A brief assessment of the Distributional National Accounts Agenda in Latin America

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All the presentations today will have the same questions in the background, explicitly or implicitly:
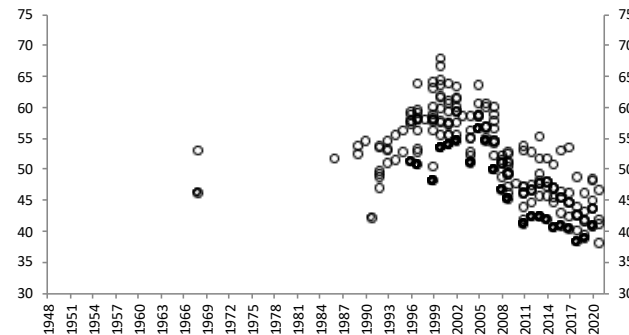
- Given:

  o The strengths and weaknesses of household surveys in the region (including the under-representation of top incomes);

  o The strengths and weaknesses of other sources, such as tax registries and National Accounts statistics;

  o The inevitability of arbitrary methodological choices in using and combining these sources;

- **Three questions:**

  ◊ **What can we say with confidence about the *levels* of income inequality in Latin America and the Caribbean?**

  ◊ **What can we say with confidence about income inequality *trends* in Latin America and the Caribbean?**

  ◊ **In the current "statistical context," does it make sense to embark in the estimation of the *personal* distribution of the National Accounts concepts? [Why? What for?]**

Figure 3. Gini coefficients in Latin America and the Caribbean, 1948-2021
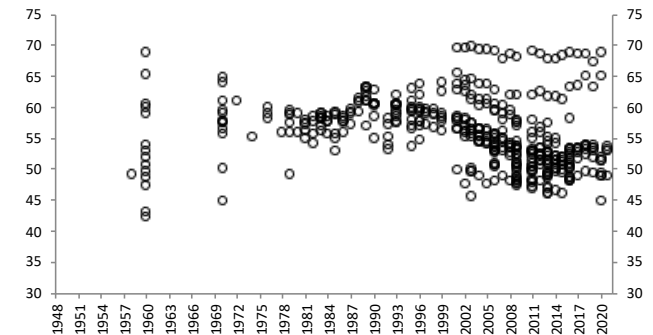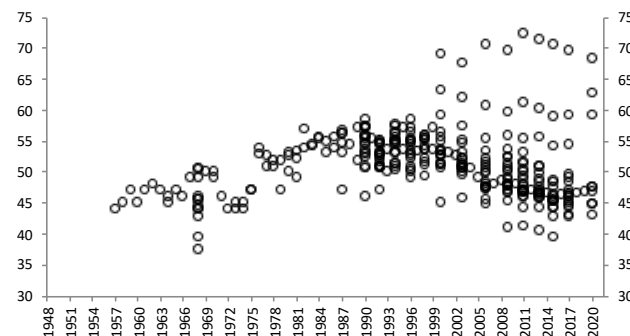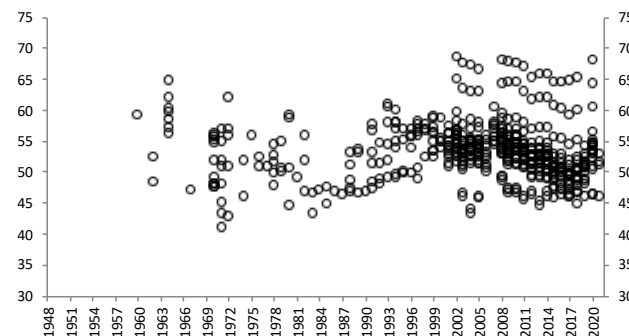
Figure 3. Gini coefficients in Latin America and the Caribbean, 1948-2021 (continued)
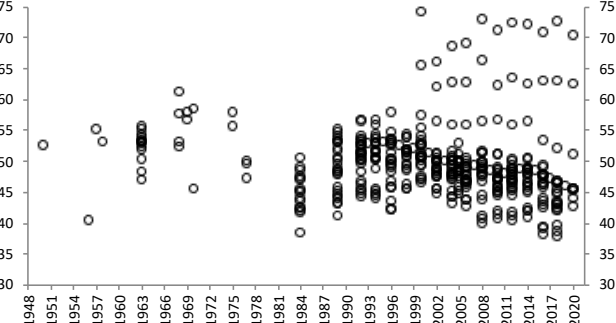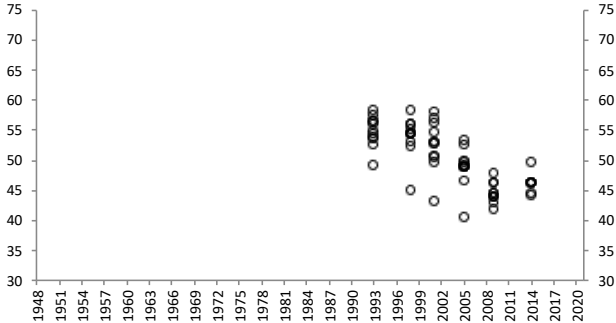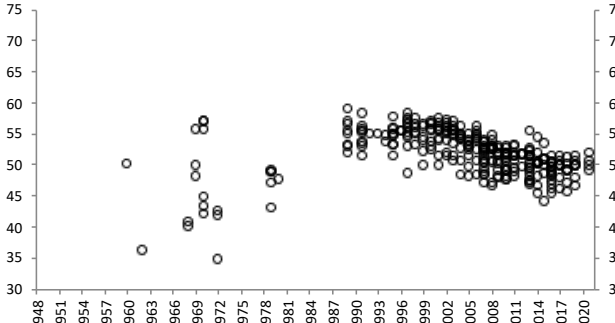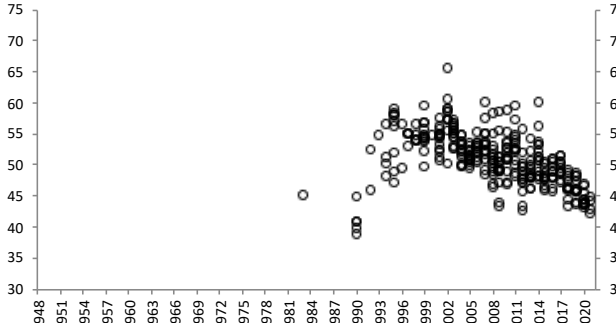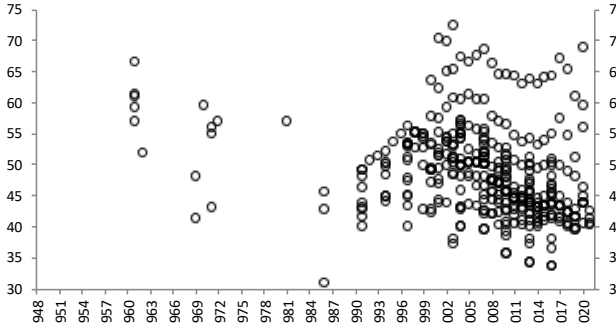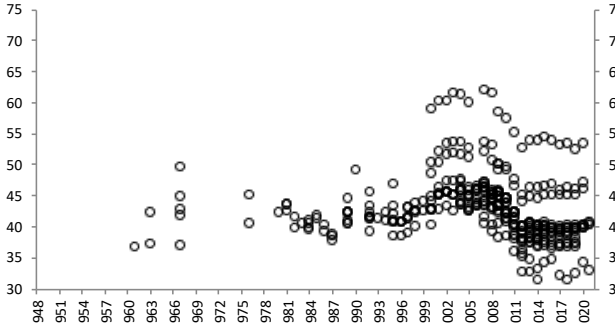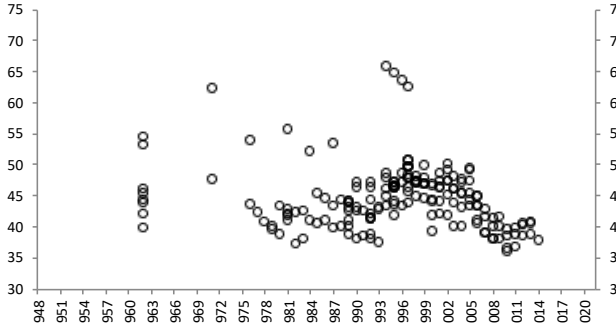
From an even broader perspective, the situation is not qualitatively different in the developed world

