

Assessing the role of tax-benefit systems in reducing the gender gap in incomes in Latin America

H. Xavier Jara, *International Inequalities Institute, London School of Economics*

Maria Cecilia Deza, *Inter-American Development Bank*

Mariana Dondo, *Universidad Nacional de Río Negro*

Javier Torres, *Universidad del Pacífico*

David Rodriguez, *Universidad Externado de Colombia*

<https://www.lse.ac.uk/international-inequalities>

@LSEInequalities



Motivation

- There are large gender disparities in Latin America
 - Gender gap in participation rates was 21.6 percentage points in 2019 (Güezmes 2021).
 - Informal employment remains more prevalent among female workers in the region (ILO 2022).
 - Women's pay in the region is on average 26% lower than the salary of men (Vaca 2019).
- There is limited evidence about the effect of tax-benefit instruments in reducing gender inequalities in the region
 - Yet, in a number of Latin American countries, social assistance benefits related to children are allocated by law to mothers.
 - Personal income tax might also reduce gender disparities at the top, as men are more likely to have higher earnings

Aim

- Assess the extent to which taxes and benefits reduce gender income disparities in seven Latin American countries (Argentina, Bolivia, Colombia, Ecuador, Mexico, Peru, and Uruguay)
 - Prior to the COVID-19 pandemic
 - During the pandemic (through the effect of emergency policies)

Preliminary Results!

Related literature (I)

- Our study relates to three strands of the literature
 - The abundant literature on the gender wage gap (Mincer and Polachek 1974, Bergmann 1989, Becker 1971, Olivetti & Petrongolo 2008, Kleven et al. 2018, ...)
 - The burgeoning literature on intra-household resource allocation, which acknowledges that the assumption of full income pooling might not hold (Chiappori 1988, Browning et al. 1994, Bargain et al. 2021, ...)
 - The large literature on the redistributive role of taxes and benefits (... a lot of work by the nice people on this room)

Related literature (II)

- Closer to our work, are studies bringing these three strands together
 - Figari et al. (2011) study the role of tax-benefit systems in reducing inequalities within couples
 - Gallego-Granados and Geyer (2015) derive the gender wage gap in terms of disposable income combining quantile decomposition, tax-benefit simulations and labour supply estimation.
 - Avram and Popova (2021) quantify the role of taxes and benefits in closing the gender gap in earnings.
 - Doorley and Keane (2020) decompose the difference between the gender gap in market income and the gender gap in disposable income into (i) the relative contribution of taxes and benefits and (ii) the relative cushioning of the gender wage gap and gender work gap.

Data (I)

- We make use of a novel set of tax-benefit microsimulation models for Latin American countries
 - Implemented in the EUROMOD platform
 - Based on nationally representative household surveys collected by national statistical institutes before and during the pandemic
- In all countries, tax-benefit models simulate
 - Social insurance contributions (employees and self-employed)
 - Personal income tax
 - The main social assistance cash transfers

Data (II)

Table 1. Data sources and microsimulation models

Country	Microsimulation model	Data sources used as input in the models	Years of data collection
Argentina	LATINMOD-Argentina	Encuesta Permanente de Hogares (EPH)	2019-2020
Bolivia	BOLMOD	Encuesta de Hogares (EH)	2019-2020
Colombia	COLMOD	Gran Encuesta Integrada de Hogares (GEIH)	2019-2020
Ecuador	ECUAMOD	Encuesta Nacional de Empleo, Desempleo y Subempleo de Hogares Urbanos y Rurales (ENEMDU)	2019-2020
Mexico	MEXMOD	Encuesta Nacional de Ingresos y Gastos de los Hogares (ENIGH)	2018-2020
Peru	PERUMOD	Encuesta Nacional de Hogares (ENAHO)	2019-2020
Uruguay	LATINMOD-Uruguay	Encuesta Continua de Hogares (ECH)	2019-2020

Data (III)

- Countries under study represent a wide range of cases
 - Female labour force participation: ranges between 46% in Mexico to 71% in Peru (ILO 2022)
 - Gender wage gaps: women earn on average between 29% (Mexico) and 14% (Colombia) less than men per month (SEDLAC 2022)
 - Redistributive role of tax-benefit systems: system reduces income inequality by 2.4 points in Bolivia and up to 8 points in Argentina and Uruguay (Arancibia et al. 2019)

