Does redistribution hurt growth?

An Empirical Assessment of the Redistribution–Growth Relationship in the EU

Michael Christl, *Universidad Loyola Andalucia*
Budget Perspectives 2026, *Dublin, Ireland*

Introduction

As argued by Berg et al. (2018):

"... the literature almost without exception does not examine the role of both redistribution and inequality in growth in a common empirical framework".

What we do

1. We introduce a new redistribution measure, the so called Net Benefit Share (NBS), that is based on micro-data from the EU-SILC.

2. We analyze the relation between economic growth, inequality and **(targeted)** redistribution in a cross-country setting for 25 EU countries over the period between 2007 and 2019 in the short run.

3. We look at the transmission channels of inequality and redistribution to growth.

Universidad **LOYOLA**

Redistribution and growth - Theory

1. Classical Political-Economy View

- ▶ **Higher inequality** increases demand for redistribution (Meltzer & Richard, 1981).
- ▶ Redistribution may reduce growth by:
  - ▶ Introducing *distortionary taxes* (Alesina & Rodrik, 1994).
  - ▶ Lowering incentives for *innovation and capital formation* (Barro, 2000).

2. Modern Efficiency-Enhancing View

- ▶ **(Targeted) redistribution** can promote growth by:
  - ▶ Alleviating *credit constraints* (Benabou, 2000).
  - ▶ Increasing *human capital investment* (Aghion et al., 2010).
  - ▶ Boosting *consumption demand* among the poor (Vu, 2023).

Universidad
LOYOLA

How to measure redistribution?

Redistributive effect (RE)

▶ The RE measures the overall income redistribution by the tax-benefit system.

▶ The RE is defined as the difference between the **Gini coefficient of market income** and the **Gini coefficient of disposable income** (after government intervention) ⇒ A higher RE implies more redistribution of income.

▶ Widely used in empirical research (e.g., *Berg et al., 2018*; *Ostry et al., 2014*).

▶ **Limitations:**
  ▶ Aggregates all redistribution types (e.g., to low-income groups and pensioners).
  ▶ Sensitive to changes in middle of the distribution, less so at extremes.
  ▶ May mix redistribution between generations and between income groups.

Universidad LOYOLA
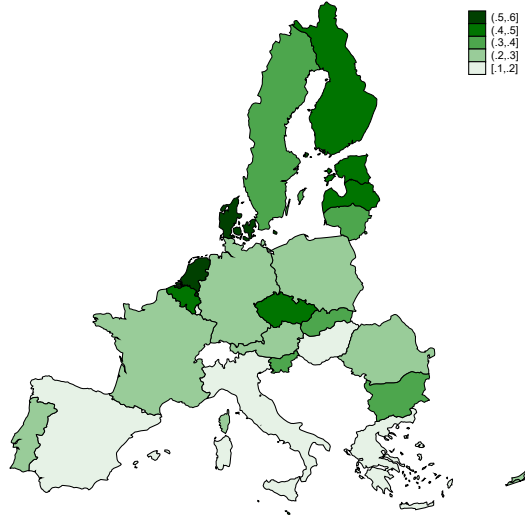
A new redistribution measure

Net Benefit Shares (NBS)

- ▶ We are specifically interested in the sub-population of low-income households, therefore we look at those households in the lowest quartile of the income distribution ($Q1$) - **Targeted redistribution**.

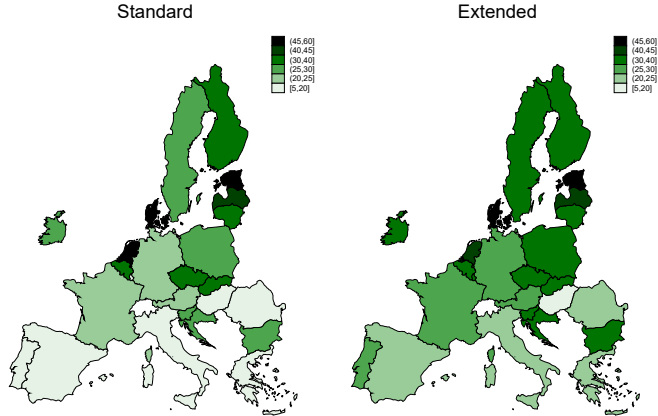- ▶ Following the approach of Hammer et al. (2023), we define:

$$\text{Q1-NBS} = \frac{\sum_{j \in Q1, b_j \geq t_j}(b_j - t_j)}{\sum_{j \in N, b_j \geq t_j}(b_j - t_j)} \tag{1}$$

- ▶ With N we refer to the total size of the population, with n to the number of individuals in $Q1$ receiving net benefits ($b_j \geq t_j$).