Two examples:
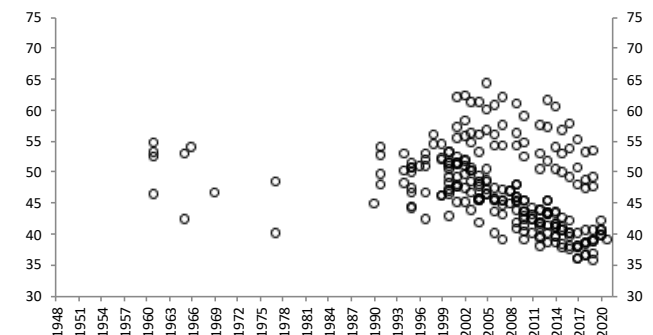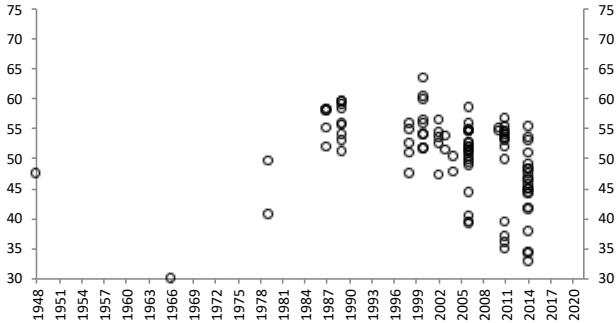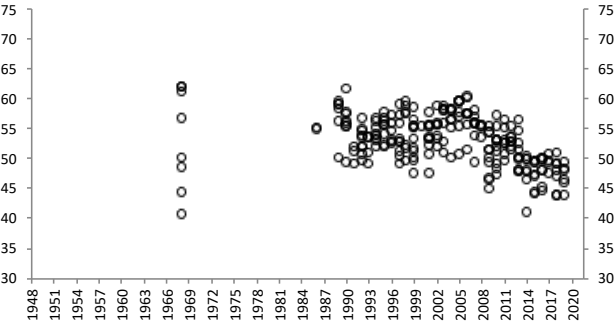

Spain
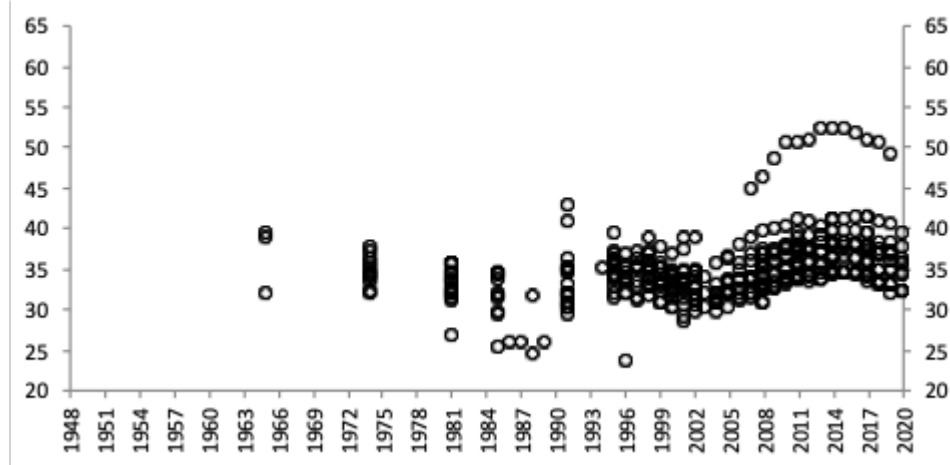
Italy
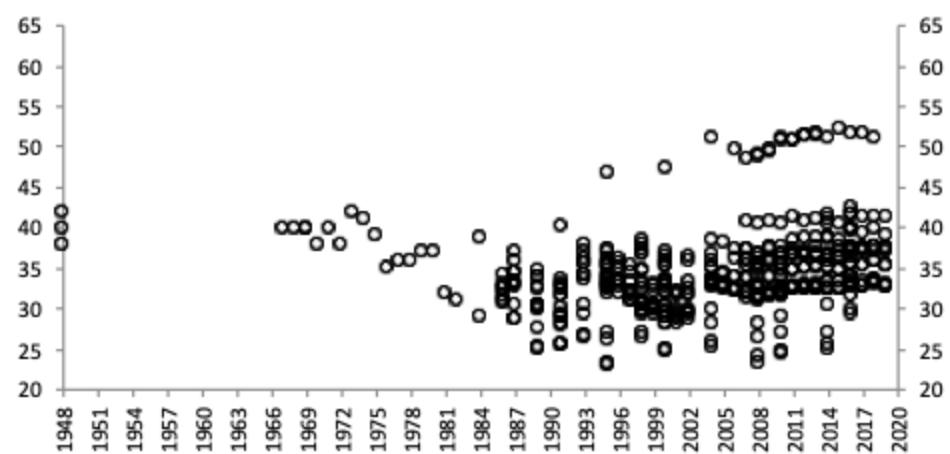
A historical perspective

- In the 1940s, 1950s and1960s, LAC followed the global practice of studying the SNA and distributional issues together.

- Studies systematically attempted to reconcile survey estimates, income tax sources, ss registries, and aggregates from SNA or input-output matrices. 4 ex.:

- **Argentina: CONADE-CEPAL (1965)** estimated the personal and the functional distribution of income for **1953, 1959 and 1961**, using surveys, population and industrial censuses, income tax registries, and social security records, attempting a reconciliation with the NA.

- **Mexico:** Based on the 7th population census of 1950 and the income and expenditure surveys of **1956 and 1958**, Navarrete (1960) published an investigation on the distribution of income, **where the gap with the national accounts was imputed to the top of the distribution**.

- **Chile:** Jadue (1959) produced "probable" distributions of income for the years 1940-1954, based on tax data and social security registries. NA adjustments were applied.

