Distributionally extended input–output analysis (DE-IOA)

A guide to data compilation

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1. Motivation: the distributional turn
2. A guide to data compilation
3. A price shock illustration
4. Limitations & conclusions

Motivation: the distributional turn

The distributional turn in macro statistics remains limited in IOA

- Official statistics increasingly produce household-distributional information on income, consumption, saving and wealth—DNA, the ECB Distributional Wealth Accounts, Eurostat's experimental distributional accounts

- Now institutionalised by the G-20 Data Gaps Initiative (DGI), Recommendation III.8 on distributional information for the household sector (Coli et al., 2022)

- Yet input–output databases—the workhorse for sectoral, price and network propagation analysis—still treat households as a single aggregate column (consumption) and row (labour income) vector

- Missing piece: an analysis-ready household sector reconciled and disaggregated distributionally inside the IO accounting structure

Previous extensions of IOA

- Input-output models with endogenous household consumption - classical Miyazawa approach (Miyazawa, 1976; Kimura and Kondo, 1999; Steenge, Incera, and Serrano, 2020)
- Social Accounting Matrix (SAM) disaggregation by household groups (Katris, Figus, and Turner, 2017)
- Extended input-output models with heterogeneous household demand (Kim, Kratena, and Hewings, 2015)
- Distributionally-disaggregated CGE models (Chalmers and Weiler, 2011; Peichl, 2015)

How to compile distributionally extended IOTs

Objective

A practical compilation guide for distributionally extended input–output tables (DE-IOTs): standard IOTs whose household consumption and labour-income vectors are split into population groups and reconciled with national accounts.

Relevance

- Built entirely from existing ESS data (ES-SILC, ES-HBS, ES-SES, FIGARO) — an actionable & reproducible recipe for experimental distributional IO tables
- Directly reconciles the G-20 DGI III.8 call with the IO framework in lieu of full SAM development
- Opens the household sector to the full IO toolkit: price-of-production models, Miyazawa multipliers, environmental and GVC extensions

The starting point is the aggregate household sector

$g = 1$

$n = 5$ industries

		Intermediate demand (P2)					HFCE	Other FD	
		A–B	C	D–F	G–I	J–U	P3S14	P3AP5	
Prim.	A–B	z_{11}	z_{12}	$\cdots$		z_{15}	c_1		**Gross output (P1)**
Manuf.	C	z_{21}	z_{22}				c_2		
Util. & C.	D–F	$\vdots$		z_{33}		$\vdots$	c_3		
Distrib.	G–I				z_{44}		c_4		
Serv.	J–U	z_{51}		$\cdots$		z_{55}	c_5		
	D21X31	ts_1	ts_2	ts_3	ts_4	ts_5			
	B2A3G	b_1	b_2	b_3	b_4	b_5			
	D29X39	t_1	t_2	t_3	t_4	t_5			
$g = 1$	**D1**	v_1	v_2	v_3	v_4	v_5			
		Gross output (P1)							

Legend: $\mathbf{c}$: Household final consumption expenditure (P3S14) $\mathbf{v}$: Labour compensation (D1)

Relation to Social Accounting Matrices

DE-IOTs *are* partial SAMs

- Convergent lineage: Stone's accounting matrix & Pyatt–Round multipliers meet Miyazawa's matrix household (Stone, 1985; Pyatt and Round, 1985; Miyazawa, 1976)
- $\mathbf{S} = \left[\begin{smallmatrix} \mathbf{A} & \mathbf{C} \\ \mathbf{V} & \mathbf{0} \end{smallmatrix}\right]$ is a SAM's household-endogenous core (p. 517 Miller and Blair, 2022)
- Its multiplier is the SAM closed-loop term: $\mathbf{K} = \left[\mathbf{I} - \mathbf{V}(\mathbf{I} - \mathbf{A})^{-1}\mathbf{C}\right]^{-1}$

What DE-IOTs add

- Bottom-up: micro to macro linkage — reproducibility & microsimulation
- Social heterogeneity: the income row ($\mathbf{V}$) and the consumption column ($\mathbf{C}$) enable standardized industry to social outcome IOA (Stone, 1985; Stiglitz, Sen', and Fitoussi, 2009)
- Fills the *current* application gap: the FIGARO-NAM keeps households as one sector (Coli et al., 2022; OECD, 2024)

Takeaway: a practical step in IO data deployment—social heterogeneity extension of FIGARO-NAM

Scope: labour-income-consumption closure — not yet a fully articulated SAM

A guide to data compilation

Methodological challenge

- Unit of analysis and scale differences

  Interindustry analysis → macro level
  Estratification analysis → micro level

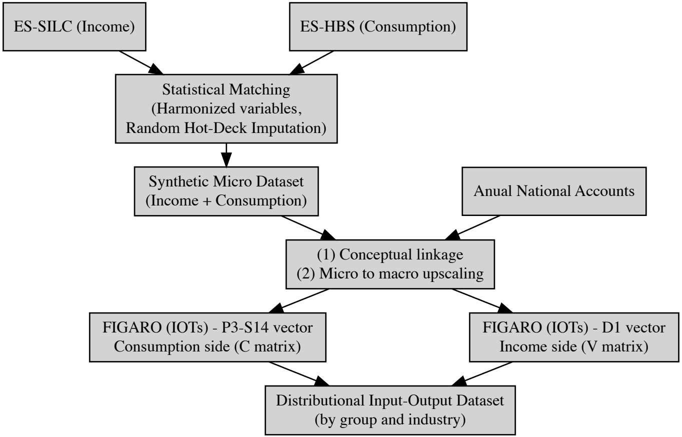
- Population and macro target differences

  National Accounts totals ≠ household surveys totals

- No official or accessible data source

  Distributional National Accounts → no interindustry linkage

Four steps bridge three statistical sources



Bottom-up (surveys) meets top-down (national accounts): ES-SILC (income) | ES-HBS (expenditure) | ES-SES (earnings) | FIGARO IOTs

Step 1 — Statistical matching: a joint income–expenditure micro-dataset

Income and expenditure are never observed in the same sample:

- ES-SILC as recipient (income)
- ES-HBS as donor (expenditure)
- Common variables harmonised; selected by Hellinger distance < 0.15 (Donatiello et al., 2014)
- Random Hot-Deck with replacement, capped donor reuse, fallback sequence (Serafino and Tonkin, 2017)

▸ Diagnostics ▸ Variable balance

	Recipient – Y	**Covariates – X**	**Donor – Z**
Recipient – A	$y_1 \ldots y_n$	$x_1 \ldots x_n$	
Donor – B_1		$x_{1,1} \ldots x_{1,n}$	$z_{1,1} \ldots z_{1,n}$
Donor – B_2		$x_{2,1} \ldots x_{2,n}$	$z_{2,1} \ldots z_{2,n}$
Donor – B_3		$x_{3,1} \ldots x_{3,n}$	$z_{3,1} \ldots z_{3,n}$
Donor – B_m		$x_{m,1} \ldots x_{m,n}$	$z_{m,1} \ldots z_{m,n}$
Matched – C	$y_1 \ldots y_n$	$x_{3,1} \ldots x_{3,n}$	$z_{3,1} \ldots z_{3,n}$

Recipient dataset (A) Donor dataset (B) Matched dataset (C = A ∪ B)