Methodology

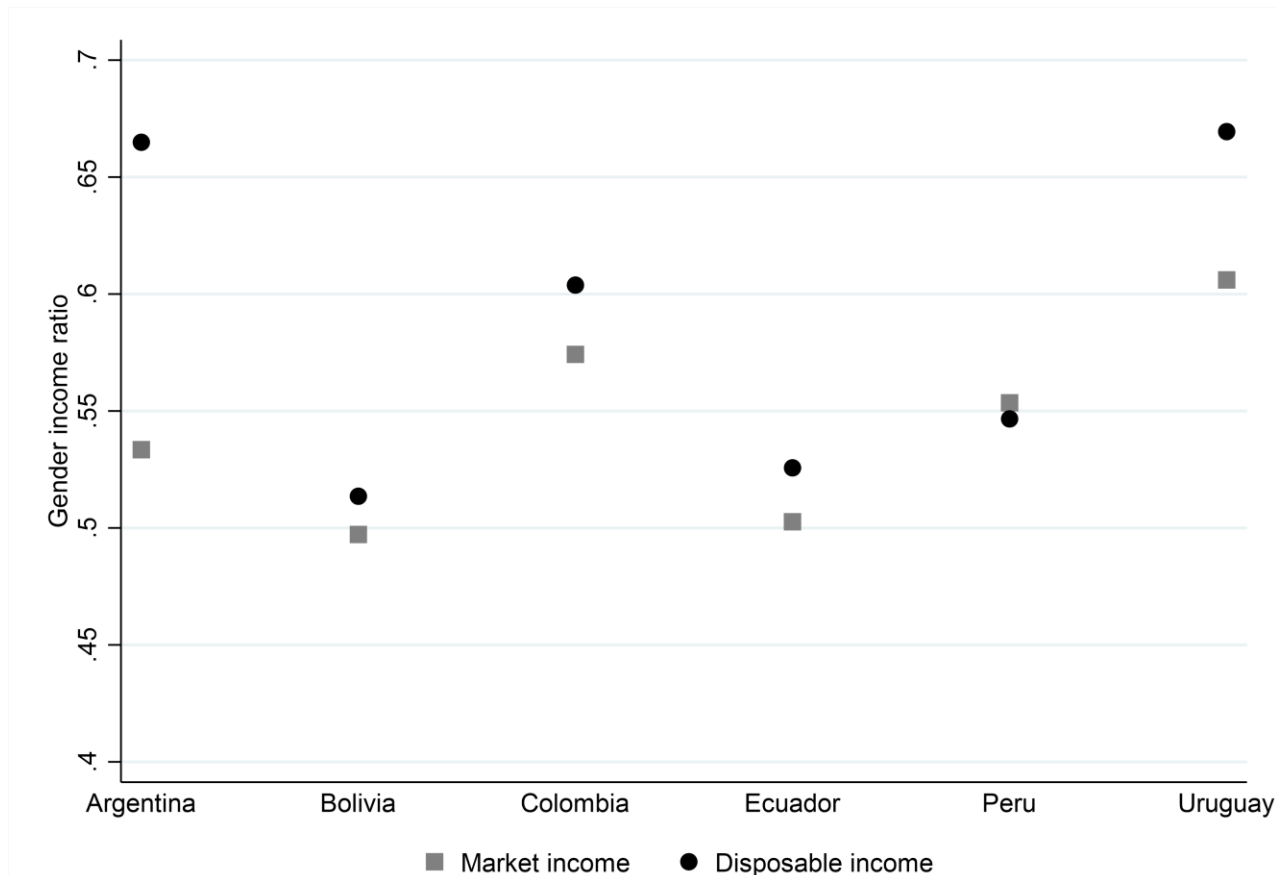
- We construct a measure of individual disposable income under the assumption of minimum income pooling (Figari et al. 2011, Avram and Popova 2021, Doorley and Keane 2020):
 - Market income is allocated to the person who receives it: earnings, pensions, capital income, etc.
 - Social insurance contributions are allocated at the individual level according to earnings.
 - Personal income tax is assessed at the individual level in the countries under analysis and therefore attributed to each earner.
 - Benefits paid to individuals remain with them, e.g. unemployment benefits, maternity benefits, old-age pension assistance
 - Social assistance benefits assessed at the family level but paid by law to mothers are attributed to them.
 - Social assistance benefits assessed at the family level or targeted to children are split equally between adults in the family unit.

Results

- We focus on comparing the gender gap in market income to the gender gap in disposable income
 - Using the gender income ratio (women's income relative to men's income)
- We look at differences in poverty rates between men and women under
 - Minimum income pooling (i.e., individual disposable income)
 - Income pooling at the level of the couple
 - Income pooling at the household level