- **Brazil:** the 7th population census of **1960** was the first to enquire about incomes. Samples were exploited by Hoffman (1971), Fishlow (1972) and Langoni (1973) to estimate the distribution of income at the national level.

A historical perspective (cont.)

- The path was followed by Altimir (1986, 1987) and CEPAL.

- **Since the 1970s, the link between SNA aggregates and distributional data weakened and the two fields went separate ways.**

- A "reaction" against the "dominance" of surveys came from the tax-based "top incomes" literature since the 2000.

- The "top incomes" literature had nonetheless no novelty from the conceptual or methodological sides: it followed the path of tax-based distribution studies since the second half of the 19th century.
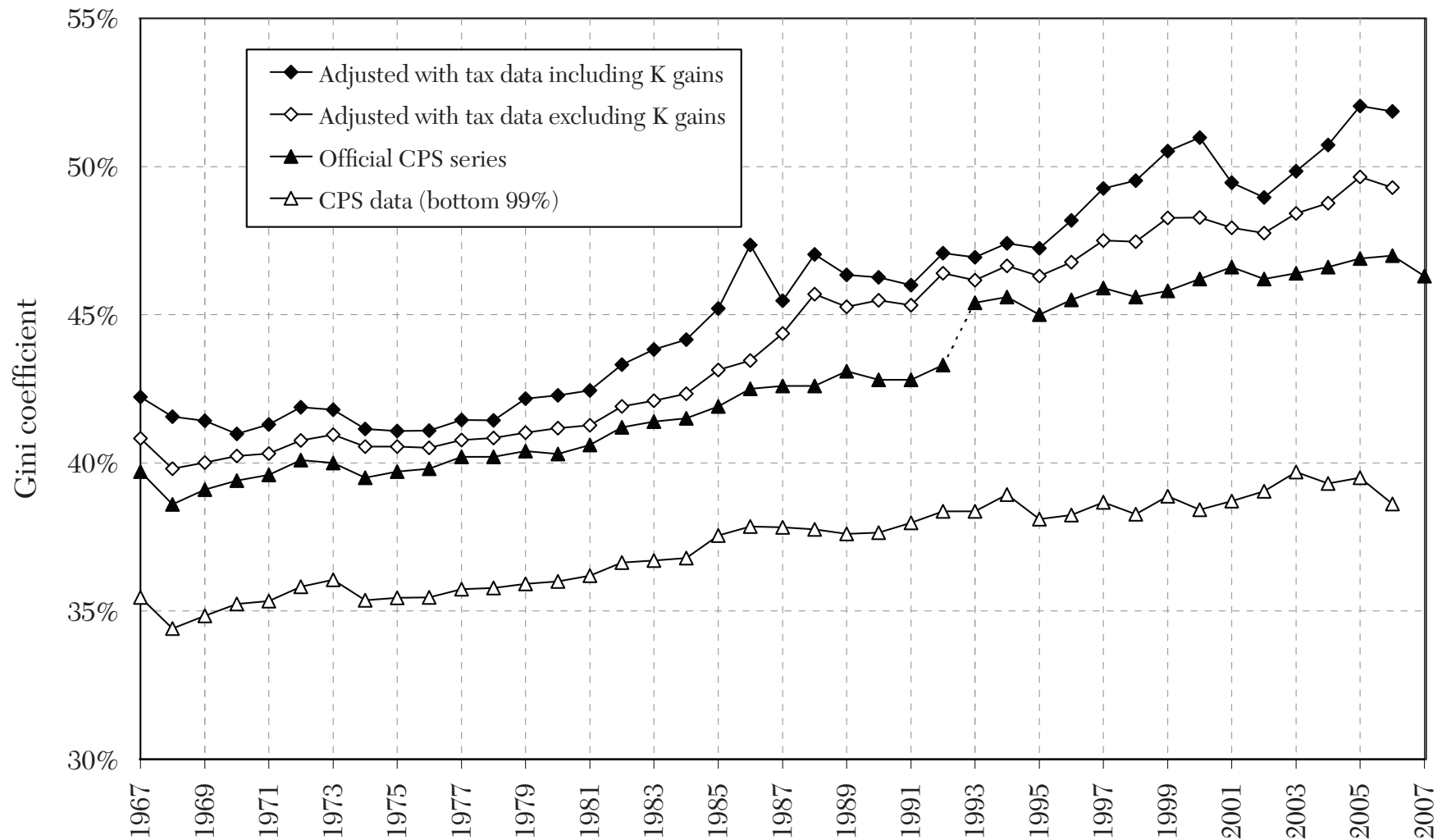
United States - Gini Coefficient

Figure 6. CPS Gini Coefficients: Correcting Top 1 Percent with Tax Data
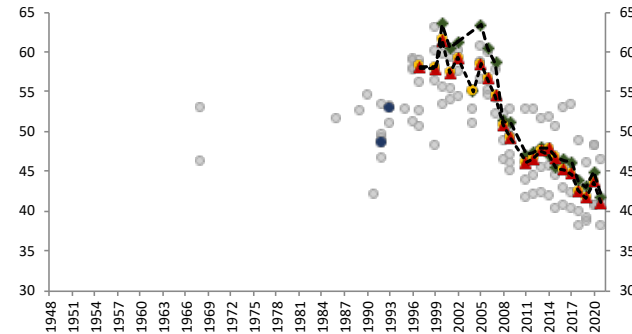
Atkinson, Piketty, Saez (2011)

Figure 4. Predominantly HHS-based Gini coefficients in Latin America and the Caribbean

