Income Inequality in Latin America

A brief assessment of the Distributional National Accounts Agenda

Facundo Alvaredo

- This brief presentation draws on two papers

- The first one, on the comparison of income aggregates across surveys, administrative records and national accounts:

  Alvaredo, F., Mauricio De Rosa, Ignacio Flores Beale, and Marc Morgan. (2022). The inequality (or the growth) we measure. Data gaps and the distribution of incomes. CEPR DP 17135.

- The second one, on the combination of income between surveys, administrative registries, and national accounts to measure inequality:

  Mauricio De Rosa, Ignacio Flores Beale, and Marc Morgan. (2022). More unequal, or not as rich? Revisiting the Latin American exception. Stone Center Working Paper Series. 53.

- Chico's presentation has reminded your recollection (or informed you) about the declining trends in income inequality in Latin America in some fifteen years of the last two decades, based on households' surveys

- He stopped "before one introduces additional data sources, such as tax and social security records, or aggregate information from the national accounts"

- 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 would show the "truth"

> *…even if those kind of 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*

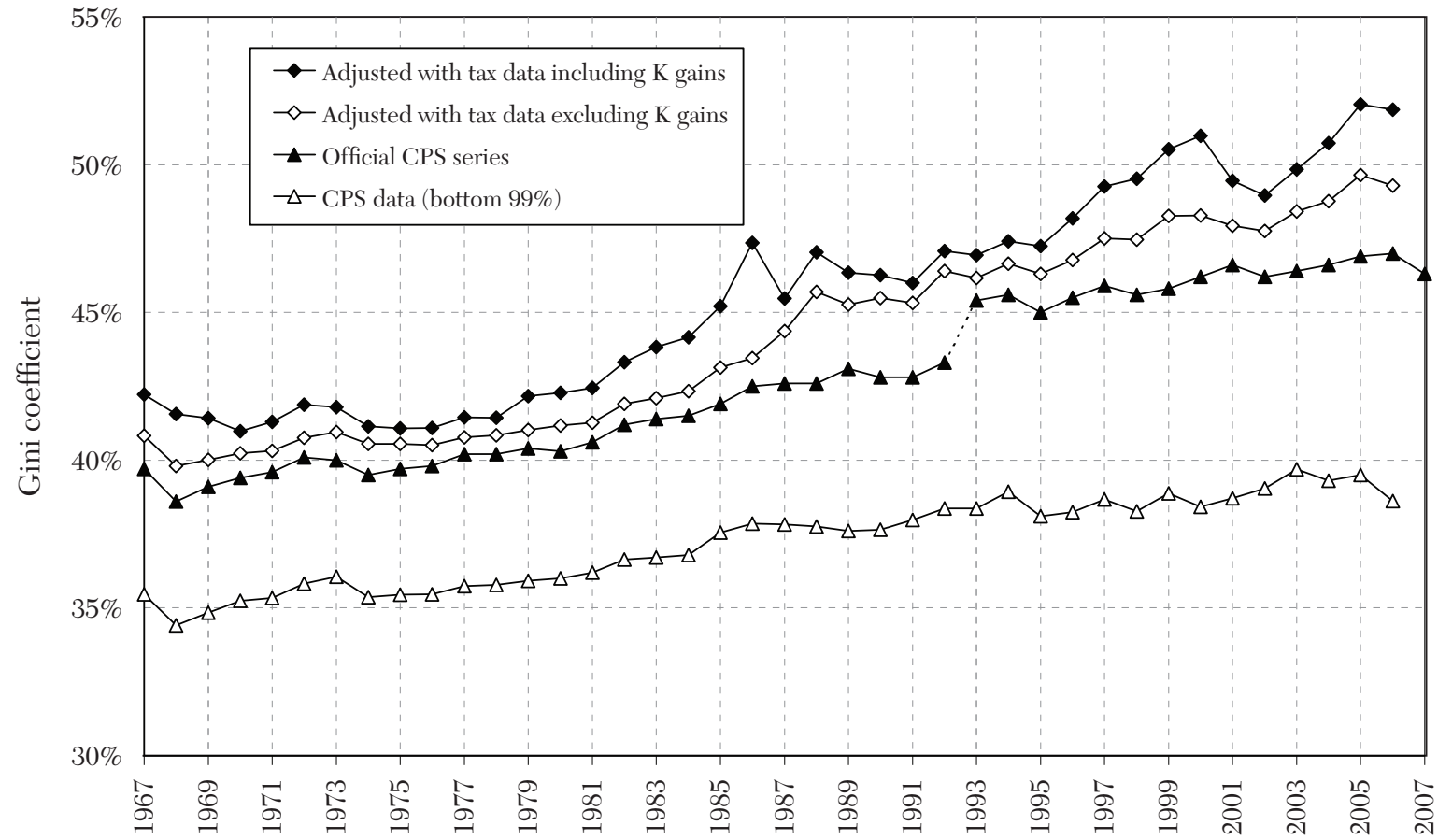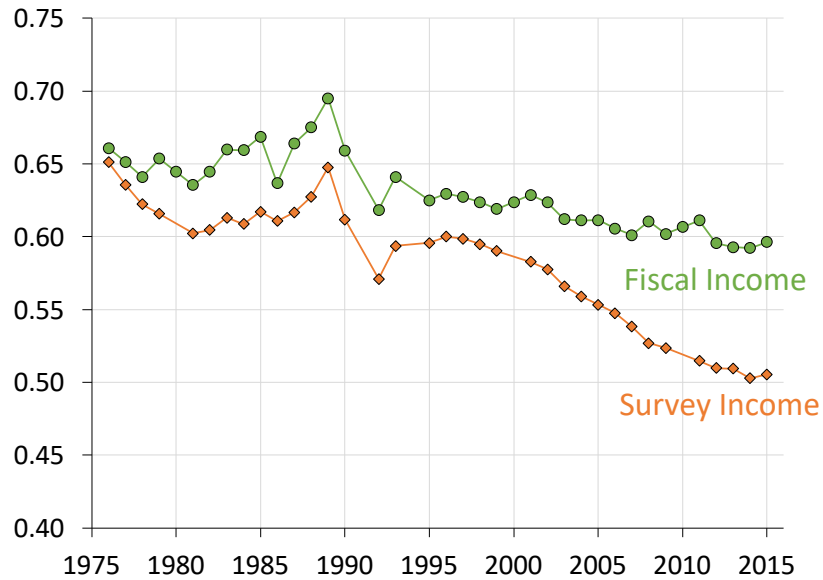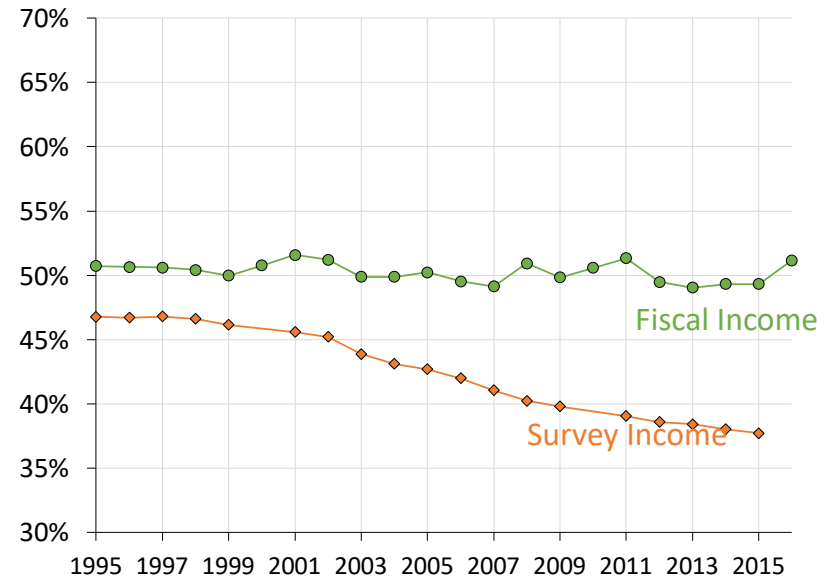# United States - Gini Coefficient