Gender gap in income

Figure 1. Market income and disposable income gender ratios

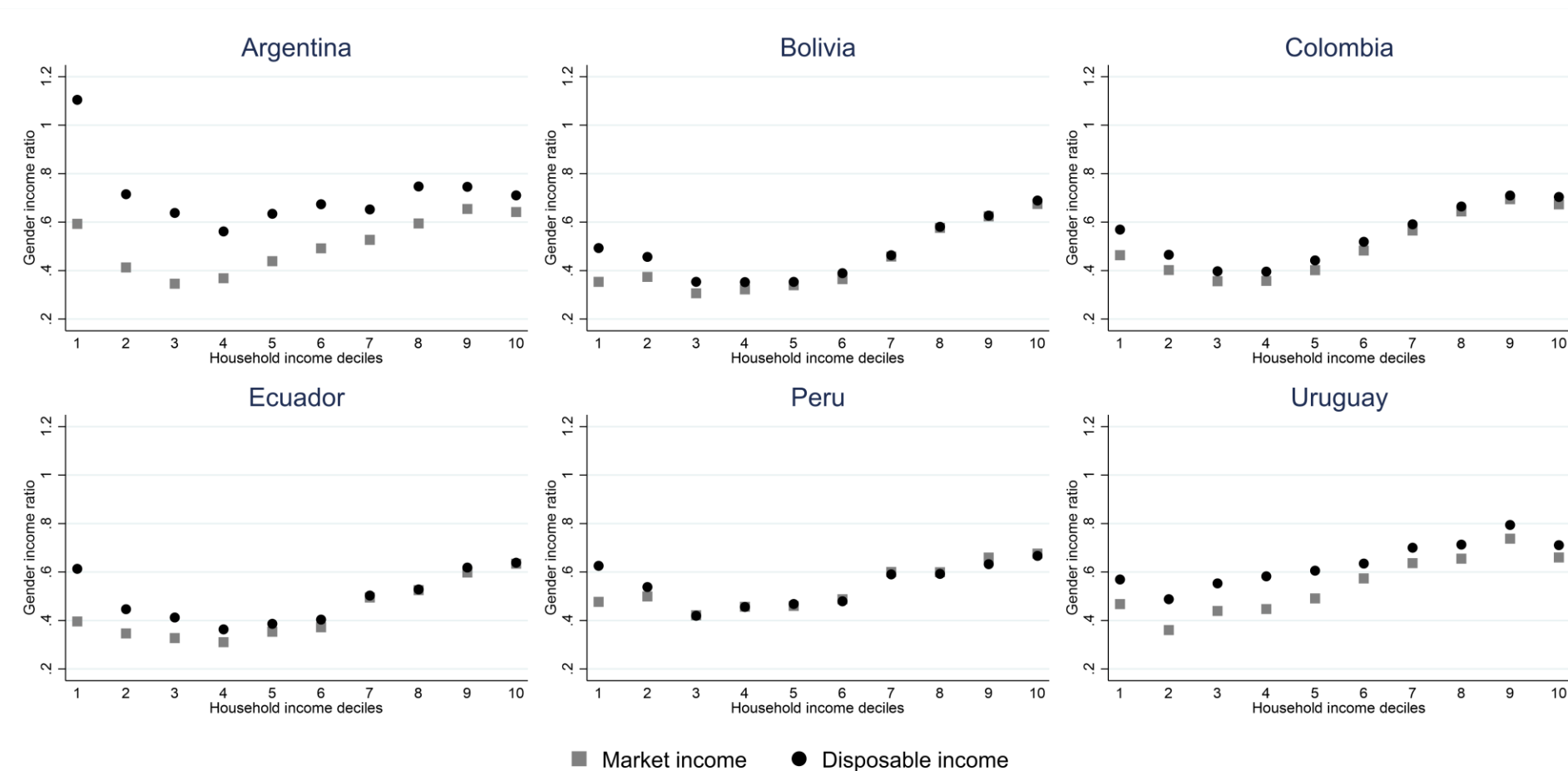


Source: Authors' elaboration based on microsimulation models

- Gender income ratio from market income ranges between 0.497 in Bolivia to 0.606 in Uruguay.
- In all countries, except Peru, tax-benefit policies reduce gender disparities (i.e., gender income ratio of disposable income is higher)
- The largest effect is observed in Argentina (0.131) the lowest in Bolivia (0.016).

Gender gap in income by income deciles

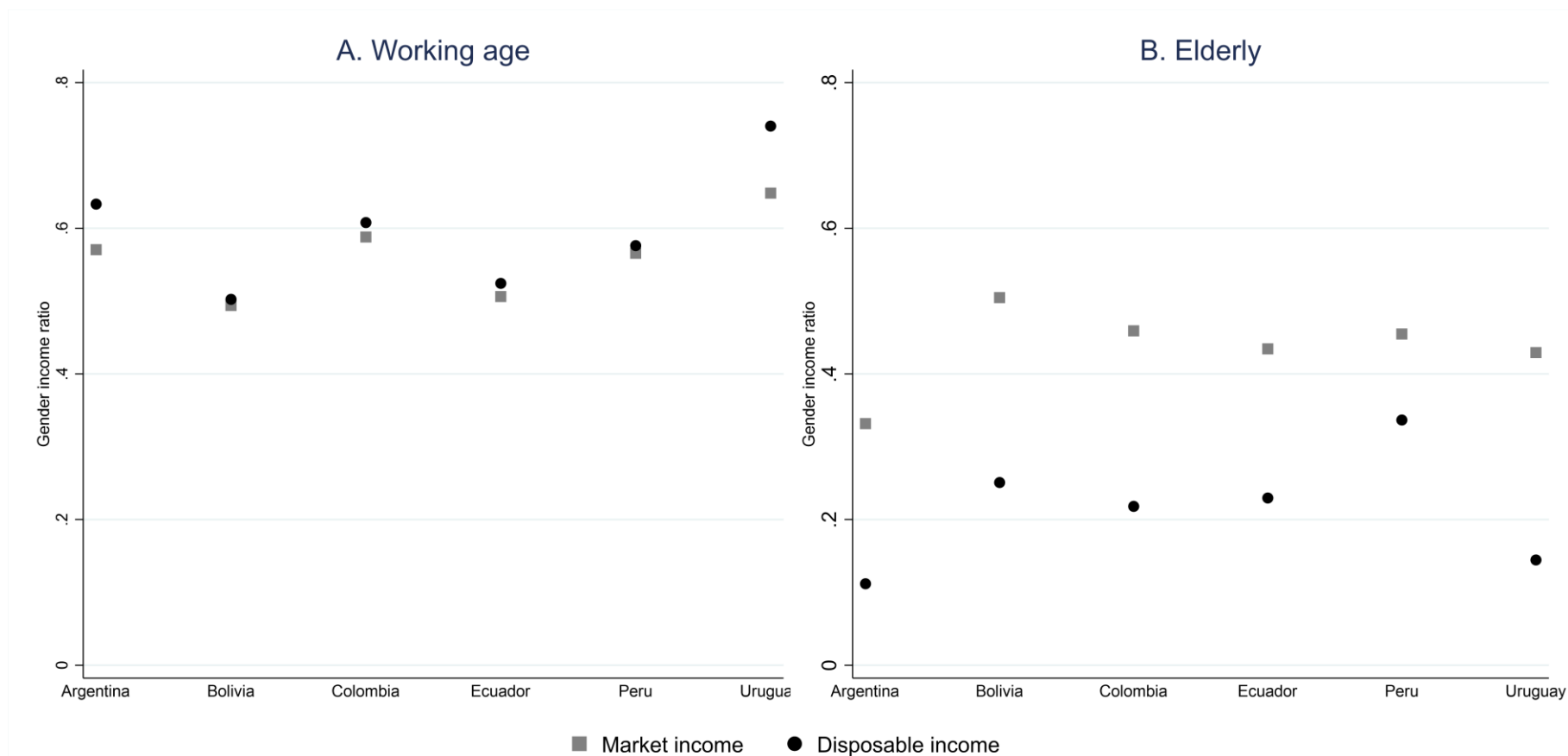
Figure 2. Market income and disposable income gender ratios by household disposable income deciles