Argentina
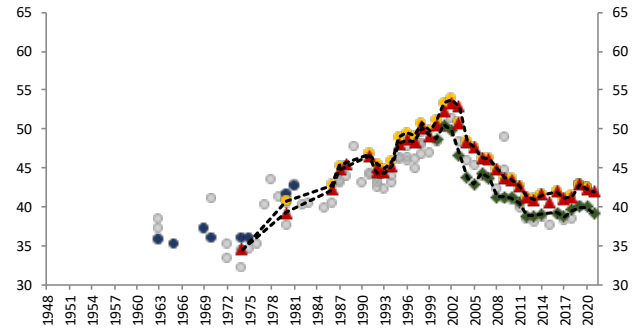
Bolivia

Brazil
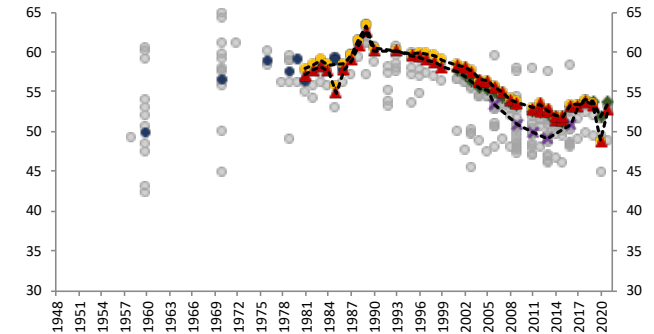
Chile
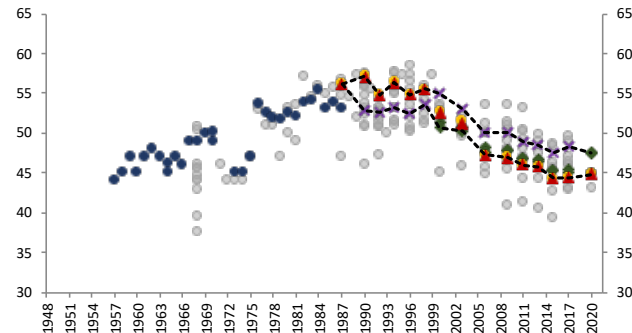
Colombia
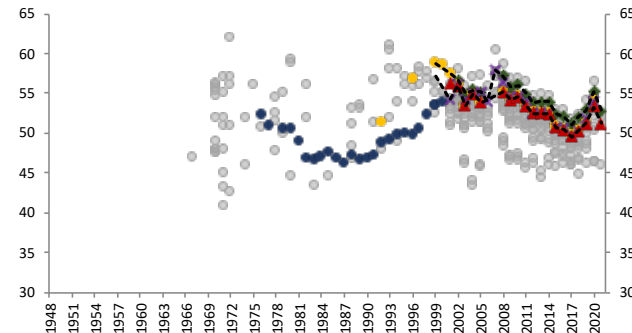
Costa Rica
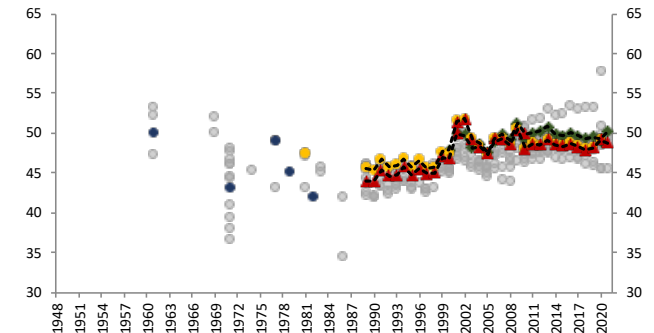
Dominican Republic
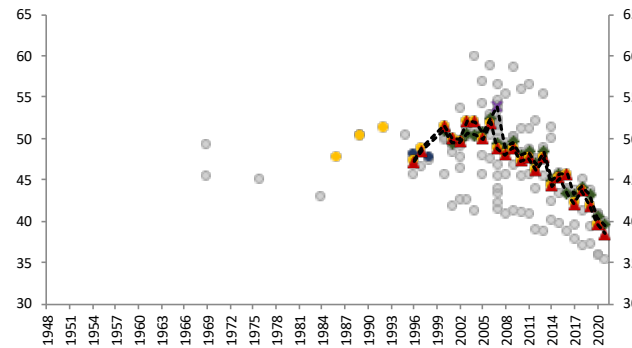
Ecuador
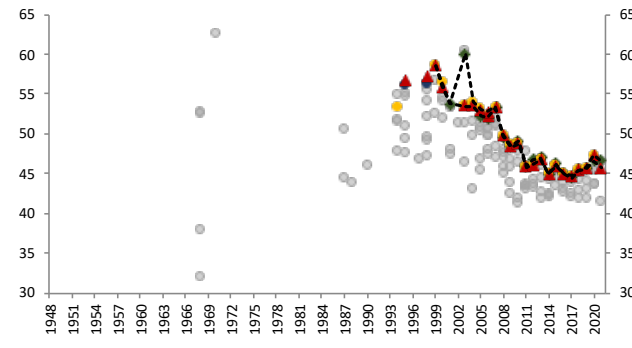
El Salvador

▲ SEDLAC   ● ECLAC new   ● POVCALNET   ✕ LIS   ● Other studies   ● Other definitions of income or consumption

Figure 4. Predominantly HHS-based Gini coefficients in Latin America and the Caribbean (continued)