Figure 6. CPS Gini Coefficients: Correcting Top 1 Percent with Tax Data

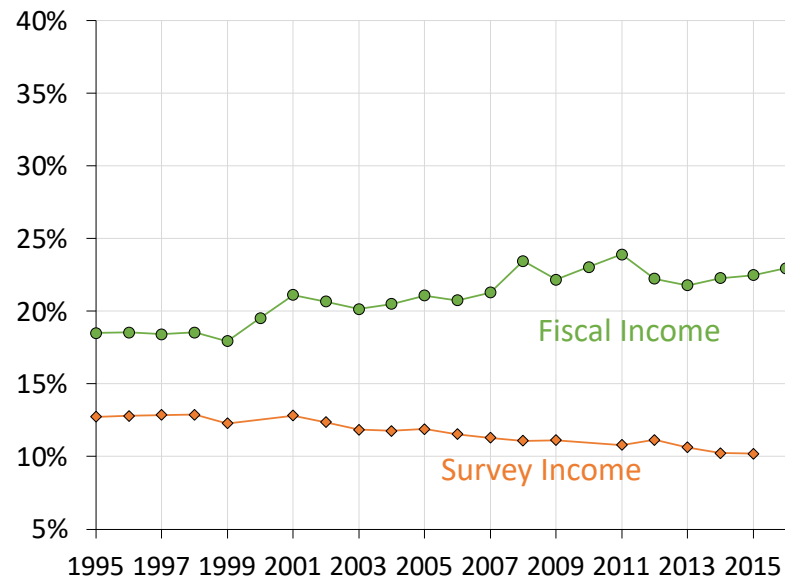Atkinson, Piketty, Saez (2011)

Brazil. Income inequality indicators (gross income)

Gini Coefficient

Top 10% share

Top 1% share

Source: Morgan 2017

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   …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, both tabulated data and microdata)

- There has been as well more debate and progress on the statistical methods of "adjustment" (e.g. Blanchet, Flores, Morgan, 2022), even if this has not been settled.

| Country	Survey microdata			Administrative data			
	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, Insituto 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.

Source: Alvaredo, De Rosa, Flores Beale, Morgan (2022)

- 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 by the statistics offices of 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?). I will just focus on "results" today.

- But let's remember that
    - There is nothing new in this: the discrepancies have long been recognized in different parts of the world. None more so than in Latin America. E.g. CONADE-CEPAL (1965); Altimir (1987); etc.
    - The very first studies in the region since the 1940s systematically attempted to present the distribution of income in the context of the NI, or input-output matrices,…

- The current practice (the machine) follows more or less the following pattern

  1. Start with the survey

  2. "Adjust" somehow the survey at the top using the information from the income tax and/or the social security registers