Source: Authors' elaboration based on microsimulation models

Gender gap in income by age group

Figure 3. Market income and disposable income gender ratios by age group

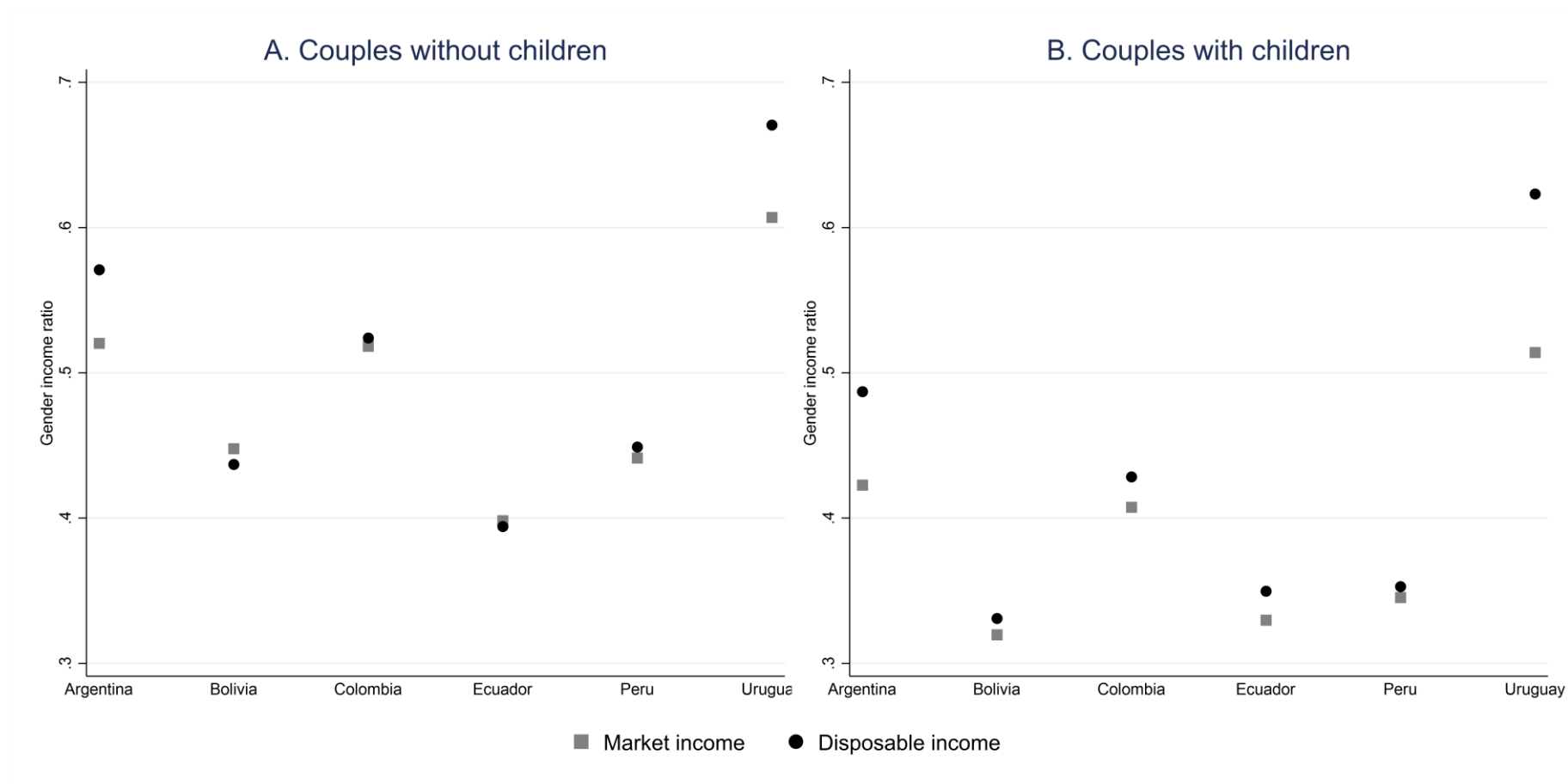


Note: Working age defined as aged between 18 and 65. Elderly defined as aged over 65.

Source: Authors' elaboration based on microsimulation models.

Gender gap in income by household type

Figure 4. Market income and disposable income gender ratios by household type

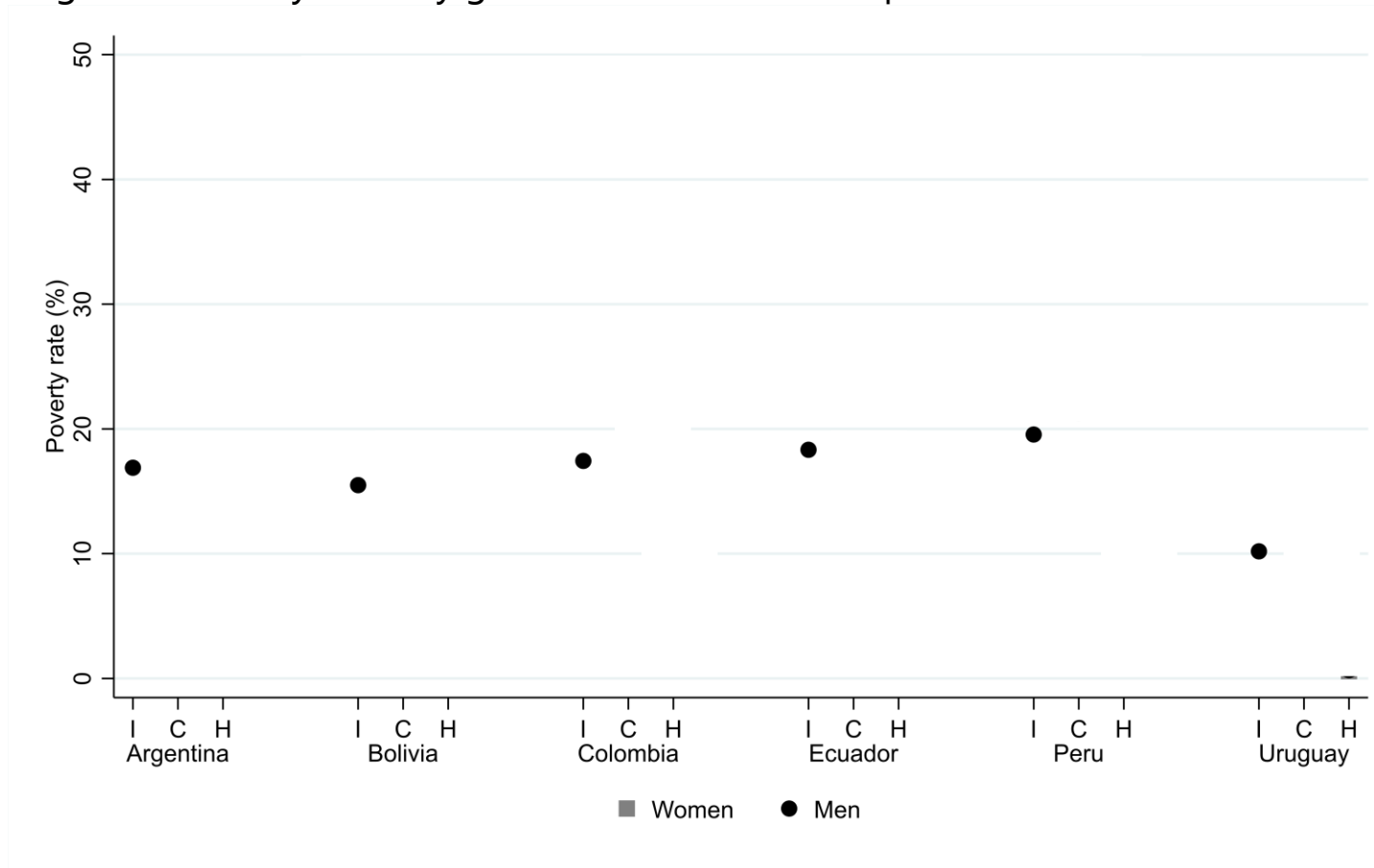


Note: Results among working age couples (at least one partner of working age)