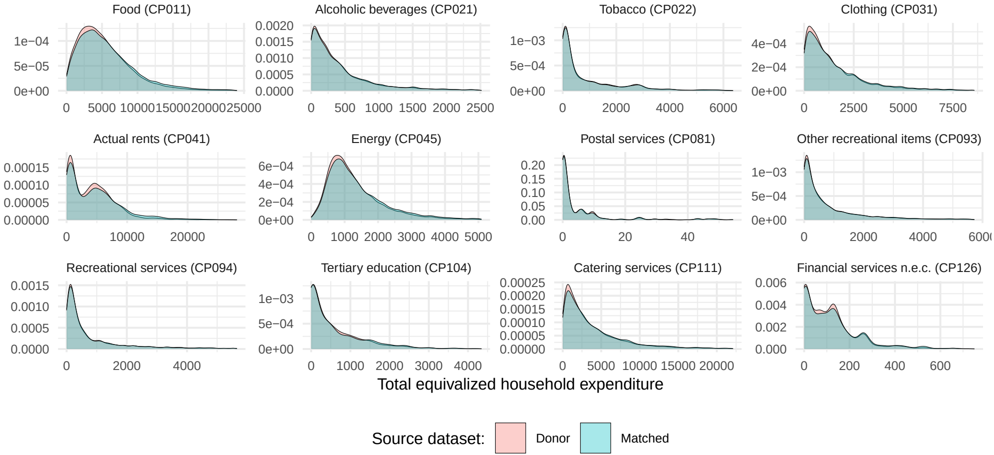
Random hot-deck matching schematic. *Source*: paper, Fig. 2.

year	country	houseid	HY020	HY020_240	decili	tenstatus	urbadense	ventli	marstatus
2023	ES	9228	69822.61	17029.9	5	Owner	Low	9	Married

year	country	houseid	numero	GASTOT	HY020	HY020_240	decili	tenstatus	urbadense	ventli	marstatus
2023	ES	9228	8274	31337.90	69822.61	17029.9	5	Owner	Low	9	Married
2023	ES	9228	8427	18654.06	69822.61	17029.9	5	Owner	Low	9	Married
2023	ES	9228	8465	23913.42	69822.61	17029.9	5	Owner	Low	9	Married
2023	ES	9228	8537	33655.63	69822.61	17029.9	5	Owner	Low	9	Married
2023	ES	9228	8708	30854.67	69822.61	17029.9	5	Owner	Low	9	Married
2023	ES	9228	8844	60062.74	69822.61	17029.9	5	Owner	Low	9	Married
2023	ES	9228	9050	36253.97	69822.61	17029.9	5	Owner	Low	9	Married
2023	ES	9228	9502	31845.62	69822.61	17029.9	5	Owner	Low	9	Married
2023	ES	9228	9524	25343.97	69822.61	17029.9	5	Owner	Low	9	Married
2023	ES	9228	9551	45866.96	69822.61	17029.9	5	Owner	Low	9	Married
2023	ES	9228	10202	39835.25	69822.61	17029.9	5	Owner	Low	9	Married

year	country	houseid	numero	GASTOT	HY020	HY020_240	decili	tenstatus	urbadense	ventli	marstatus
2023	ES	9228	8465	23913.42	69822.61	17029.9	5	Owner	Low	9	Married

Step 1 — Matching preserves the marginal distributions



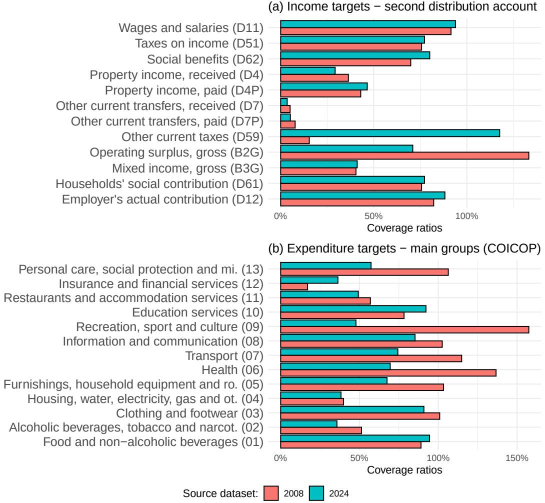
Expenditure shares on selected 3-digit COICOP headings, before vs. after matching, 2023.

Step 2 — Reconciling the micro-dataset with national accounts

Survey totals ≠ national-accounts totals.
Three-step alignment (Coli et al., 2022):

1. Population weights — proportional upscaling
2. Conceptual mapping — survey items to NA aggregates, item by item
   ▸ SILC→SNA map
3. Gap allocation — distribute each residual; *progressive* for income (top-income under-reporting), Engel-modified for expenditure

This is exactly the DNA / DGI III requirement, met from inside the IO build. ▸ Robustness

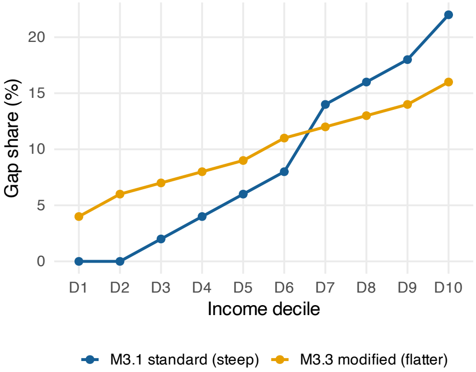


Step 2 — Gap allocation: one menu, item-specific choices

Each item's micro–macro gap is closed by the method fitting its likely bias (Coli et al., 2022):

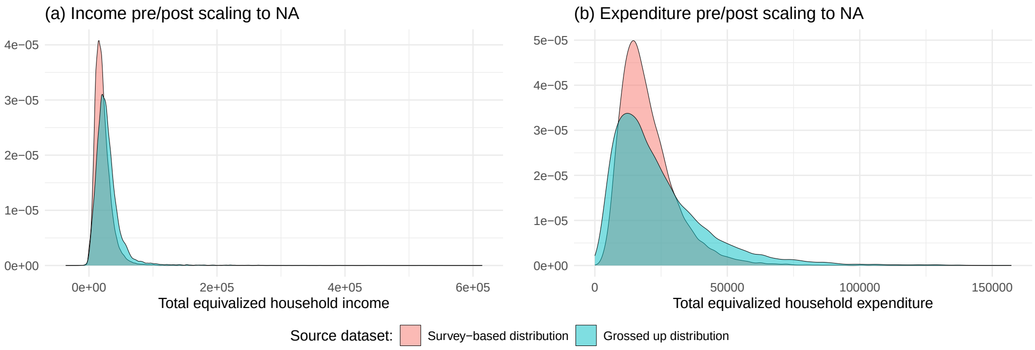
- M1 Proportional — gap $\propto$ coverage, distribution *invariant*; default for most income items & necessities
- M2 Pareto tail — top decile to a power law; here a to-the-top allocation (property income received, D4R)
- M3.1 / M3.2 — ascending / descending decile shares; M3.1 for mixed income (B3G), other taxes (D59)
- M3.3 Modified — flatter ascending shares (other current transfers, D7)
- M4 Combined — income default: M1 for most, the rest by exception

Expenditure uses Engel's law: proportional for necessities, progressive (M3.1) for non-necessities.