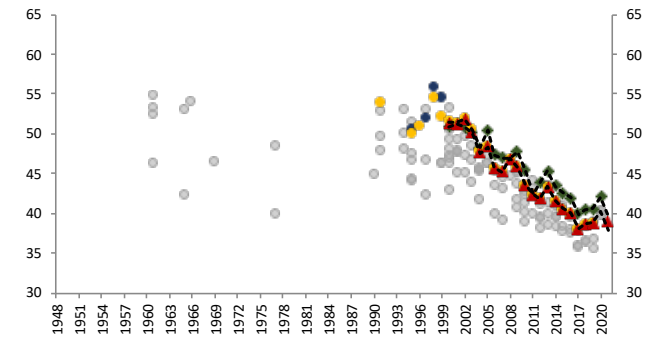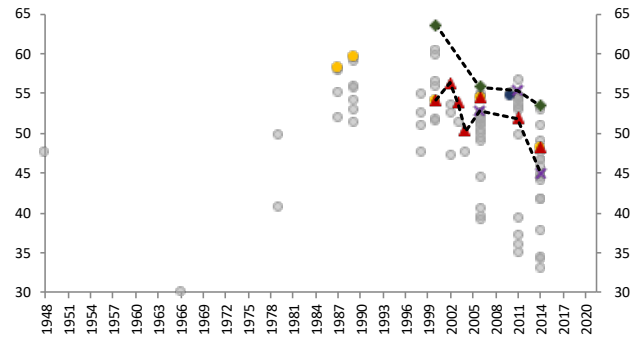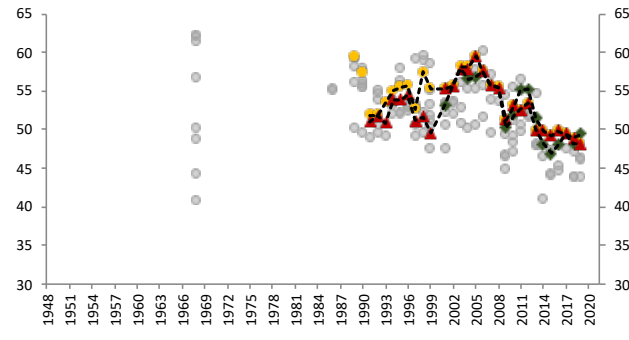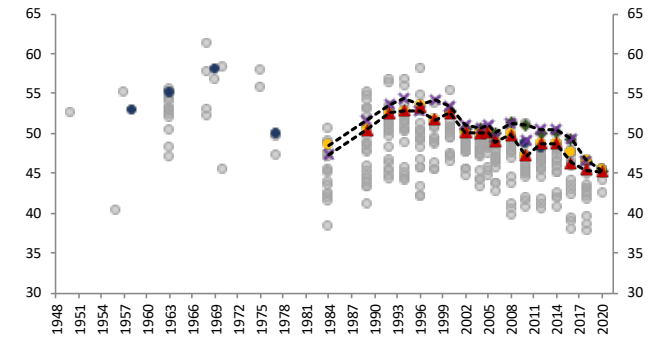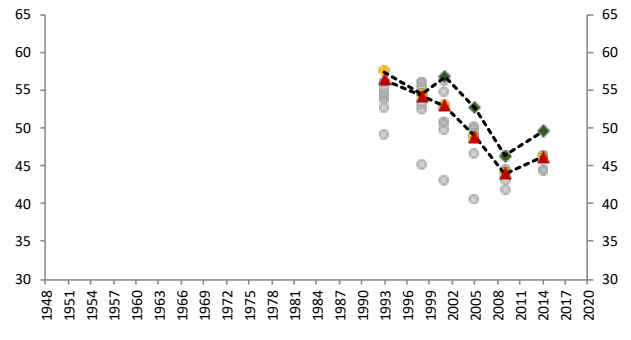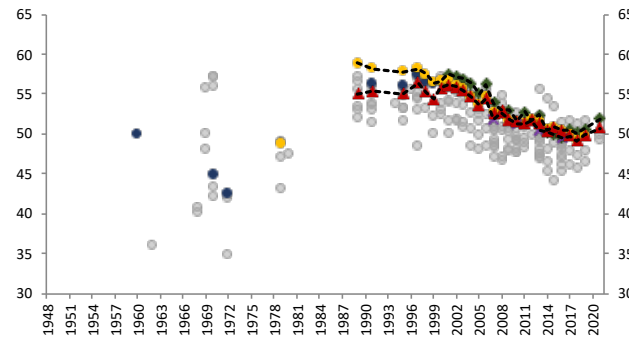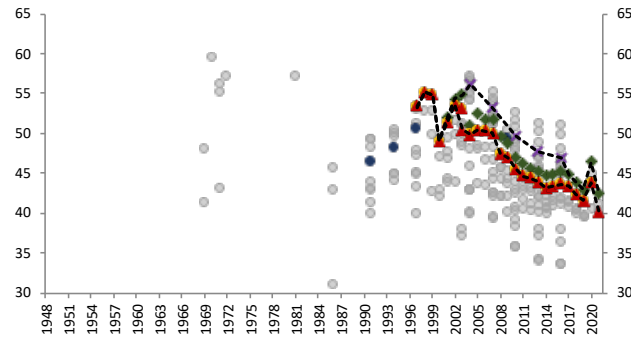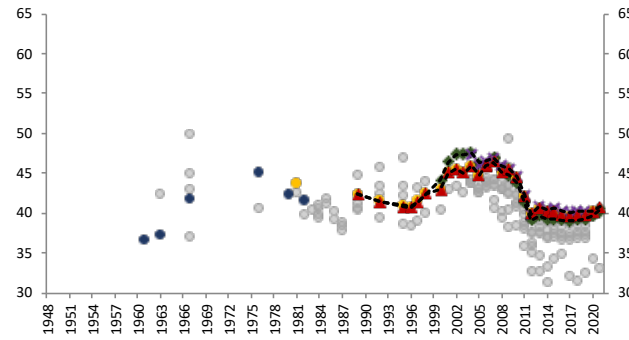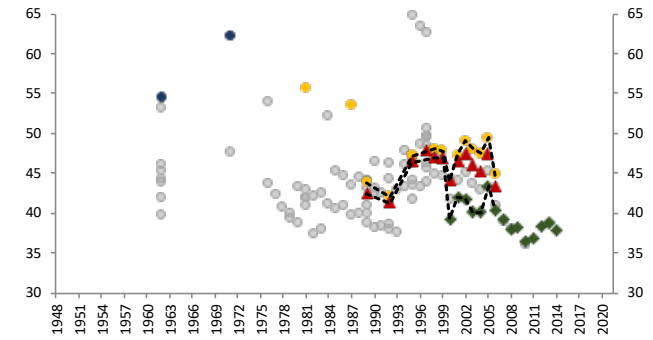SEDLAC   ECLAC new   POVCALNET   LIS   Other studies   Other definitions of income or consumption

- In the initial days of the literature of top incomes applied to Latin America, there was the presumption that **"correcting"** surveys with income tax data would "break" this observed decline, and show the "truth"

  …even if changes in the dynamics was not what had been shown for the US or for any other country (despite narratives)
  &
  *…even if the methods behind this **"correction"** were far from being statistically robust*

- In the last ten years there has been a remarkable increase in the provision of administrative data in the LATAM countries (income tax and social security, tables and microdata)

- There has been as well more debate on the statistical methods of "adjustment" (e.g. Blanchet, Flores, Morgan, 2022).

	Survey microdata			Administrative data			
Country	Source	Availability		Source	Availability	Population (% of total)	Definitions
Argentina	Encuesta Permanente de Hogares (EPH) and EPH-Continua from 2003, Insituto Nacional de Estadística y Censos (INDEC)	2000-2014, 2016-2020		Income tax tabulations, Administración Federal de Ingresos Públicos (AFIP), Employee microdata, Ministerio de Trabajo, Empleo y Seguridad Social	2000-2017, 2000-2015	2% 40%	Survey is representative of urban areas (28-31 cities). Income tax data is total pre-tax fiscal income. Employee microdata includes only private sector wages.
Brazil	Pesquisa Nacional por Amostra de Domicílios (PNAD), Instituto Brasileiro de Geografia e Estatística (IBGE)	2001-2009, 2011-2020		Income tax tabulations, Receita Federal (RFB)	2000, 2002, 2006, 2007-2019	14%	Income tax data is total pre-tax fiscal income.
Chile	Encuesta de Caracterización Socioeconómica Nacional (CASEN), Ministerio de Desarrollo Social	2000-2009 (triannual), 2011-2020 (biannual)		Income tax tabulations, Servicio de Impuestos Internos (SII)	2000-2018	70%	Wages reported separately from other fiscal incomes in 2000-2004.
Colombia	Encuesta continua de hogares (Gran Encuesta Integrada de Hogares from 2008), Departamento Administrativo Nacional de Estadística (DANE)	2002-2005, 2008-2020		Alvaredo and Londoño-Vélez (2013)	2000-2010	1%	Income tax data is total pre-tax fiscal income.
Costa Rica	Encuesta Nacional de Hogares, Instituto Nacional de Estadística y Censos (INEC)	2000-2020		Wage income, Non-wage income Zuñiga-Cordero (2018)	2000-2017 2010-2016	28% 5%	Wage earners from social security records, Independent workers from income tax declarations.
Ecuador	Encuesta Periódica de Empleo y Desempleo (EPED) and Encuesta de Empleo, Desempleo y Subempleo (ENEMDU) from 2003, Instituto Nacional de Estadística y Censo (INEC)	2001, 2003 2005-2020		Cano (2015) Rossignolo et al. (2016)	2008-2011 2012-2014	14% 38%	Distributional data on total fiscal incomes is only available from Cano (2015) for the 10%.
El Salvador	Encuesta de Hogares de Propósitos Múltiples, Dirección General de Estadística y Censos (DIGESTYC)	2000-2007, 2009, 2010, 2012-2019		Tax tabulations (wages), Tax tabulations (diverse income) Dirección General de Impuestos Internos (DGII)	2000-2019	4% (wages) 4% (diverse)	Wages of salaried workers are reported separately from income from diverse sources.
Mexico	Encuesta Nacional de Ingresos y Gastos de los Hogares, Instituto Nacional de Estadística, Geografía e Informática (INEGI)	2002-2020 (biannual)		Income tax microdata, Servicio de Administración Tribuataria (SAT)	2009-2014	20% (wages) 2% (diverse)	Wages of salaried workers are reported separately from income from diverse sources.
Peru	Encuesta Nacional de Hogares - Condiciones de Vida y Pobreza, Instituto Nacional de Estadística e Informática (INEI)	2000-2020		Income tax tabulations, Superintendencia Nacional de Aduanas y de Administración Tributaria (SUNAT)	2016-2018	25%	Income tax data excludes entrepreneurial incomes.
Uruguay	Encuesta Continua de hogares (ECH), Instituto Nacional de Estadística (INE)	2000-2005, 2007-2020		Income tax microdata, Dirección General Impositiva	2009-2016	75%	Income tax data is total pre-tax fiscal income.