Source: Authors' elaboration based on microsimulation models

Poverty rates

Figure 5. Poverty rates by gender at individual, couple and household level

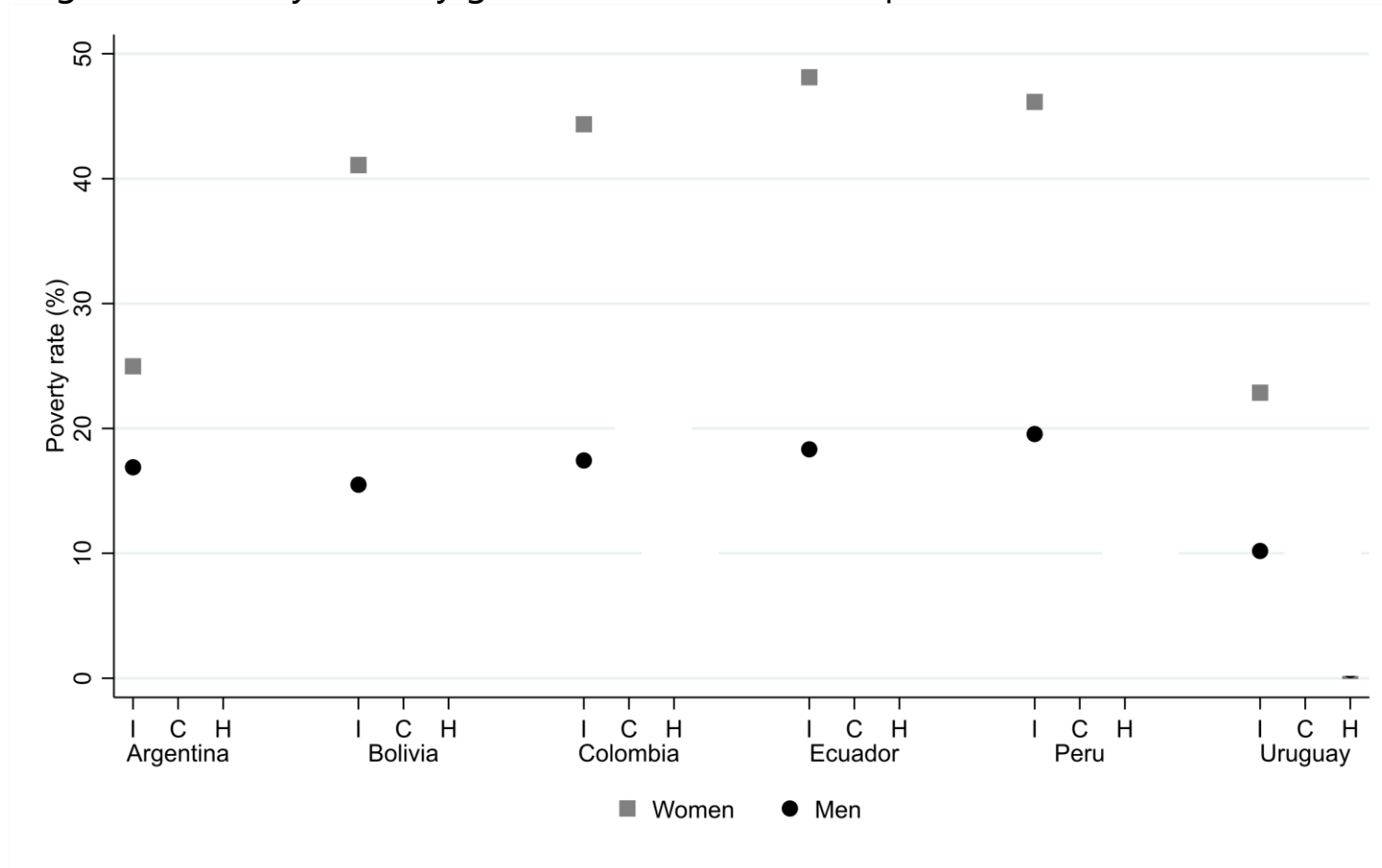


Note: PPP US\$ 5 dollar a day used as poverty line.