  3. Upscale to the National Income from the National Accounts; making the necessary imputations

  4. Impute undistributed profits (taken as the net balance of primary incomes of corporate sector in NA)

From households' surveys to national income (I)
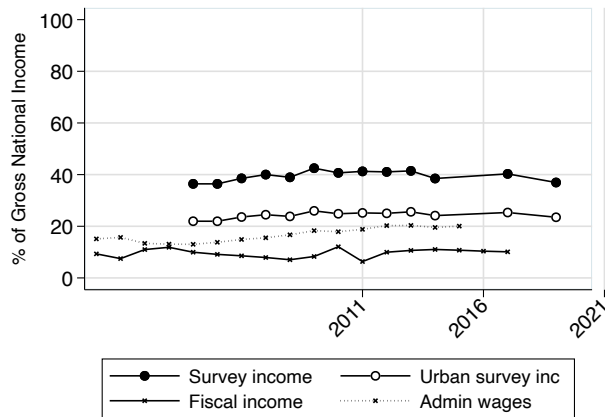
(a) Argentina
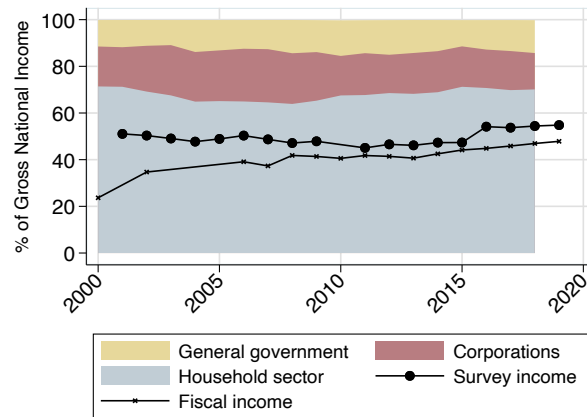
(b) Brazil
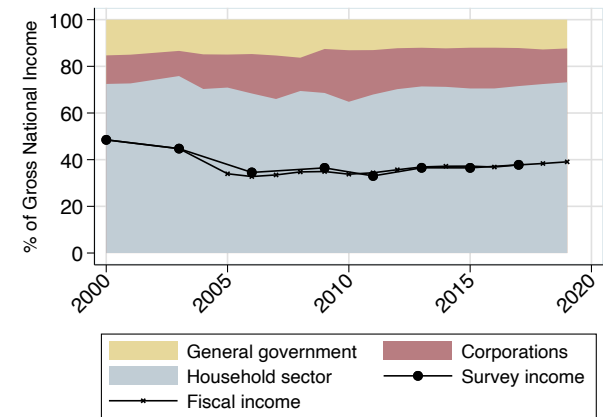
(c) Chile
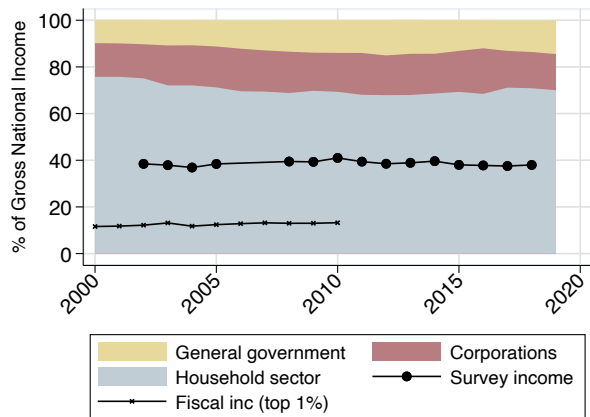
(d) Colombia
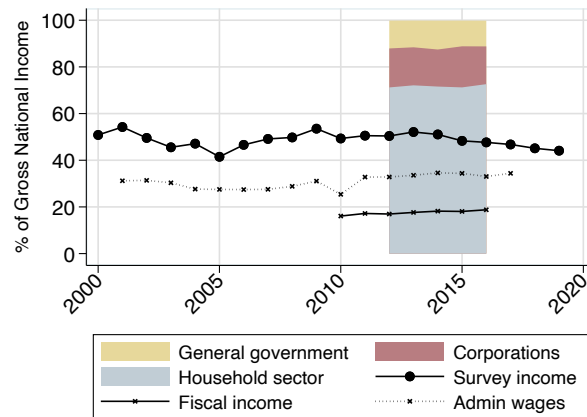
(e) Costa Rica
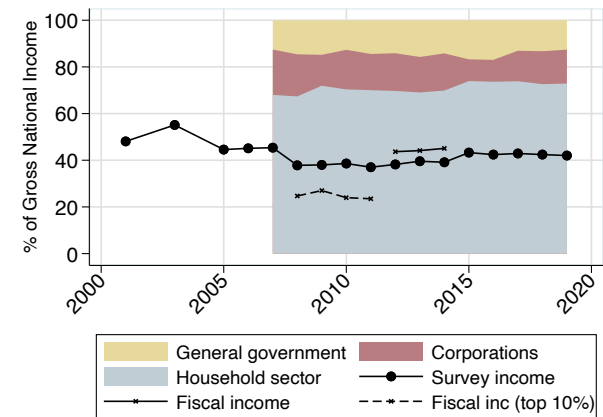
(f) Ecuador