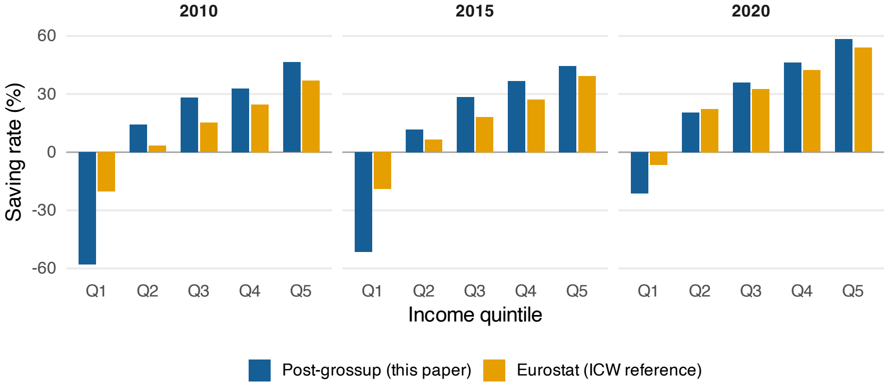
Meso decile gap-share gradients (sum to 100%): steep M3.1 vs flatter M3.3. M1 keeps shares data-invariant; to-the-top loads D10 only.

Step 2 — Grossing-up shifts the distribution, preserving its shape



Equivalised household income, pre vs. post grossing-up to NA totals, 2023. Wider and slightly right-skewed, but unimodal and recognisable.

Step 2 — Validation: saving rates are coherent but weaker for Q1



Saving rates by income quintile: our post-grossup distributional accounts vs. the Eurostat ICW reference (published only every five years). Profiles track closely, except for Q1, where bottom-income saving stays hardest to pin down.

Step 3 — The C matrix: three transforms to IOT compatibility

From grossed-up COICOP expenditure to an industry-by-group matrix. Three classification/valuation obstacles (Cazcarro et al., 2022):

1. **Classification** — COICOP (purpose) $\rightarrow$ CPA (product), via a bridge matrix $\mathbf{B}^0$ RAS-updated to each year:

$$\underset{cpa}{\mathbf{C}^{pp}} = \underset{coicop}{\mathbf{C}^{pp}} \cdot \mathbf{RAS}\big(\mathbf{B}^0, \mathbf{u}, \mathbf{v}\big)$$

2. **Valuation** — purchasers' $\rightarrow$ basic prices (strip net taxes T_i and margins M_i): $p_i^{pp} = p_i^{bp} + T_i + M_i \;\Rightarrow\; \underset{cpa}{\mathbf{C}^{bp}} = \mathbf{F}\big(\underset{cpa}{\mathbf{C}^{pp}}\big)$

3. **Dimension** — product $\rightarrow$ industry, market-shares matrix $\mathbf{D} = \mathbf{V}'\hat{q}^{-1}$ (Model D): $\underset{nace}{\mathbf{C}^{bp}} = \mathbf{D} \cdot \underset{cpa}{\mathbf{C}^{bp}}$

Result: $\mathbf{C}$ $(n \times g)$, directly compatible with the FIGARO industry-by-industry tables. ▸ Valuation detail

Step 4 — The V matrix: tracing disposable income back to value added

ES-SILC disposable income (B6G) linked to value added at the primary-income level (paper, Tab. 4):

Production Account	SNA	Distribution Account	SILC	Definition	Variable
Operating surplus	B2A3G	Gross operating surplus	B2G	Imputed rent	HY030G
		Mixed income	B3G	Self-employment cash flows	PY050G
				Value of own consumption	HY170N
		Property income	D4	Interest, dividends, profits	HY090G
				Income from property or land	HY040G
				Interest repayments on mortgage	HY100G
Labor compensation	D1	Wages and salaries	D11	Employee cash or near cash income	PY010G
				Non-cash employee income	PY020G
				Company car	PY021G
		Employers' contributions	D12	Employers' insurance contributions	PY030G
				Contributions to private pension	PY035G

Primary income (D1, B2A3G, D4) is endogenous; transfers stay exogenous (Morais, Blatnik, and Kavonius, 2023).

Step 4 — From 21 to 64 industries via the Structure of Earnings Survey

- ES-SILC records industry only at NACE 2-digit (21 sections); FIGARO details 64
- ES-SES (Structure of Earnings Survey) gives gross earnings by 3-digit NACE ⇒ within-section labour-compensation shares by earnings decile
- Agriculture (no SES coverage): split A01–A03 by their IOT labour-compensation shares
- Missing industry for positive-wage households: imputed by random hot-deck

Result: $\mathbf{V} = \{v_{h,j}\}$, the $g \times n$ matrix of labour-income coefficients by group h per unit of industry-j output — replacing the $1 \times n$ D1 vector.

Putting it together: the distributionally extended IO table

$g = 5$ quintiles

$n = 5$ industries

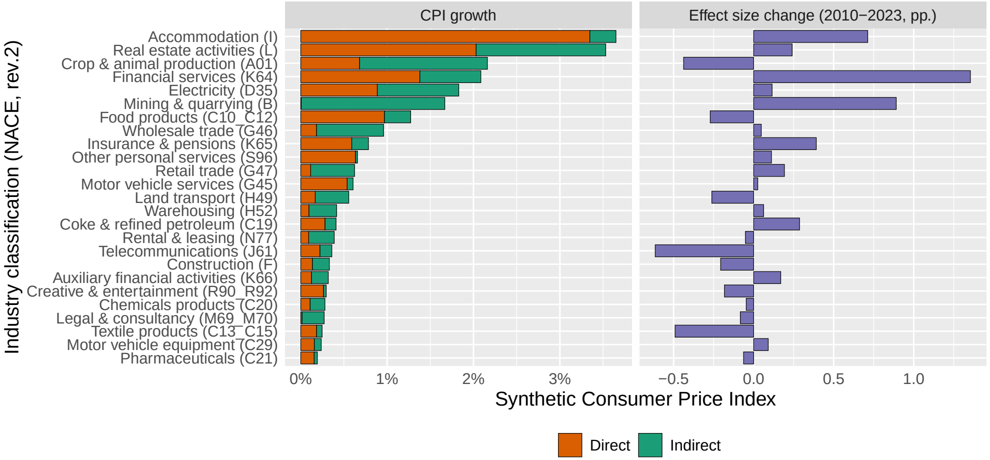
		Intermediate demand (P2)					HFCE (P3S14)					Other FD	
		A–B	C	D–F	G–I	J–U	Q1	Q2	Q3	Q4	Q5	P3AP5	Gross output (P1)
Prim.	A–B	z_{11}	z_{12}	$\cdots$		z_{15}	$c_{1,1}$				$c_{1,5}$		
Manuf.	C	z_{21}	z_{22}										
Util. & C.	D–F	$\vdots$		z_{33}		$\vdots$			$\underset{n\times g}{\mathbf{C}}$				
Distrib.	G–I				z_{44}								
Serv.	J–U	z_{51}		$\cdots$		z_{55}	$c_{5,1}$				$c_{5,5}$		
	D21X31	ts_1	ts_2	ts_3	ts_4	ts_5							
	B2A3G	b_1	b_2	b_3	b_4	b_5							
	D29X39	t_1	t_2	t_3	t_4	t_5							
D1	Q1	$v_{1,1}$				$v_{1,5}$							
	Q2												
	Q3			$\underset{g\times n}{\mathbf{V}}$									
	Q4												
	Q5	$v_{5,1}$				$v_{5,5}$							
		Gross output (P1)											