Source: Authors' elaboration based on microsimulation models

Poverty rates

Figure 5. Poverty rates by gender at individual, couple and household level



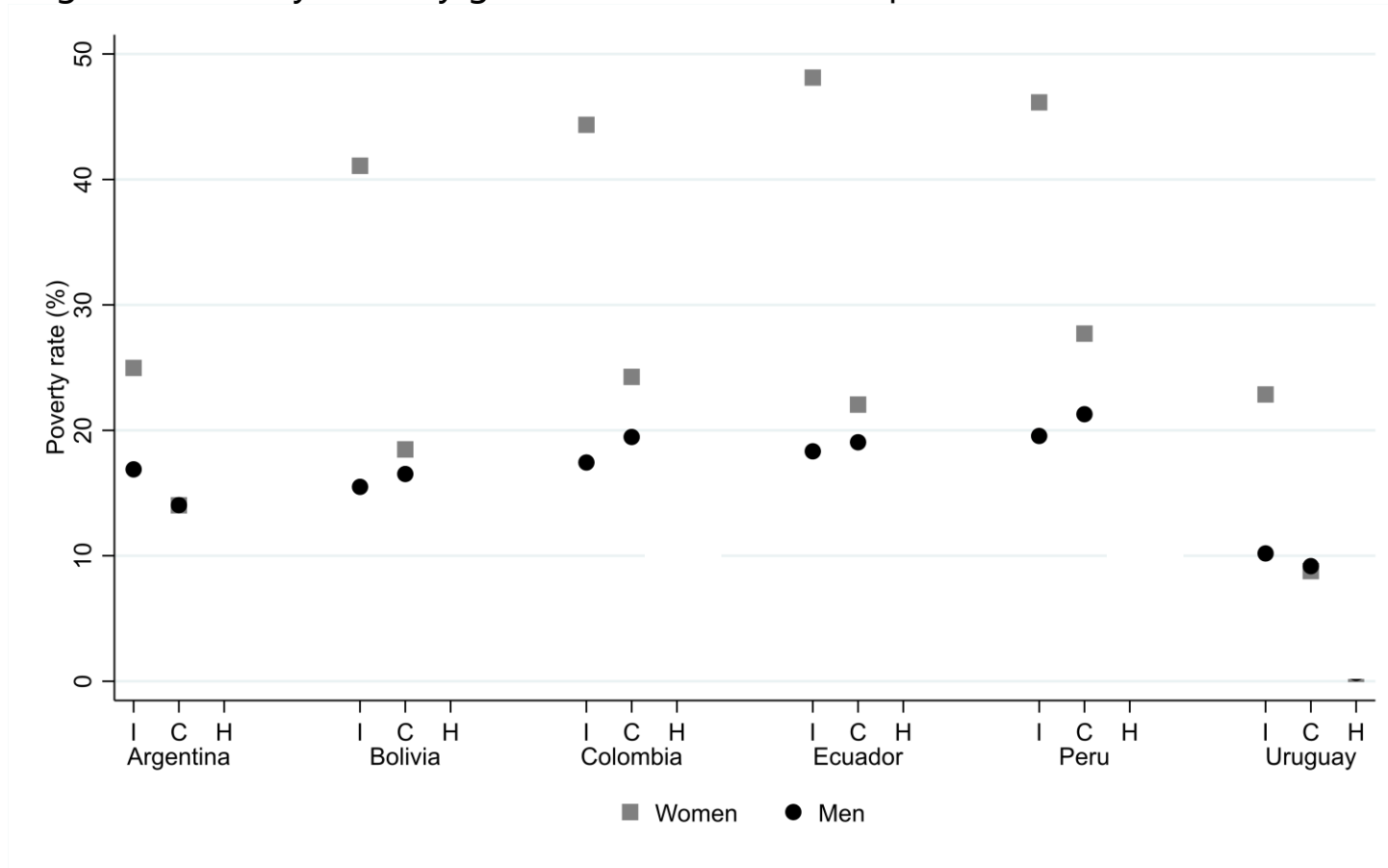
- Large differences in poverty rates across gender with individual disposable income (8.1pp in Argentina to 29.8pp in Ecuador).

Note: PPP US\$ 5 dollar a day used as poverty line.

Source: Authors' elaboration based on microsimulation models