Universidad
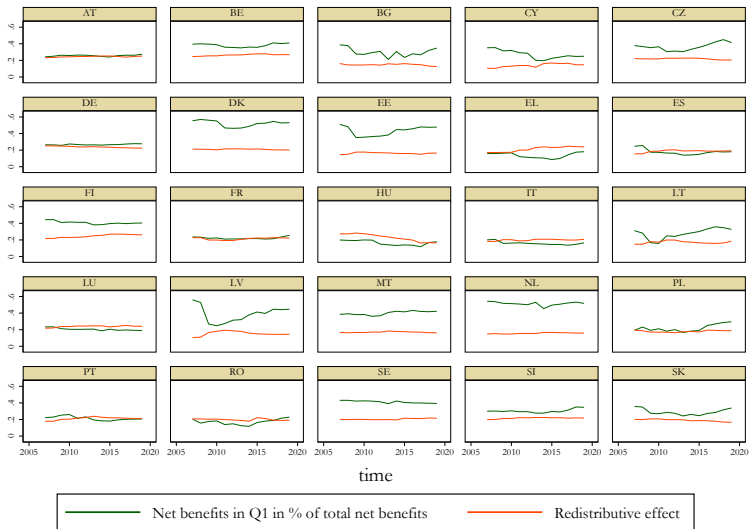LOYOLA

1st Quartile Net Benefit Share (Q1-NBS), 2019

1st Quartile Net Benefit Share (Q1-NBS), 2024

Standard

Extended

Net Benefit Share of Q1 (Q1-NBS), 2007 – 2019

Net benefits in Q1 in % of total net benefits — Redistributive effect

Methodology

▶ Similar to Berg et al. (2018), Ferreira et al. (2018) and Marrero et al. (2019), we estimate growth regressions using System GMM (Blundell and Bond, 1998).

▶ We define economic growth per capita ($g_{i,t}$) as a function of initial income per capita ($log(Y_{i,t-1})$), inequality ($I_{i,t}$), redistribution $R_{i,t}$ and other controls ($Z_{i,t}$):

$$g_{i,t} = \lambda_1 log(Y_{i,t-1}) + \lambda_2 I_{i,t} + \lambda_3 R_{i,t} + \lambda_4 Z_{i,t} + \alpha_i + \beta_t + \epsilon_{i,t} \qquad (2)$$

▶ Our dependent variable $g_{i,t}$ is the growth rate of per capita GDP (from year t-1 until year t). We are primarily interested in both, the effect of inequality, as well as of redistribution on the per capita GDP growth rate.

Universidad
LOYOLA

Methodology

▶ We estimate two different models:

    1. The **standard model**, following Berg et al. (2018), where the **Redistibutive Effect** is used as redistribution measure.

    2. The **new model** where the **Q1 Net Benefit Share** is used as redistribution measure.

▶ We use several different specifications of the econometric model.