$g = 5$ quintiles

Legend: $\mathbf{C}$: Household final consumption expenditure by quintile (P3S14) $\mathbf{V}$: Labour compensation by quintile (D1)

A price shock illustration

One possible application of DE-IOTs: Inflationary potential by industry



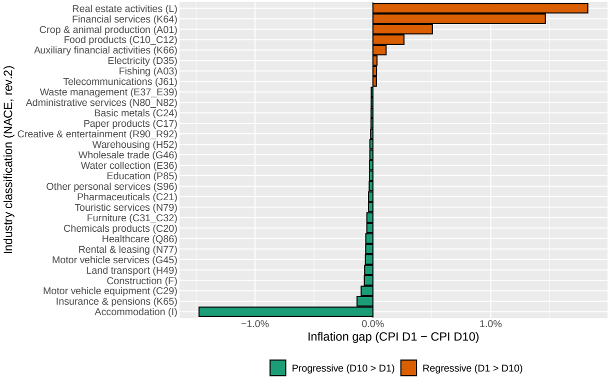
Synthetic inflation rate from a 50% GOS per industry shock, Spain. Cost-push potential is highly concentrated.

Another possible application of DE-IOTs: inequality and industry shocks

With $\mathbf{C}$ and $\mathbf{V}$, industry shocks map to household outcomes through both channels simultaneously.

Illustration: a 50% gross-operating-surplus shock to each NACE industry, and its inflation-inequality gap $CPI_{D1} - CPI_{D10}$.

Orange = regressive; green = progressive. One of many possible analyses. ▸ More results ▸ Price model ▸ Miyazawa



Limitations & conclusions

Limitations and caveats

- Resolution. Results are deciles/quintiles $\times$ 64 industries, delivered as point estimates—no finer household detail and no uncertainty bands (no consensus method yet)
- Gap allocation. The residual-distribution step is not yet stress-tested, the bottom quintile (Q1) saving rate shows methodological weakness, and low-coverage expenditure items are the most sensitive
- Household–industry link. No micro source maps households to the full 64 industries: the $\mathbf{V}$ side leans on ES-SES as a proxy, an IOT-share split for agriculture, and hot-deck imputation to populate missing household industry information
- Bridges & valuation. The COICOP$\rightarrow$CPA bridge is a 2010 base (46×64, few countries report one), RAS-projected forward; trade/transport margins and net taxes are confidential for Spain, so they are estimated from supply-use components

Conclusions: An invitation to developers and adopters

The contribution

A replicable, four-step compilation guide for DE-IOTs as a route to experimental distributional IO tables, reconciling G-20 DGI III.8 with the IO framework based on data already available across the European Statistical System

Data availability and expansion timeline

Full Spain series 2010–2023; microdata ready for EU extension; updatable as new FIGARO/OECD-ICIO data releases, ideal end-state is open publication for the community

Open empirical agenda

Multi-earner households, endogenous closure (Miyazawa), environmental and price-of-production extensions

Thank you for your attention

Comments very welcome

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DE-IOTs for Spain, 2010–2023 (FIGARO / OECD-ICIO) — available on request

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Appendix

The price model: cost-push propagation, an accounting identity

Supply-side (cost-push) reading of the Leontief system, with a group-specific value-added shock $\boldsymbol{\Gamma} = \mathrm{diag}(\gamma_1, \ldots, \gamma_g)$: Back

$$\tilde{\mathbf{p}} = \mathbf{i}'\,\boldsymbol{\Gamma}\,\mathbf{V}\,(\mathbf{I} - \mathbf{A})^{-1} \qquad \Longrightarrow \qquad CPI_h = \textstyle\sum_i \omega_{h,i}\,\tilde{c}_{h,i}$$

Assumptions & responses

- **Fixed coefficients / no substitution** — first-order cost propagation through the existing structure; a distributional accounting instrument, not a forecast
- **Open system** — households exogenous in the baseline; Miyazawa closure (next slide) adds the circular loop without overturning the sign of results
- **Base-year prices** $= 1$ — changes are relative; internally consistent across years without a separate deflator

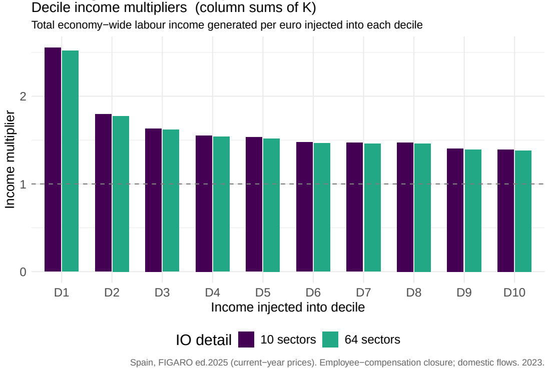
See Miller and Blair (ch. 2 2022).

Endogenising households: Miyazawa's multipliers, estimated

Closing the loop with the *same* $\mathbf{C}, \mathbf{V}$ already built for the DE-IOT, writing $\mathbf{L} = (\mathbf{I} - \mathbf{A})^{-1}$:

$$\underbrace{\mathbf{K} = (\mathbf{I} - \mathbf{VLC})^{-1}}_{\text{interrelational } \textit{income} \text{ multiplier}} \qquad \underbrace{\mathbf{M} = \mathbf{L}(\mathbf{I} + \mathbf{CKVL}) = (\mathbf{I} - \mathbf{A} - \mathbf{CV})^{-1}}_{\text{enlarged } \textit{output} \text{ multiplier}}$$

- Pro-poor gradient: income generated per unit injected falls $3.1 \to 1.5$ from D1 to D10
- Closing the loop lifts output multipliers $1.6 \to 2.7$ on average
- Well-behaved loop: $\rho(\mathbf{VLC}) < 0.42$ throughout 2010–2023
- Estimated on the Spanish decile SAM — an instrument, not a forecast



▸ The K matrix

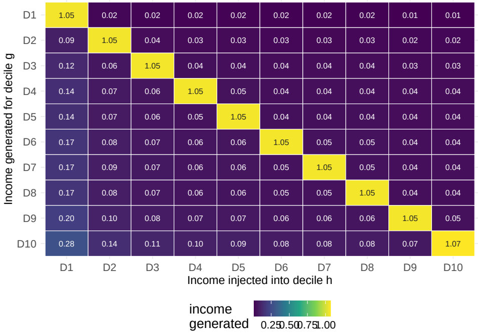
Following Steenge, Incera, and Serrano (2020) and Miyazawa (1976).