Poverty rates

Figure 5. Poverty rates by gender at individual, couple and household level



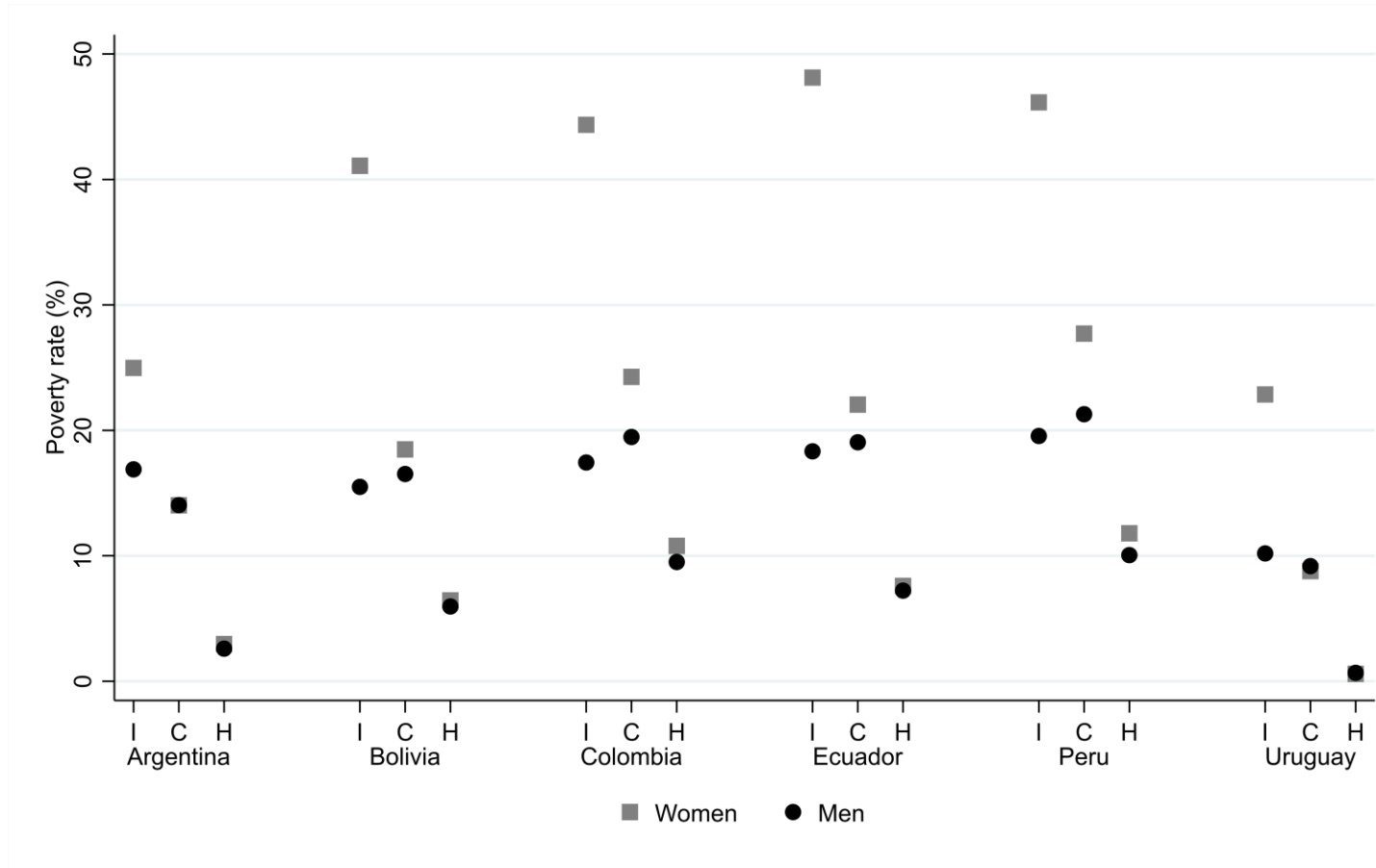
- Large differences in poverty rates across gender with individual disposable income (8.1pp in Argentina to 29.8pp in Ecuador).
- Assuming income pooling at the couple level reduces largely gender differences in poverty (largest in Colombia with 4.8pp).