From households' surveys to national income (II)
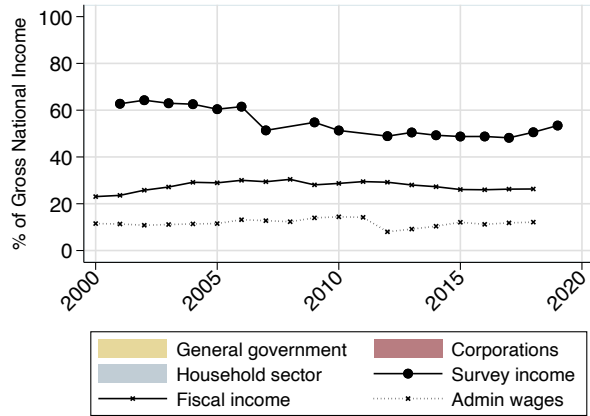
(g) El Salvador
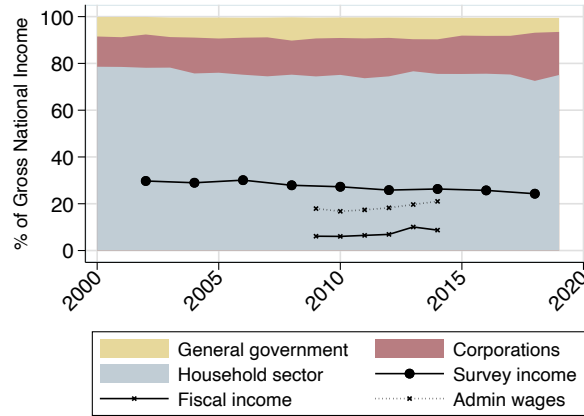
(h) Mexico
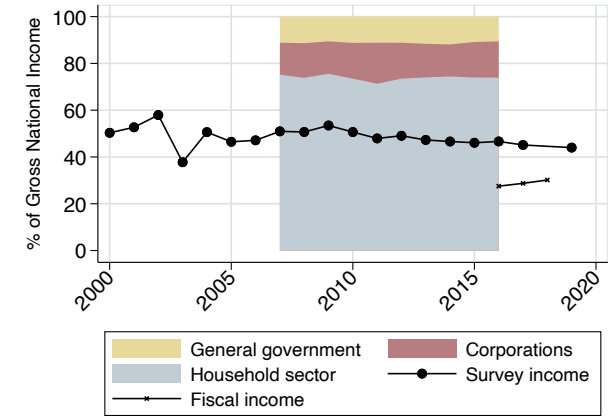
(i) Peru
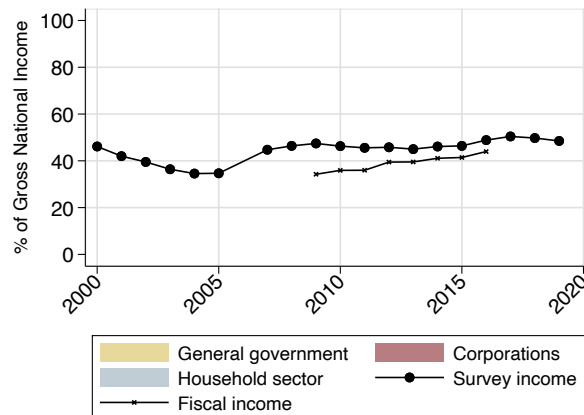
(j) Uruguay

Source: Alvaredo, De Rosa, Flores Beale, Morgan (2022)

Discrepancies between surveys and NA by income components
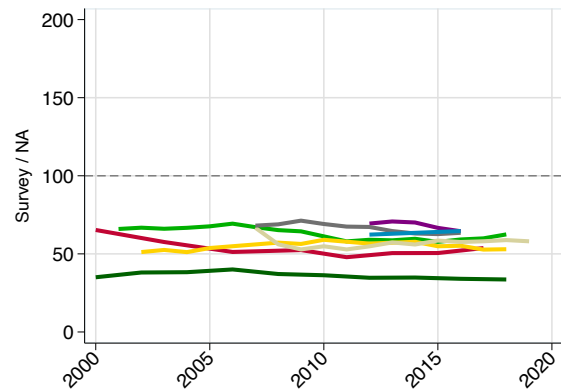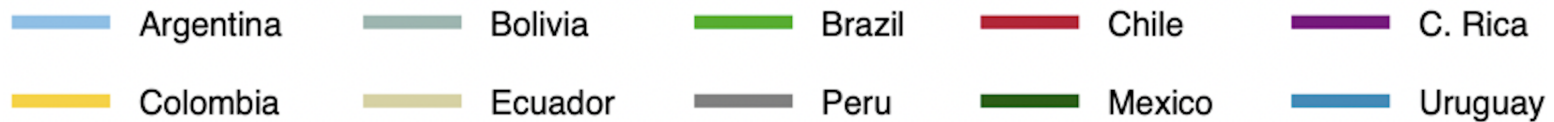