The interrelational income multiplier $\mathbf{K}$: income leaks upward

◂ Back

Interrelational income multiplier matrix $K = (I - VBC)^{-1}$

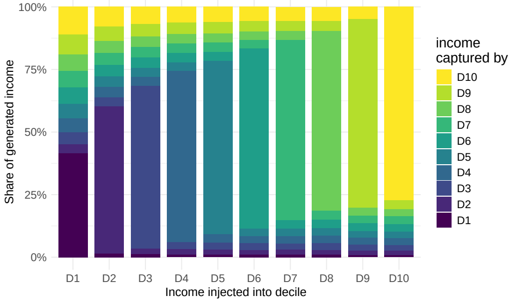
Labour income generated for decile g (row) per euro injected into decile h (column)



Spain, FIGARO ed.2025 (current−year prices). Employee−compensation closure; domestic flows. a64, 2023.

Who captures the income a stimulus generates?

Composition of labour income generated by a euro injected into each decile

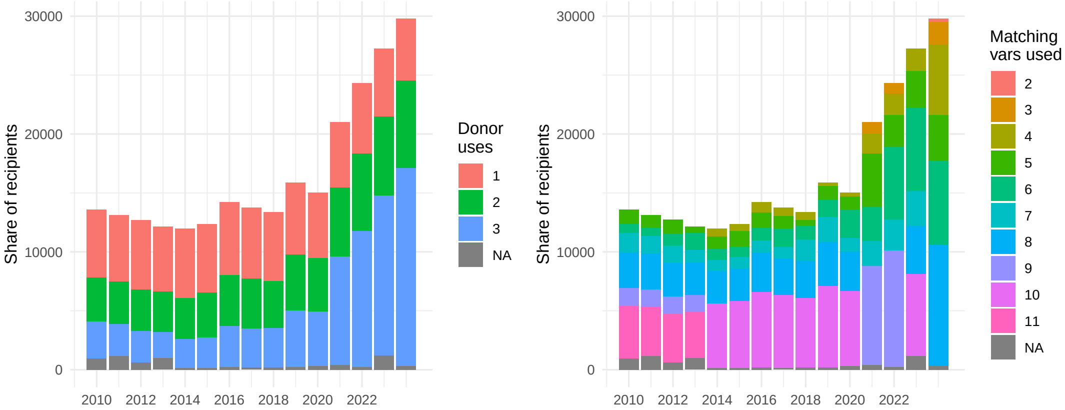


Spain, FIGARO ed.2025 (current−year prices). Employee−compensation closure; domestic flows. a64, 2023.

Of the labour income a unit injected into D1 generates, only ∼34% stays with D1 while ∼32% is captured by the top three deciles: a large but regressively-distributed multiplier. Spain, 2023.

Matching diagnostics: donor uses and fallback

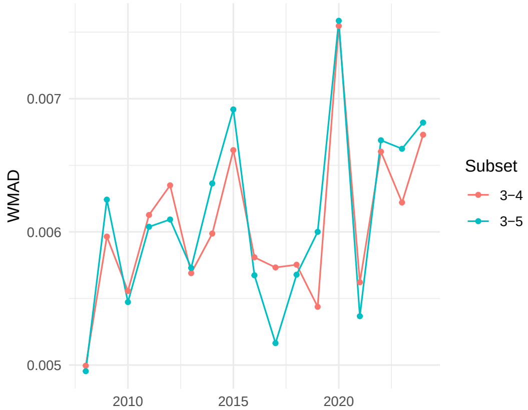
Back

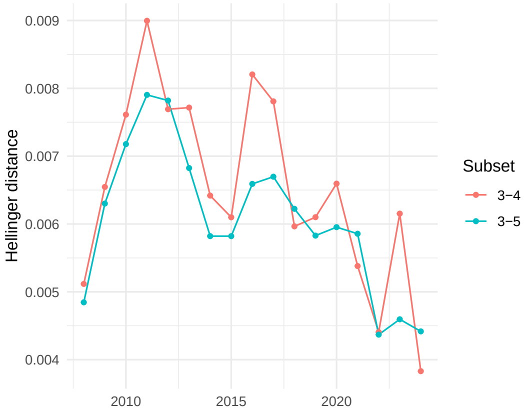


Donor uses (left) and matching-variable fallback (right), 2010–2023 — uses concentrate at ≤ 3, with minimal fallback.

Matching diagnostics: WMAD and Hellinger distance

◂ Back

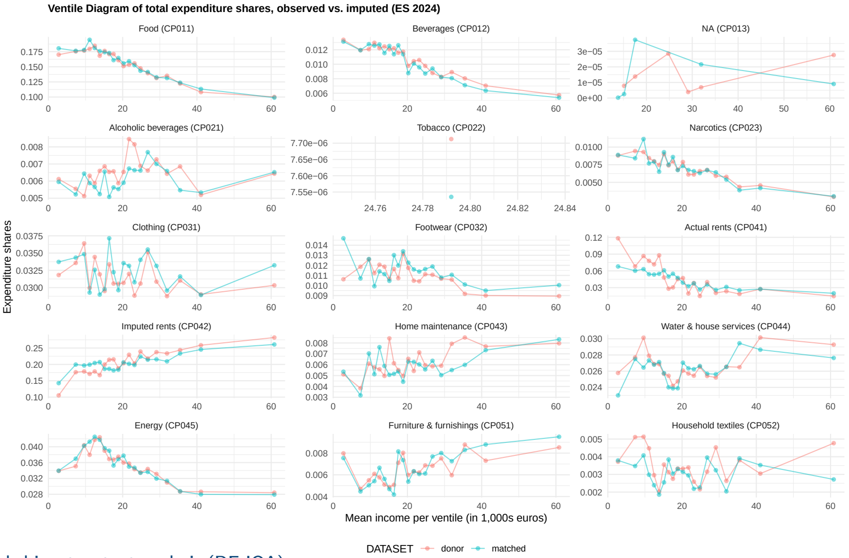




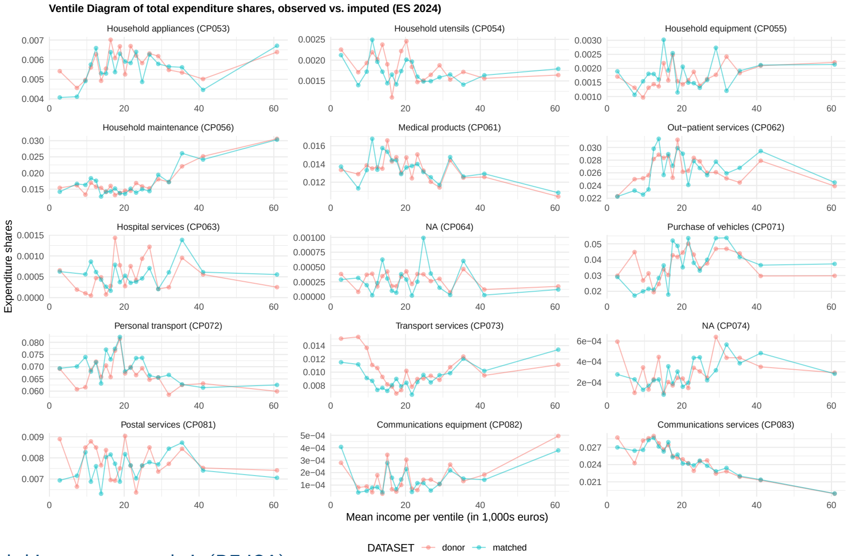
WMAD (left) and Hellinger distance (right): matched synthetic vs. original ES-HBS, 2010–2023, 2-digit COICOP — both small and stable.