Países donde solo cambian los niveles (Gini)
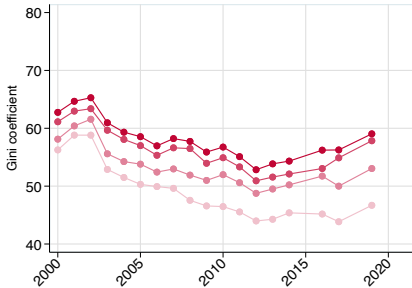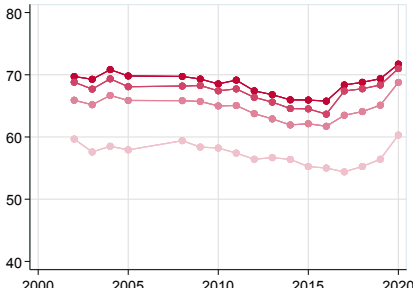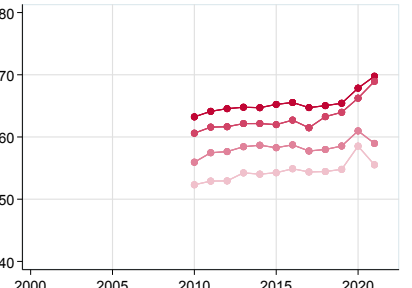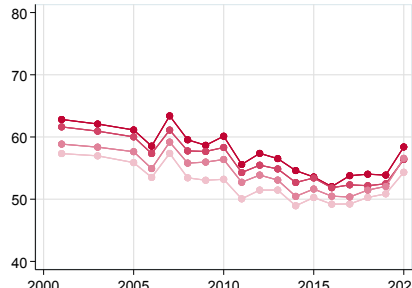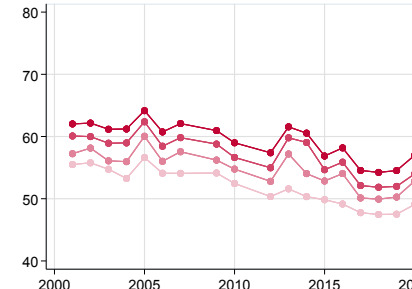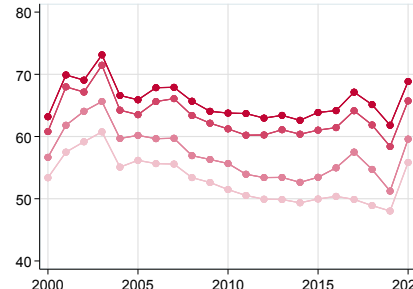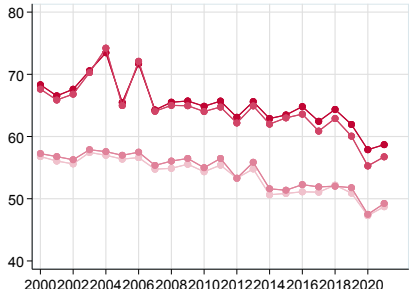

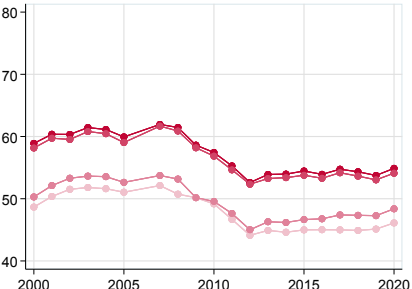Argentina   Colombia   Costa Rica   Ecuador

El Salvador   Perú   Rép. Dominicana   Uruguay

# A few comments on the adjustment of surveys with tax data:

- Survey incomes have been made increasingly comparable across countries in LAC
- Income information from the income tax is much less comparable across countries
    - The definition of taxable income is defined by the tax code, not with research or measurement purposes
    - Countries have different taxation arrangements and sub-regimes
    - Example: dividend incomes
- Perhaps contrary to general belief, there is very little capital incomes (compared to NA figures) in tax-based income data

- So, after many years and much work done in the direction of cross-country comparability in the realm of surveys, the adjustment with tax data makes the series not comparable in the same way.

- Subsequently, recent work has embarked in a process of combining surveys, administrative records, and National Accounts. This includes
  ◊ DINA, from the World Inequality Lab
  ◊ DNA, from the OECD
  ◊ DPI from the Bureau of Economic Analysis of the US (Fixler et al, 2017)
  ◊ Etc. (Official work in Canada, Australia, France…)

- It was argued that the large (and sometimes increasing gaps) between *survey+tax data and NA* makes it hard to assess how macroeconomic growth is distributed across income groups