(a) Total Income
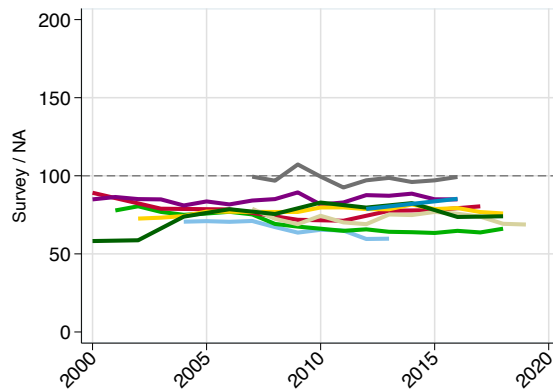
(b) Wages
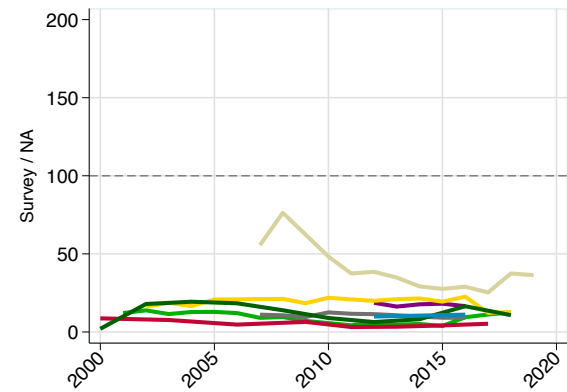
(c) Property income
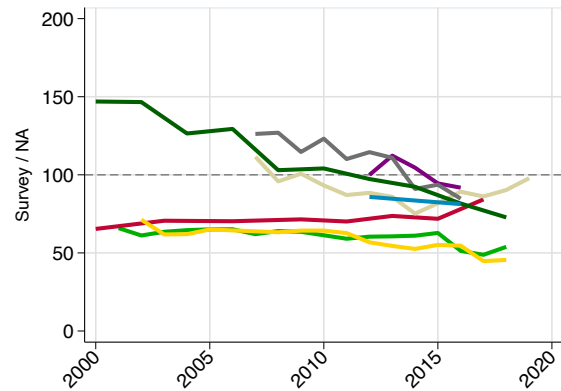
(d) Social Benefits
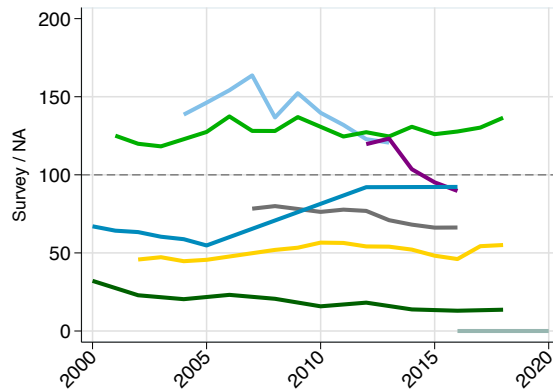
(e) Self-emp. income

(f) Imputed rents

Legend: Argentina, Bolivia, Brazil, Chile, C. Rica, Colombia, Ecuador, Peru, Mexico, Uruguay
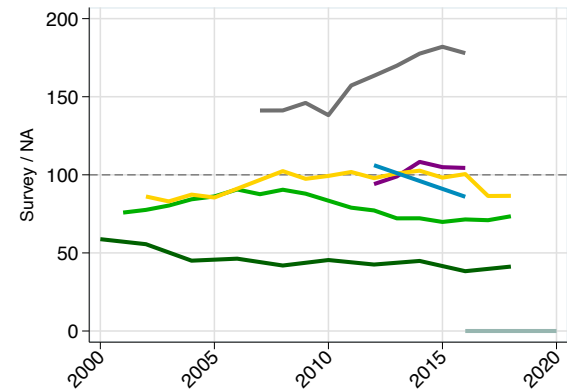
Source: Alvaredo, De Rosa, Flore