Matching robustness: ventile expenditure shares (CP01–CP05)

Back



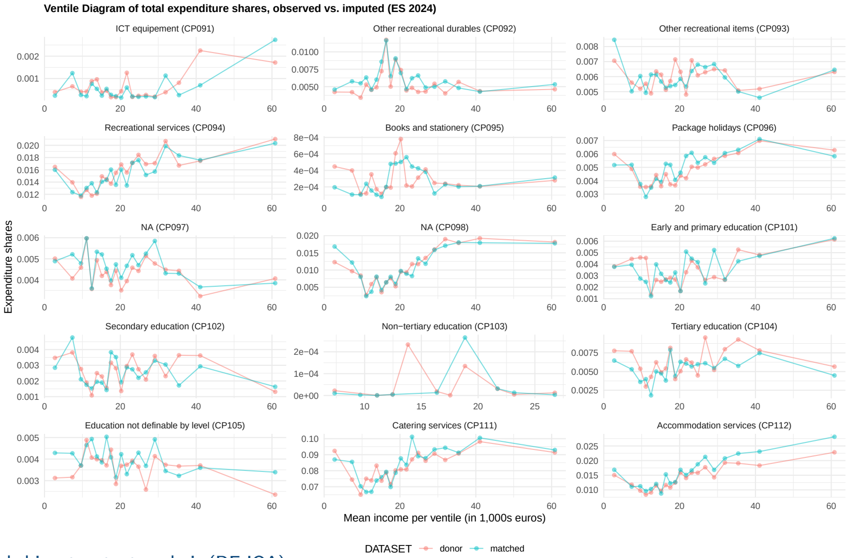
Matching robustness: ventile expenditure shares (CP05–CP08)



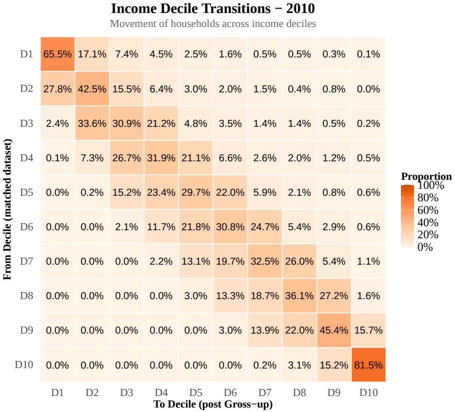
Back

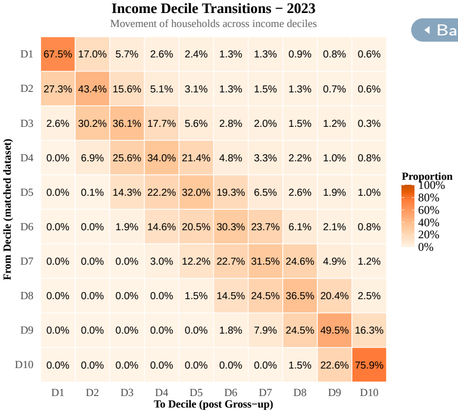
Matching robustness: ventile expenditure shares (CP09–CP11)

Back



Grossing-up robustness: decile movement





◂ Back

Household decile movement induced by the income grossing-up to NA totals, 2023. Mass stays near the diagonal $\Rightarrow$ ranking largely preserved.

SILC $\rightarrow$ NA income map (1/3): generation of income $\Rightarrow$ value added

◂ Back

National Accounts		ES-SILC	
Definition	**Code**	**Definition**	**Code**
Operating surplus, gross	B2G	Imputed rent	HY030N
Mixed income, gross	B3G	Income from self-employment	PY050G
		Value of own production	HY170G
Wages and salaries	D11	Employee cash or near-cash income	PY010G
		Non-cash employee income	PY020G
		Company car	PY021G
Employer's actual contribution	D12	Employer's actual contribution	PY030G

Compensation of employees ($\mathbf{D1}$ = D11+D12) and gross operating surplus & mixed income ($\mathbf{B2A3G}$) are the value-added components the $\mathbf{V}$ matrix traces income back to. After Coli et al. (p. 23 2022).

▸ Next: property & taxes

SILC → NA income map (2/3): property income, taxes & contributions

Back

National Accounts		ES-SILC	
Definition	**Code**	**Definition**	**Code**
Property income (recd./paid)	D4	Interest, dividends, profits Income from property rents Interest repayments on mortgage	HY090G HY040G HY100G
Taxes on income	D51	Taxes on income & social contr.	HY140G
Other current taxes	D59	Regular taxes on wealth	HY120G
Households' actual social contr. Households' social contributions	D613 D614	Taxes on income & social contr.	HY140G

Property income (D4) is folded into operating surplus for the primary-income linkage (B2A3G, D1, D4); taxes and social contributions belong to the secondary-distribution account.

Next: benefits & transfers

SILC → NA income map (3/3): social benefits & current transfers

Back

National Accounts		ES-SILC	
Definition	**Code**	**Definition**	**Code**
Social benefits & transfers	D62	Unemployment benefits	PY090G
		Old-age benefits	PY100G
		Survivor benefits	PY110G
		Sickness benefits	PY120G
		Disability benefits	PY130G
		Education-related allowances	PY140G
		Housing allowances	HY070G
		Family/children related allowances	HY050G
		Other social exclusion	HY060G
Other current transfers (recd./paid)	D7	Regular inter-household transfer	HY080G HY110G HY130G

Secondary-distribution transfers; in the IO build these net government transfers are treated as exogenous — the vertical linkage is established at the primary-income level (B2A3G, D1, D4).

Valuation: purchasers' to basic prices, $\mathbf{F}(\cdot)$

$$p_i^{pp} = p_i^{bp} + \underbrace{T_i}_{\text{net taxes}} + \underbrace{M_i}_{\text{trade \& transport margins}}$$

- Net-tax and margin rates are confidential for Spain (and others)
- Implicit rates derived from available supply–use components (Mongelli, Neuwahl, and Rueda-Cantuche, 2010; Cazcarro et al., 2022)
- Stepwise algorithm $\mathbf{F}(\cdot)$: first redistribute margins, then strip net taxes
- Reference vectors forced to match the FIGARO entries, even where this deviates from other intermediate national-accounts figures
- For the synthetic CPI, the process is reversed (Model B) to push industry price changes back onto COICOP purposes at purchasers' prices

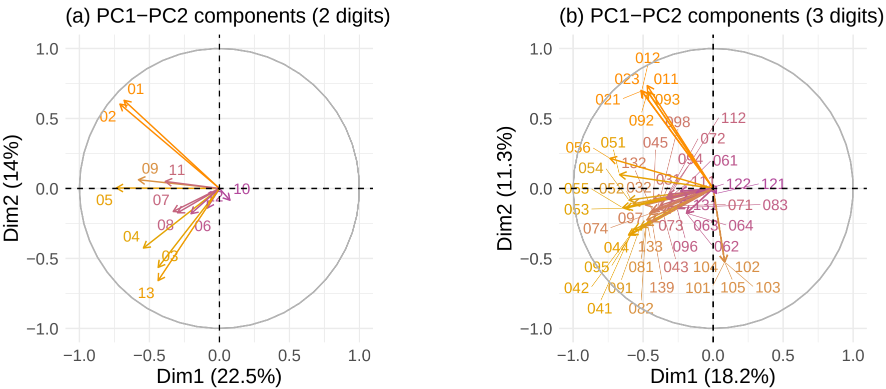
Empirical application — additional results

◂ Back Application to Spain, 2010–2023; 50% gross-operating-surplus shock applied to each NACE industry. Jump to a result, or page through; **Back** returns to the talk.