Universidad
LOYOLA

Results

Table: Growth Regression, standard model

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
L.log(GDP)	-0.010	-0.037	-0.025*	0.00066	0.0033	-0.027	-0.014	0.015
	(0.0083)	(0.023)	(0.015)	(0.016)	(0.017)	(0.037)	(0.021)	(0.016)
Gini coefficient	0.048	0.0099	0.093	0.25***	0.11	0.033	0.12	0.34**
	(0.082)	(0.14)	(0.13)	(0.094)	(0.12)	(0.20)	(0.15)	(0.15)
Redistributive effect	-0.074	-0.067	-0.14	-0.27***	-0.14	0.0046	-0.096	-0.28**
	(0.080)	(0.15)	(0.10)	(0.097)	(0.11)	(0.20)	(0.13)	(0.12)
private investment		0.086***	0.035	0.023		0.040**	0.038***	0.033*
		(0.034)	(0.023)	(0.024)		(0.016)	(0.015)	(0.018)
public investment		-0.072***	-0.054***	-0.039***		-0.0090	-0.012	-0.0057
		(0.021)	(0.015)	(0.011)		(0.013)	(0.011)	(0.011)
high education			0.089***	0.050			0.034**	0.018
			(0.032)	(0.033)			(0.017)	(0.015)
open				0.024**				0.029***
				(0.010)				(0.0059)
Observations	300	298	298	298	300	298	298	298
No. of instruments	80	35	80	81	27	26	30	31
Hansen-J (p-value)	1.00	0.79	1.00	1.00	0.41	0.25	0.47	0.45
PCR	No	No	No	No	Yes	Yes	Yes	Yes

Standard errors in parentheses, * $p \leq 0.10$, ** $p \leq 0.05$, *** $p \leq 0.01$

Universidad LOYOLA

Results

Table: Growth Regression, Q1 Net Benefit Share

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
L.log(GDP)	-0.028***	-0.033***	-0.031***	-0.019*	-0.011	-0.030	-0.032	0.0022
	(0.0099)	(0.011)	(0.011)	(0.011)	(0.018)	(0.029)	(0.025)	(0.021)
Gini coefficient	0.15**	0.14**	0.16**	0.21***	0.17*	0.14	0.15	0.24**
	(0.078)	(0.071)	(0.070)	(0.075)	(0.093)	(0.096)	(0.092)	(0.099)
Q1-NBS	0.087***	0.071**	0.067**	0.051*	0.075**	0.063*	0.062*	0.029
	(0.032)	(0.034)	(0.033)	(0.029)	(0.034)	(0.036)	(0.033)	(0.034)
private investment		0.030**	0.028**	0.023		0.032**	0.029*	0.027
		(0.013)	(0.014)	(0.015)		(0.015)	(0.015)	(0.017)
public investment		-0.0093	-0.015	-0.0096		-0.0087	-0.015	-0.0025
		(0.010)	(0.010)	(0.011)		(0.014)	(0.013)	(0.014)
high education			0.029**	0.015			0.029**	0.013
			(0.013)	(0.013)			(0.013)	(0.016)
open				0.019***				0.023***
				(0.0066)				(0.0087)
Observations	300	298	298	298	300	298	298	298
No. of instruments	80	82	83	84	27	29	30	31
Hansen-J (p-value)	1.00	1.00	1.00	1.00	0.41	0.46	0.46	0.45
PCR	No	No	No	No	Yes	Yes	Yes	Yes

Standard errors in parentheses, * $p \leq 0.10$, ** $p \leq 0.05$, *** $p \leq 0.01$

Universidad LOYOLA

13

Results

Table: Growth channels

	(1) pub inv	(2) priv inv	(3) cons	(4) prod	(5) pub inv	(6) priv inv	(7) cons	(8) prod
L.log(GDP)	-0.34*	0.16	-0.012	0.045**	-0.38**	-0.11	-0.019	0.14***
	(0.18)	(0.15)	(0.0096)	(0.020)	(0.18)	(0.086)	(0.028)	(0.048)
Gini coefficient	-1.73	-0.38	-0.023	0.25**	-2.08*	-0.59	-0.059	0.37*
	(1.12)	(0.79)	(0.10)	(0.13)	(1.17)	(0.86)	(0.10)	(0.21)
Q1 NBS	0.29	0.52*	0.082**	0.050	0.15	0.67***	0.083**	-0.0021
	(0.46)	(0.31)	(0.038)	(0.057)	(0.46)	(0.24)	(0.042)	(0.11)
Observations	298	298	300	300	298	298	300	300
No. of instruments	80	80	80	80	24	24	29	24
AR1 (p-value)	0.13	0.031	0.0067	0.24	0.12	0.017	0.0057	0.47
AR2 (p-value)	0.0030	0.061	0.14	0.044	0.0028	0.038	0.14	0.21
Hansen-J (p-value)	1.00	1.00	1.00	1.00	0.30	0.21	0.58	0.24
PCR	No	No	No	No	Yes	Yes	Yes	Yes