Undistributed profits (Net balance of primary incomes of corporate sector in NA) Ratio to aggregate income
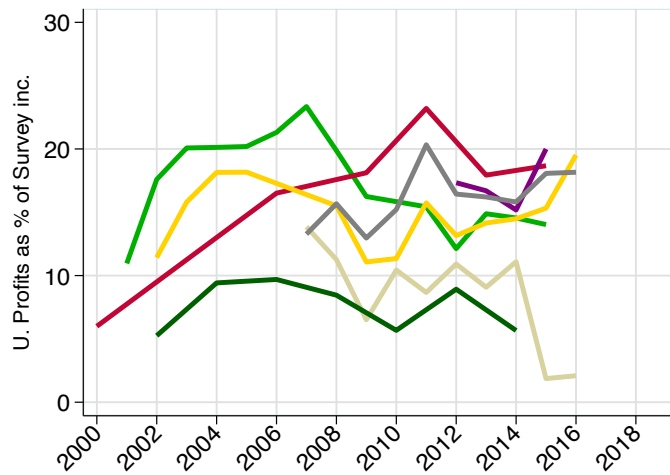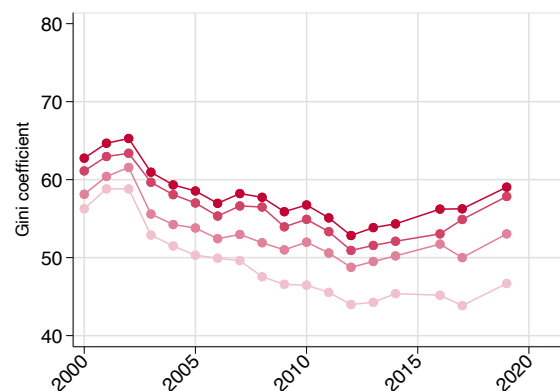

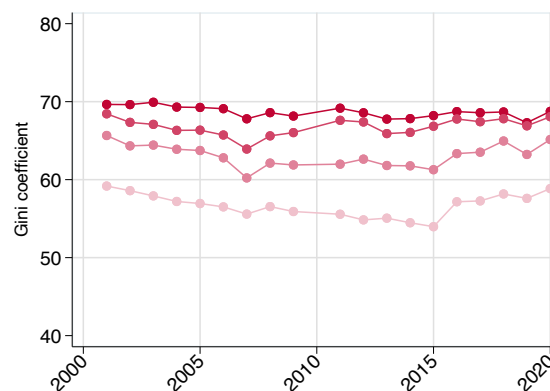**(a)** % of Survey Income

(b) % of National Income

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

Source: Alvaredo, De Rosa, Flores Beale, Morgan (2022)