- ▸ 1 Inflationary potential by industry (synthetic CPI)
- ▸ 2 Transmission channels — PCA of COICOP patterns
- ▸ 3 Price, income and net effects, by decile
- ▸ 4 Inequality: price-only vs net (Gini)
- ▸ 5 Distributional ranking (Q5/Q1 ratio impact)

Transmission channels — PCA of COICOP patterns

Back

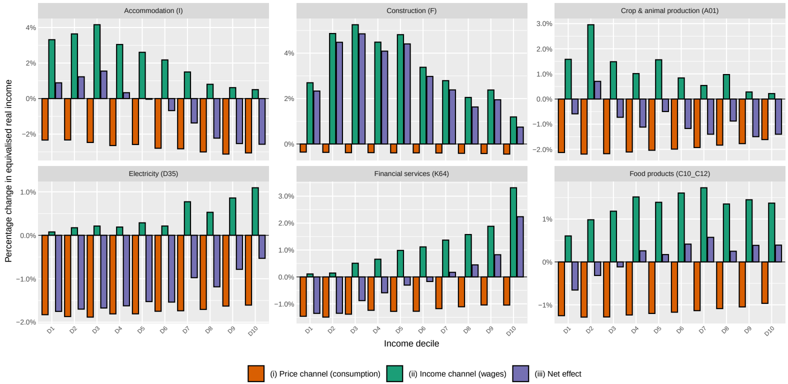


First two principal components of COICOP-level transmission. PC1 groups essentials (regressive); separate education and recreation/hospitality clusters.

Results menu

Price, income and net effects, by decile

◂ Back

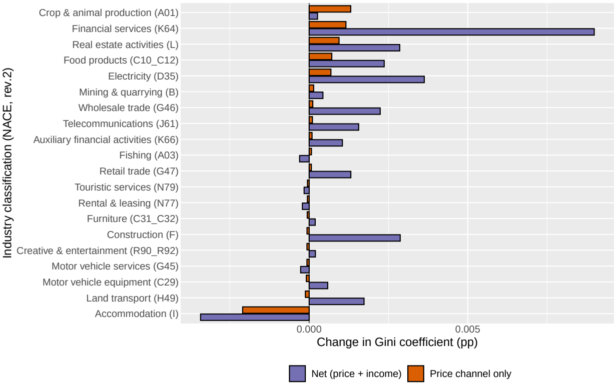


Real income change by decile: price channel (i), income channel (ii), net (iii), selected industries. Channels are misaligned for essentials.

▸ Results menu

Inequality: price-only vs net (Gini)

◂ Back

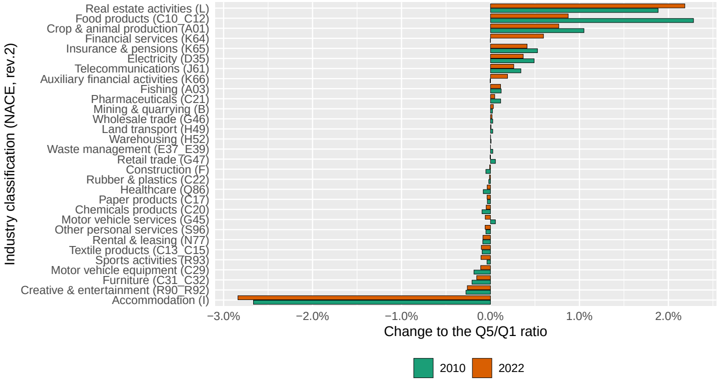


Change in the Gini of equivalised real income: price-only vs net (price+income), top 20 industries by absolute impact. The income channel attenuates but rarely offsets.

▸ Results menu

Distributional ranking (Q5/Q1 ratio impact)

Back

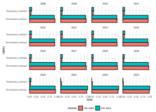


Top 30 industries by impact on the Q5/Q1 real-income ratio, 50% GOS shock, Spain.

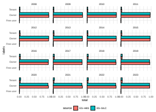
Results menu

Matching-variable balance — recipient (SILC) vs donor (HBS)

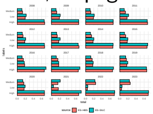
Back Click a variable, or page through; **Back** returns to the talk.



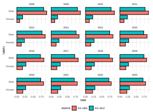
Contract type



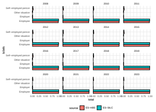
Tenure status



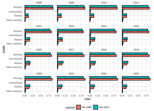
Urbanisation



Gender

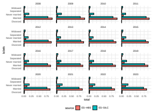


Professional status

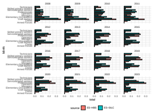


Economic activity

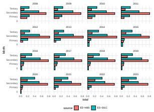
Age



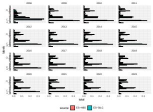
Marital status



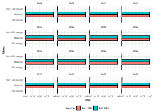
Occupation



Education



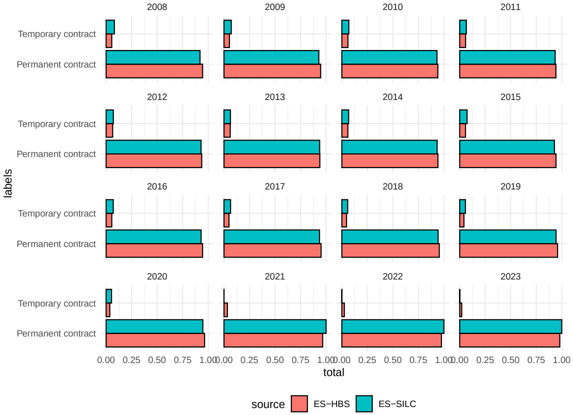
Activity (NACE)



Country of birth

Matching balance: Contract type

Back

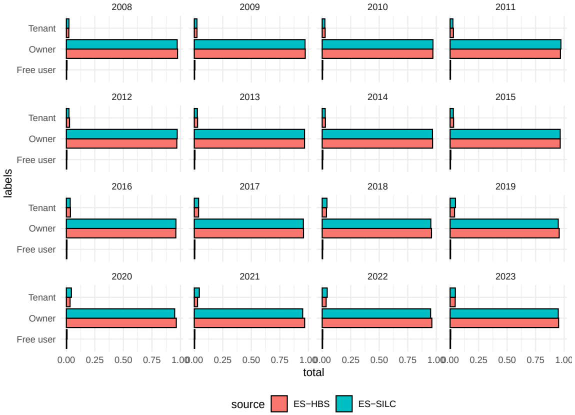


Recipient (ES-SILC) vs donor (ES-HBS) distribution.