- There is no time in this presentation to discuss these endeavors conceptually (Do they make sense? Are they necessary? Can this be done at present with the available data? Is the NI concept right? What is/are the income concept/s for welfare/distribution analysis?).
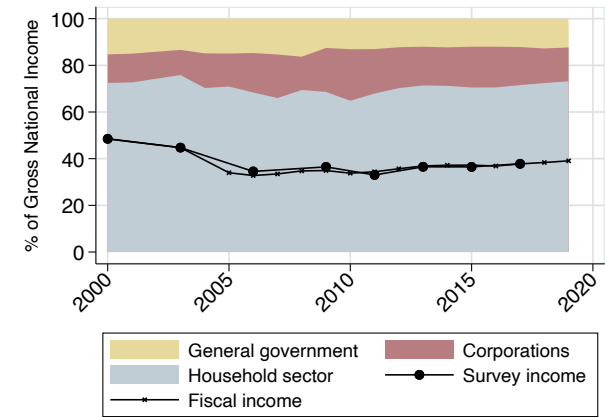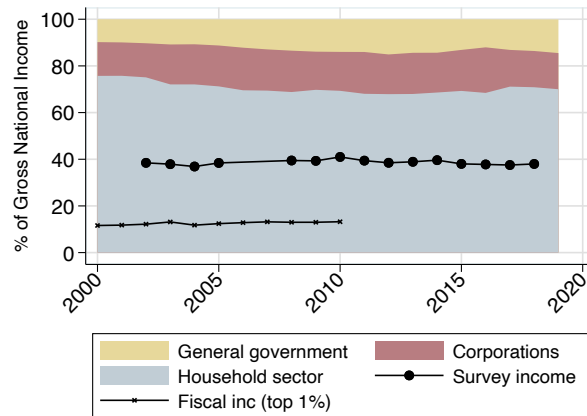
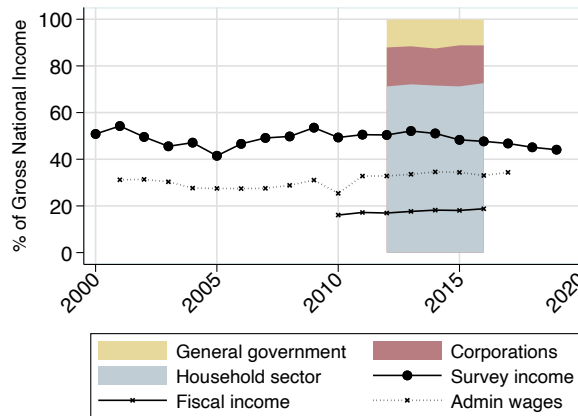# From household surveys to national income (I)
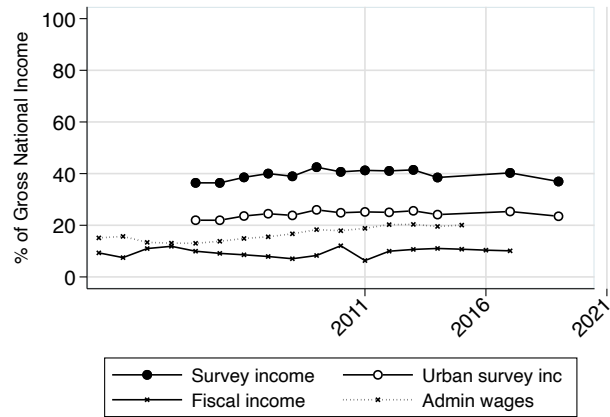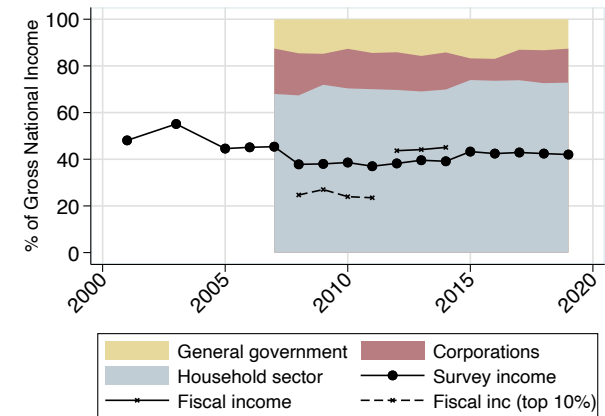

(a) Argentina
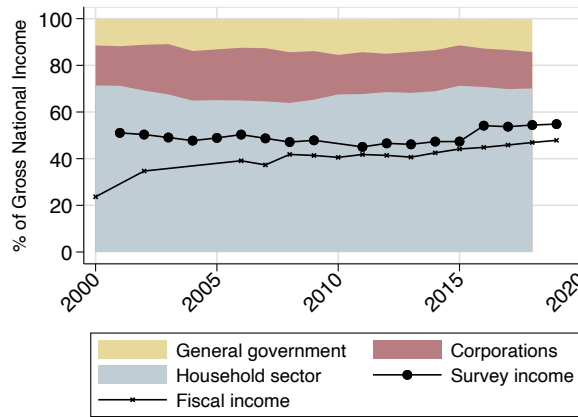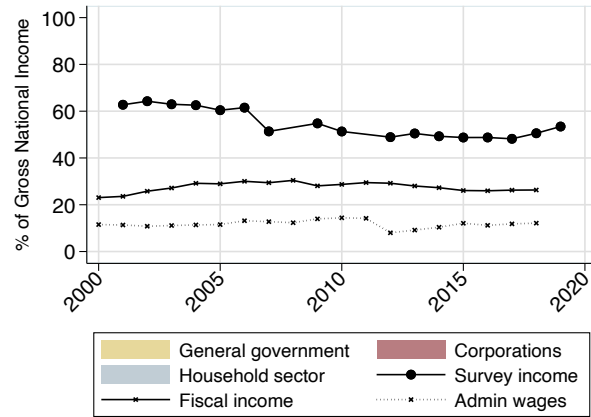
(b) Brazil

(c) Chile

(d) Colombia
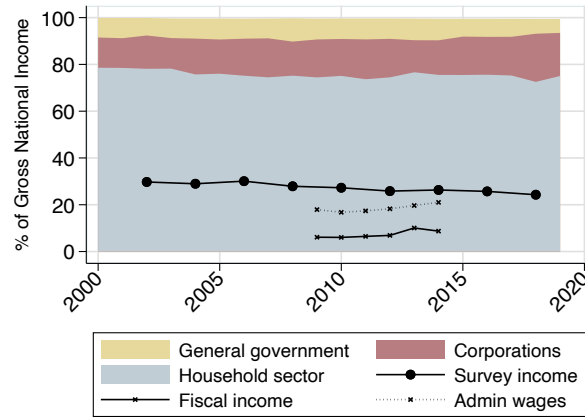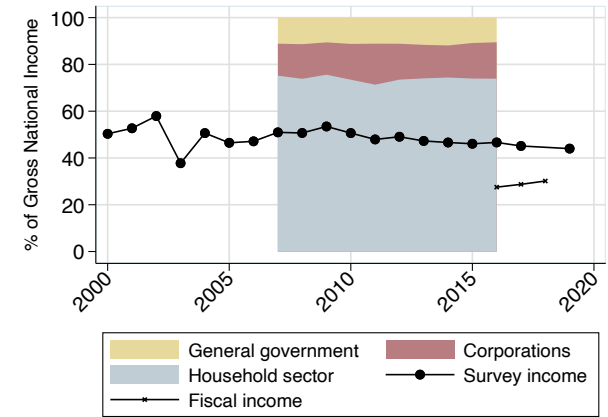
(e) Costa Rica

(f) Ecuador

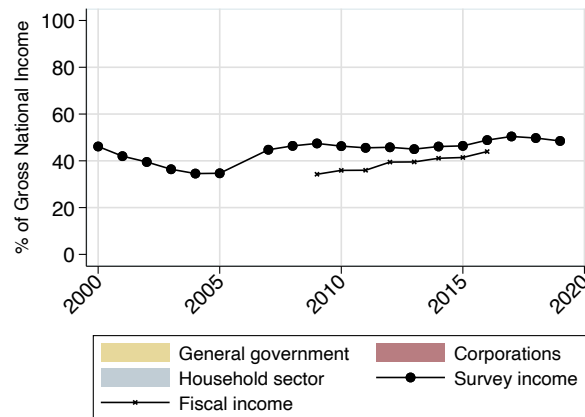**From household surveys to national income (II)**
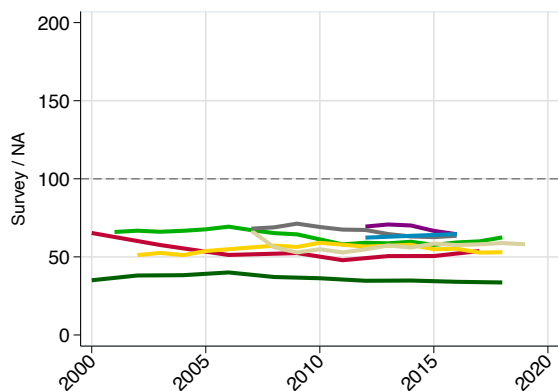
(g) El Salvador

