subsidies	0.80

Legend
- Education Spending
- Health Spending
- Targeted Transfer
- Other Social Assistance
- Non-Contributory Pension
- Subsidy
- Gini

Argentina: **Share of Benefits Main Social Programs 1999**

Net Market Income Group	Share of benefits going to each income group					
	y<2.5	2.5 < y < 4	4 < y < 10	10 < y < 50	y > 50	Total
ARGENTINA						
Jefas y Jefes de Hogar	35.0%	18.2%	45.8%	0.9%	0.0%	100.0%
Familias	37.2%	20.2%	37.8%	4.4%	0.3%	100.0%
Unemployment Insurance	22.9%	16.8%	34.2%	24.4%	1.7%	100.0%
Becas	15.4%	14.0%	52.6%	18.1%	0.0%	100.0%
Non Contributory Pensions (inferred)	35.2%	7.4%	37.3%	19.7%	0.3%	100.0%
Food	37.2%	18.6%	38.6%	5.6%	0.0%	100.0%
Asignación Universal Por Hijo (simulated)	36.8%	20.9%	37.0%	5.2%	0.2%	100.0%
At least one of the above (a)	34.6%	12.2%	38.2%	14.7%	0.3%	100.0%
Education: All Except Tertiary	22.5%	15.9%	47.7%	13.8%	0.1%	100.0%
Education: Tertiary	5.0%	4.8%	41.2%	48.3%	0.6%	100.0%

Argentina: Coverage Main Social Programs 2009

Net Market Income Group	y<2.5	2.5 < y < 4	4 < y < 10	10 < y < 50	y > 50	Total Population
		Percent of individuals in each income group who are beneficiaries				
ARGENTINA						
Jefas y Jefes de Hogar	5.0%	3.8%	2.0%	0.0%	0.0%	1.8%
Familias	36.5%	30.1%	11.2%	0.9%	0.8%	12.5%
Unemployment Insurance	1.6%	2.2%	0.9%	0.6%	0.8%	1.0%
Becas	1.3%	2.1%	1.6%	0.4%	0.0%	1.2%
Non Contributory Pensions (inferred)	33.2%	19.2%	17.5%	9.4%	3.4%	16.7%
Food	20.8%	15.9%	5.6%	0.7%	0.0%	6.7%
Asignación Universal Por Hijo (simulated)	52.9%	46.6%	20.6%	3.9%	3.7%	21.2%
At least one of the above (a)	91.9%	78.8%	47.6%	15.2%	7.9%	44.6%
Education: All Except Tertiary	31.1%	31.1%	19.0%	6.6%	1.1%	17.2%
Education: Tertiary	1.8%	2.5%	4.6%	6.7%	2.8%	4.8%
Health (b)	68.1%	63.9%	34.3%	11.1%	6.1%	33.0%
Contributory Pensions	1.0%	3.1%	12.9%	19.9%	17.4%	12.9%
Above (all above for benefits except food, at least one for beneficiaries)	90.4%	76.1%	45.7%	14.8%	7.9%	43.2%

BENEFITS PER BENEFICIARY BY DAY PPP 2005

	y < 2.5	2.5 < y < 4	4 < y < 10	10 < y < 50	y > 50	Total
Jefas y Jefes de Hogar	0.35	0.34	0.35	0.48	0.00	0.35
Familias	0.54	0.52	0.55	0.97	2.31	0.56
Unemployment Insurance	1.36	1.09	1.11	1.52	2.50	1.25
Becas	1.30	1.12	1.17	1.94	0.00	1.27
Non Contributory Pensions (inferred)	3.87	2.06	2.38	2.90	4.19	2.84
Food	0.15	0.14	0.18	0.26	0.00	0.16
Asignación Universal Por Hijo (simulated)	1.22	1.14	0.96	0.88	0.85	1.07
Above (all above for benefits, at least one for beneficiaries)	2.26	1.35	1.47	2.20	2.60	1.75

ARGENTINA : Government Spending by Category (% of GDP)

	2003	2006	2009	Change 2009-2003 (% pts)	Share of the increase (in %)
Gross Nat Inc/capita (PPP US$)	**8,180**	**11,740**	**14,230**		
Total Government Spending	**29.5%**	**32.9%**	**43.2%**	**13.7%**	--
Primary Government Spending	**27.1%**	**30.7%**	**40.6%**	**13.5%**	**100.0%**
Social Spending	**13.0%**	**15.4%**	**20.6%**	**7.6%**	**56.1%**
Social Spending (In Incidence Analysis Benchmark)	**7.3%**	**8.3%**	**11.8%**	**4.5%**	**33.4%**
Total Cash Transfers	2.0%	2.0%	3.7%	1.7%	12.6%
Cash Transfers (excluding all Pensions)	1.3%	0.7%	0.8%	-0.5%	-4.0%
Non-Contributory Pensions	0.7%	1.2%	2.9%	2.2%	16.6%
Moratorium Pensions	*0.4%*	*0.8%*	*2.4%*	*2.0%*	*14.4%*
Total In Kind Transfers	**5.3%**	**6.3%**	**8.1%**	**2.8%**	**20.8%**
Education	3.4%	4.3%	5.6%	2.1%	15.6%
Health Primary Care	1.9%	2.0%	2.6%	0.7%	5.2%
Other Social Spending (Not in Incidence Analysis)	**5.7%**	**7.1%**	**8.8%**	**3.1%**	**22.7%**
Non- Social Spending	**7.9%**	**9.6%**	**12.8%**	**4.9%**	**36.5%**
Indirect Subsidies	2.5%	3.8%	5.6%	3.1%	23.3%
Other Non Social Spending	5.4%	5.9%	7.2%	1.8%	13.2%
Contributory Pensions (In Sensitivity Analysis)	**6.2%**	**5.7%**	**7.2%**	**1.0%**	**7.4%**
Debt Servicing	**2.4%**	**2.2%**	**2.6%**	**0.2%**	**1.3%**

Financing of Government Spending

	2003	2006	2009	Change 2009-2003 (% pts)	Share of the increase (in %)
Financing of Total Government Spending	**29.5%**	**32.9%**	**43.2%**	**13.7%**	100.0%
Total Government "Actual" and "Creative" Revenue	**30.4%**	**34.5%**	**41.0%**	**10.6%**	**77.3%**
Total Government Tax Collection	23.4%	27.4%	31.4%	8.0%	58.3%
Total Government "Actual" Non Tax Revenue	6.8%	6.6%	7.6%	0.8%	6.1%
Total Government "Creative" Non Tax Revenue	0.2%	0.5%	2.0%	1.8%	12.9%
Official "Creative" Public Sector Borrowing Requirements	**-0.9%**	**-1.6%**	**2.2%**	**3.1%**	**22.7%**
"Actual"Public Sector Borrowing Requirements	-0.7%	-1.1%	4.1%	**4.9%**	**35.7%**

Problems of this redistribution

- 2) The redistribution of second part of decade thanks principally to "moratoria".

- It was partially subsidized through contributory pensions.

- Disincentives to contribute to social security, and incentives to informality.

Problems of this redistribution

3) As a consequence, the total number of beneficiaries of social programs increase enormously over decade: from about 5% and not more than 10% in the 90s

- With crisis, increase to 24% in 2003
- But with the crisis over, in 2009 43% of population depended on social transfers, to get poverty levels similar to the 90s.

Beneficiaries of Social Programs