All variables

Matching balance: Tenure status

Back

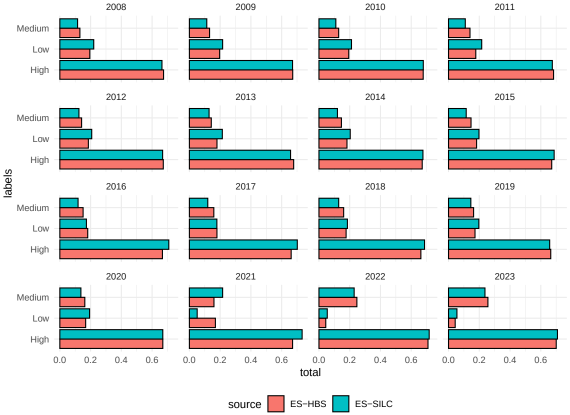


Recipient (ES-SILC) vs donor (ES-HBS) distribution.

All variables

Matching balance: Degree of urbanisation

Back



Recipient (ES-SILC) vs donor (ES-HBS) distribution.

All variables

Matching balance: Gender

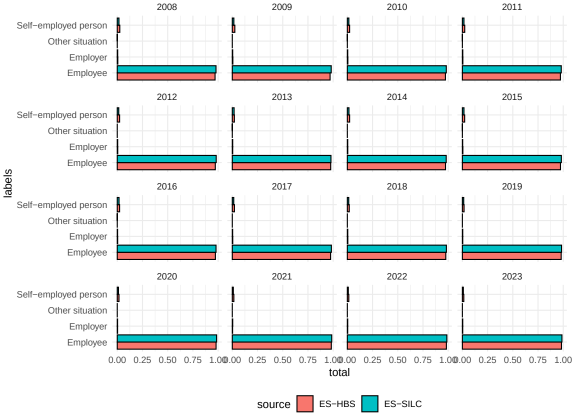
Back

Recipient (ES-SILC) vs donor (ES-HBS) distribution.

All variables

Matching balance: Professional status

◀ Back

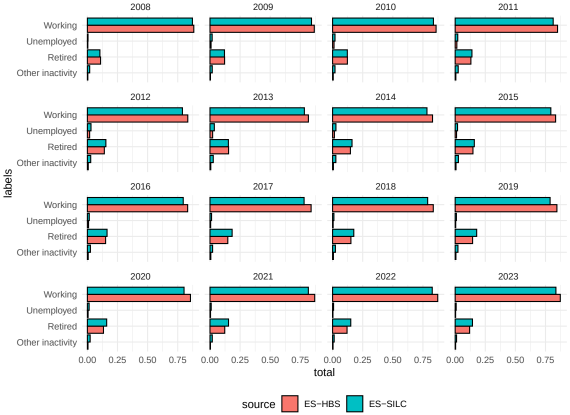


Recipient (ES-SILC) vs donor (ES-HBS) distribution.

▶ All variables

Matching balance: Economic activity status

◂ Back



Recipient (ES-SILC) vs donor (ES-HBS) distribution.

▸ All variables

Matching balance: Age

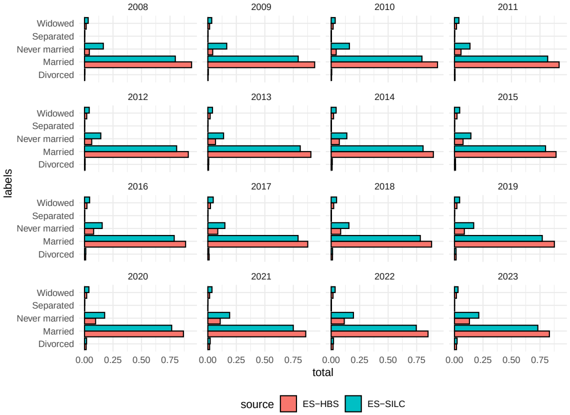
Back

Recipient (ES-SILC) vs donor (ES-HBS) distribution.

All variables

Matching balance: Marital status

Back

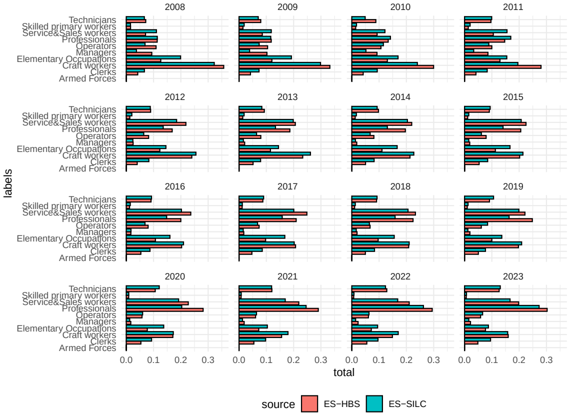


Recipient (ES-SILC) vs donor (ES-HBS) distribution.

All variables

Matching balance: Occupation

Back

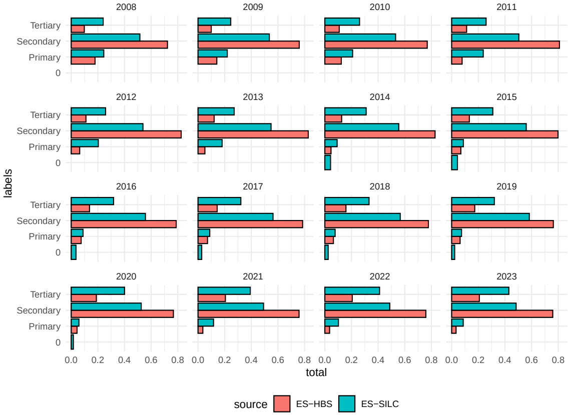


Recipient (ES-SILC) vs donor (ES-HBS) distribution.

All variables

Matching balance: Education level

◂ Back

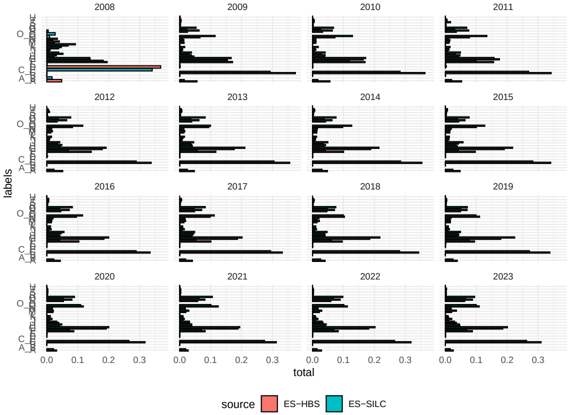


Recipient (ES-SILC) vs donor (ES-HBS) distribution.

▸ All variables

Matching balance: Activity (NACE)

Back

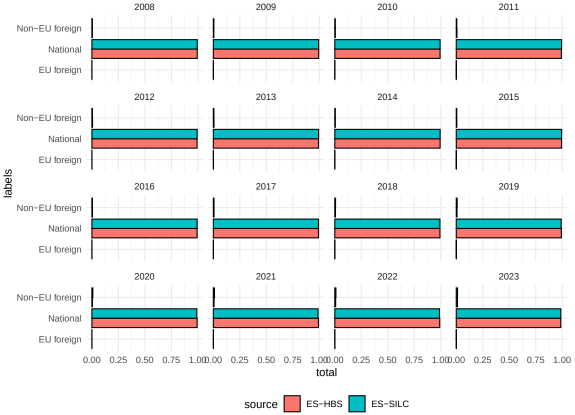


Recipient (ES-SILC) vs donor (ES-HBS) distribution.

All variables

Matching balance: Country of birth

Back



Recipient (ES-SILC) vs donor (ES-HBS) distribution.

All variables