(h) Mexico
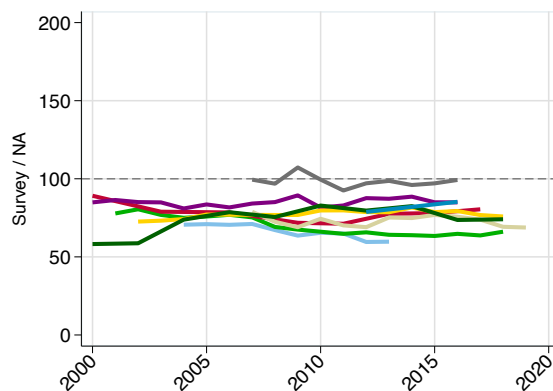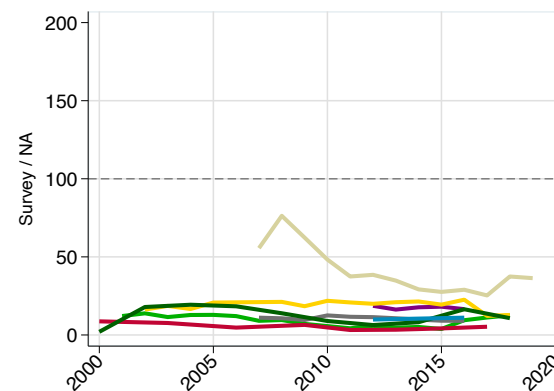
(i) Peru

(j) Uruguay

Discrepancies between surveys and NA by income components

(a) Total Income

(b) Wages

(c) Property income
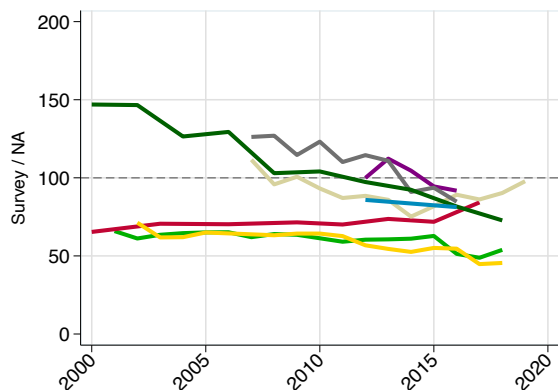
(d) Social Benefits
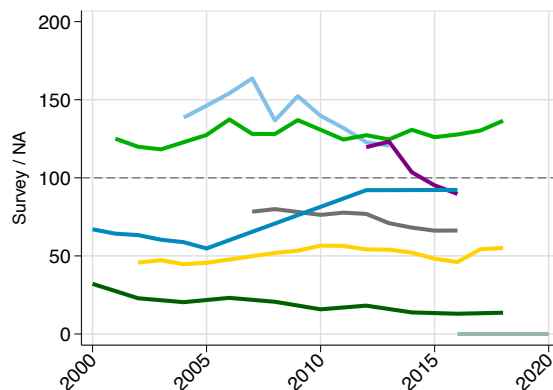
(e) Self-emp. income

(f) Imputed rents

Argentina   Bolivia   Brazil   Chile   C. Rica

Colombia   Ecuador   Peru   Mexico   Uruguay
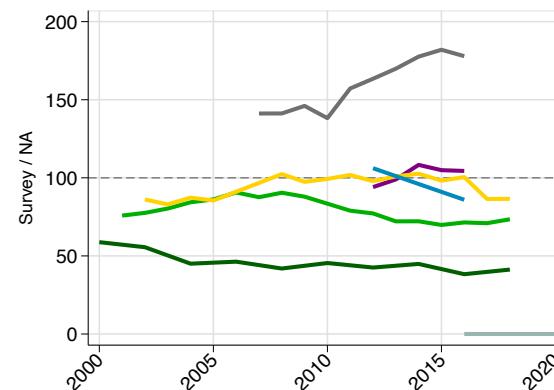
Undistributed profits (Net balance of primary incomes of corporate sector in NA)
Ratio to aggregate income
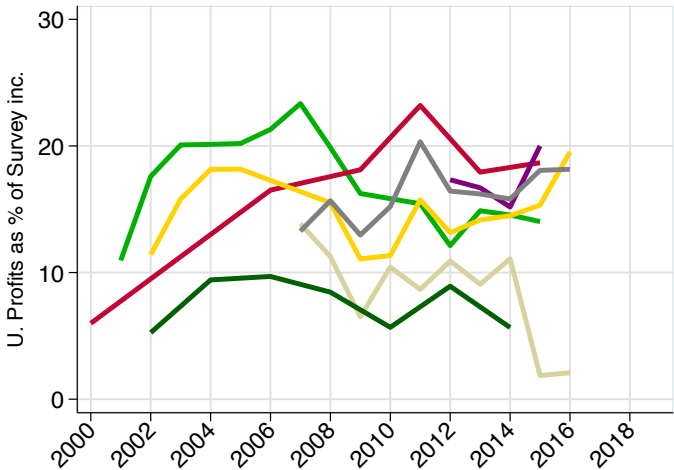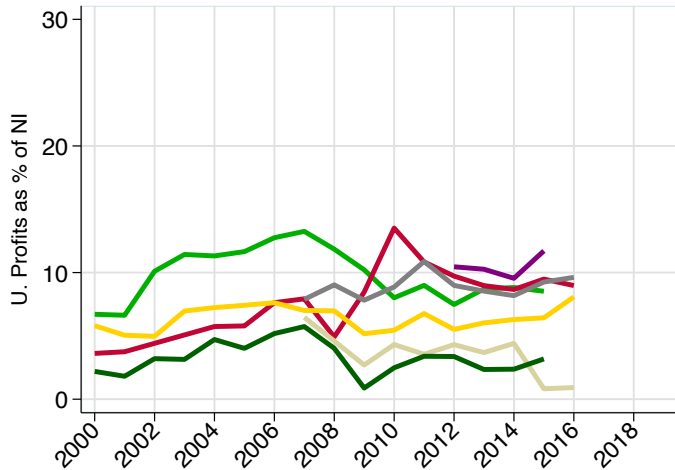
(a) % of Survey Income **(b)** % of National Income

	Argentina		Brazil
	Chile		Colombia
	Costa Rica		Ecuador
	Mexico		Peru
	El Salvador		Uruguay

Warning/reminder: The net balance is a balancing (!) item. It is computed as a residual in many cases.

Some final remarks for debate:

-So far, while the existing gaps have strengthened the feelings of uncertainty about inequality measures, these "new" approaches have taken for granted the numbers provided by tax data and the NA.

-This practice does not contribute to diminish the feelings of uncertainty, at least in the case of developing countries.

-Welcome to all the discussions yesterday and the day before about the improvements of NA, but in LAC we have very little information in the distribution of income accounts in NA.

-Increasingly necessary for survey producers, administrative data producers and national accountants to work synergistically.

-Increasingly necessary for National Accountants to be more explicit about assumptions, year-base path dependence, actual data, and imputations.

-Acknowledgment of the massive "power" of assumptions in the current "statistical" state of affairs.

-Need of a MECOVI II.