Note: PPP US\$ 5 dollar a day used as poverty line.

Source: Authors' elaboration based on microsimulation models

Poverty rates

Figure 5. Poverty rates by gender at individual, couple and household level



- Large differences in poverty rates across gender with individual disposable income (8.1pp in Argentina to 29.8pp in Ecuador).
- Assuming income pooling at the couple level reduces largely gender differences in poverty (largest in Colombia with 4.8pp).
- Assuming income pooling at the household level reduces the level of poverty and gender differences.

Note: PPP US\$ 5 dollar a day used as poverty line.

Source: Authors' elaboration based on microsimulation models

Conclusions

- Tax-benefit systems reduce gender income disparities in all countries, except Peru
 - However, small effect, except in Argentina and Uruguay
- The effect is driven by the role of social assistance benefits targeted to mothers
- Effect of taxes is very small
 - ... due to large exempted thresholds and generous deductions
- Old-age contributory pensions increase gender disparities in all countries
- Large differences in poverty rates across gender if disposable income measured at the individual level.

Next steps

- Assess changes in individual disposable income during the COVID-19 pandemic
 - Evidence on larger impact on women's employment and earnings
 - Assess the cushioning effect of emergency policies across gender

Thank you!

Simulated social assistance programmes

Country	Social Programas	Oriented Towards Women
Argentina	Asignación Universal por hijo: cash transfer for families with children under the age of 18 or with a disability, who belongs to an unemployed or informal worker family group.	Yes. It is prioritized that the mother receive it.
	Tarjeta Alimentar: cash transfer for the purchase of food, for families that receive the AUH when the children are under 6 years old and women who receive benefits for being mothers of 7 or more children.	Yes. It is prioritized that the mother receive it.
Bolivia	Bono Juancito Pinto: cash transfer for children enrolled in public education	No, paid directly to children.
	Bono Juana Azurduy: cash transfer for pregnant women and mothers of children under 2.	Yes.
	Renta Dignidad: cash transfer for people over 60.	No, transfer is to a specific person.
Colombia	Familias en acción: cash transfer to families with children in economically vulnerable conditions	Yes. It is prioritized that the mother receive it.
	Jóvenes en acción: social assistance for young people in tertiary education	No, transfer is to a specific person.
	Colombia Mayor: Pension assistance for the elderly	No, transfer is to a specific person.
Ecuador	Bono de Desarrollo Humano: cash transfer paid to three economically vulnerable populations: (i) families with children, (ii) the elderly without contributory pensions; (iii) persons with disability who do not receive contributory benefits	Yes. The component for families is paid to mothers.
Peru	Juntos : cash transfer to economically vulnerable households with children under 19 years old.	Yes, oriented the transfer towards mothers.
	Pension65: cash transfer to the elderly (65+) who are economically vulnerable population and have nocontributory old-age pension	No, transfer is to a specific person.
Uruguay	Tarjeta Uruguay Social: cash transfer for households and individuals in a situation of extreme socio-economic vulnerability.	No. The regulations do not say so explicitly, but there are components for pregnant women or victims of violence
	Asignaciones Familiares del Plan Equidad: Conditional cash transfer program aimed at children and adolescents from households in a vulnerable socioeconomic situation.	Yes. It is prioritized that the mother perceives it