(a) Argentina **(b)** Brazil **(c)** Chile

(e) Costa Rica **(f)** Ecuador

Pretax National Inc. Scaled Household Inc.
Corrected Survey Raw Survey

14
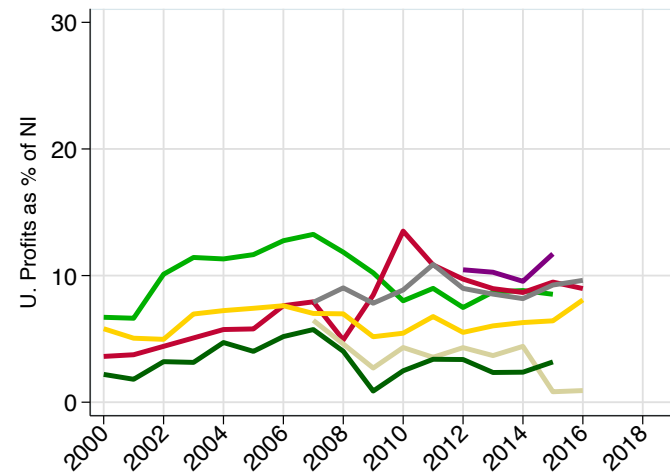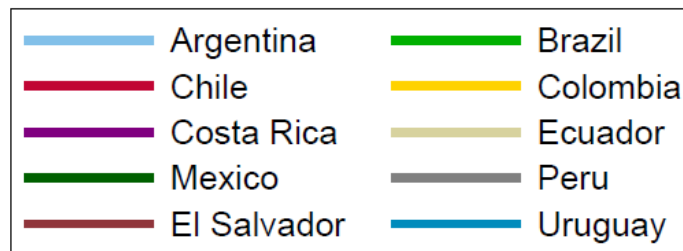
Gini Coefficients in Latin America (gross income)
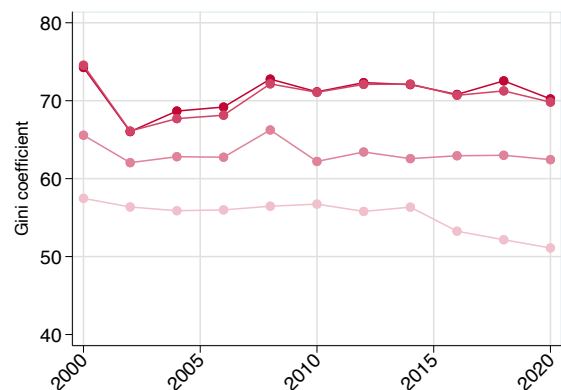
(g) Mexico
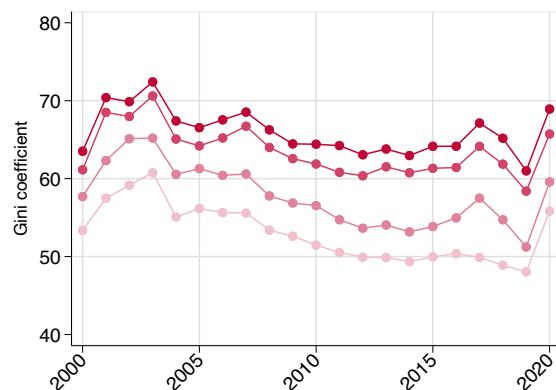
(h) Peru

(i) El Salvador

(j) Uruguay
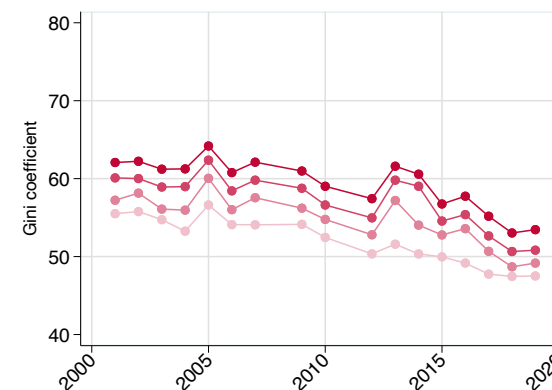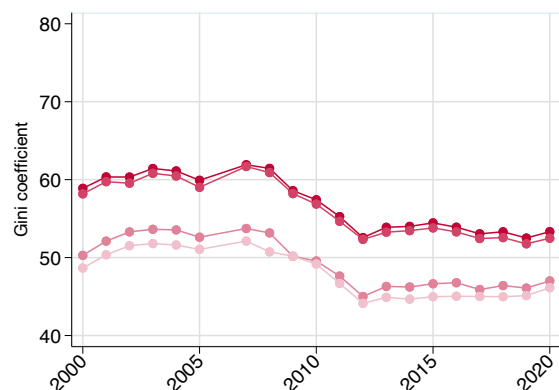
Legend:
- Pretax National Inc.
- Scaled Household Inc.
- Corrected Survey
- Raw Survey

Source: De Rosa, Flores Beale, Morgan (2022)

A few final remarks:

-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 the NA, uncritically.

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

-"Administrative data are highly preferable to survey data […] The development and expansion of direct, secure access to administrative micro-data should be a top priority for the NSF. Administrative data offer much larger sample sizes and have far fewer problems with attrition, non-response, and measurement error than traditional survey data sources."

David Card, Raj Chetty, Martin Feldstein, and Emmanuel Saez. 2010. "Expanding Access to Administrative Data for Research in the United States", White Paper for NSF 10-069 call for papers on "Future Research in the Social, Behavioral, and Economic Sciences," September.