Standard errors in parentheses, * $p \leq 0.10$, ** $p \leq 0.05$, *** $p \leq 0.01$

Universidad **LOYOLA**

Key Take-aways

▶ **Inequality of market income positively affects short-term economic growth**

▶ However, also **targeted redistribution to low-income households significantly increases economic growth** in the short run.

  ▶ An increase in the Q1 NBS from the level of from Spain (18.1% in 2019) to that of Denmark (53.2% in 2019) would elevate economic growth by approximately 1.6 percentage points in the short run.

▶ Results are driven by higher consumption and private investment.

Digging further I

What happens if we measure different targeting?

- ▶ To poor households, but defined as the bottom half
  - ▶ The positive effect is getting smaller, but stays significant

- ▶ To rich households, the top 25%
  - ▶ The effect turns negative and is strongly significant.

- ▶ To pensioner households
  - ▶ The effect is negative and is strongly significant.

Universidad **LOYOLA**

Digging further II

What happens in the medium-run?

▶ We find evidence that a higher **Q1-NBS** is associated with **higher economic growth** also in the **medium run**.

▶ Effects are robust, but caution has to be taken due to low number of observations.

▶ Reinforces the idea that targeted redistribution to low-income groups could also have medium-term benefits.

Universidad
LOYOLA

Conclusions I

▶ **Targeted redistribution to low-income households significantly increases economic growth** in the short run.

> An increase in the Q1 NBS from the level of from Spain (18.1% in 2019) to that of Denmark (53.2% in 2019) would elevate economic growth by approximately 1.6 percentage points in the short run.

▶ **Transition channels:**
  ▶ Redistribution to low-income households has a significant and positive impact on private investment and on consumption ⇒ a more targeted redistribution leads to a higher consumption growth, as well as to higher private investment.

Conclusion II

Different targeting

▶ Countries that allocate a larger share of redistribution to pensioners or high-income households tend to experience significantly lower economic growth.

Medium-run growth-effects

▶ We find evidence for positive growth effects of targeted redistribution also in the medium-run.

Robustness:

▶ Our results are very stable across model choices, across the concepts of redistribution and across the data set used.

Universidad
LOYOLA

Key Implications for Fiscal and Social Policy

▶ **Targeting matters, at least in the short-run!**

▶ **Smarter welfare spending:**
  ▶ Shift from broad, universal transfers to **means-tested or targeted transfers**.
  ▶ Reallocate spending away from less efficient redistribution (e.g. high-income pension benefits).

▶ **Reframing the equity-efficiency trade-off:**
  ▶ Well-targeted redistribution shows that **equity can enhance efficiency**.

▶ **Short-run benefits are growth-relevant:**
  ▶ Targeted transfers stabilize demand during downturns, supporting recovery and social cohesion.
  ▶ Useful for macroeconomic management during crises (e.g. recessions, pandemics).

Universidad LOYOLA

References I

Berg, A., Ostry, J.D., Tsangarides, C.G., Yakhshilikov, Y., 2018. Redistribution, inequality, and growth: new evidence. Journal of Economic Growth 23, 259–305.

Blundell, R., Bond, S., 1998. Initial conditions and moment restrictions in dynamic panel data models. Journal of econometrics 87, 115–143.

Ferreira, F.H., Lakner, C., Lugo, M.A., Özler, B., 2018. Inequality of opportunity and economic growth: how much can cross-country regressions really tell us? Review of Income and Wealth 64, 800–827.

Hammer, B., Christl, M., De Poli, S., 2023. Public redistribution in europe: Between generations or income groups? The Journal of the Economics of Ageing 24, 100426.

Marrero, G.A., Rodríguez, J.G., et al., 2019. Inequality and growth: The cholesterol hypothesis. ECINEQ WP 501.