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What works to mitigate and reduce relative (and absolute) inequality? A systematic review

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Online appendix

Summary table for Jorda and Alonso (2020): *What works to mitigate and reduce relative (and absolute) inequality? A systematic review*

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Aaberge et al. (1995)	Norway	1979 – 1992	Household equivalent income (disposable and market)	Gini index	Tax policies	Microsimulation	A flat tax rate reduce disposable income inequality
Aaberge et al. (2004)	Italy	1993	Household disposable income	Relative inequality	Tax reform	Microsimulation	A flat tax rate is disequalising
Aaberge and Langørgen (2006)	Norway	1988	Equivalised household disposable income	Gini index	In -kind benefits	Inequality decomposition	The equalizing contribution of central government cash transfers is substantially higher than that of social assistance
Adams and Atsu (2015)	72 developing countries	1970 – 2012	Individual gross earnings	Gini index	Employment protection	Dynamic model – GMM	Labour regulation seems to have a negative impact on inequality
Agnello and Sousa (2014)	18 Industrialised countries	1978 – 2009	Household disposable income (market and disposable)	Gini index	Fiscal consolidation	OLS with clustered standard errors	<ul style="list-style-type: none"> • Fiscal consolidation raises income inequality. • Spending cuts tend to be detrimental for income distribution. • Tax hikes seem to have an equalizing effect.
Agostini et al. (2012)	Chile	2010	Individual net earnings	Suits index	PIT and CIT	Microsimulation	Removing the favourable tax treatment for corporate income makes the income tax more progressive.
Agostini and Jiménez (2015)	Chile	1996 – 2006	Household expenditure and income (total and per capita)	Suits index (Relative ineq)	Fuel tax	Incidence analysis	This tax is slight progressive in terms of income and moderately progressive in terms of expenditures
Akita et al. (1999)	Indonesia	1987 – 1993	Household expenditure	GE	Education expansion	Inequality decomposition	<ul style="list-style-type: none"> • Education explains one third of inequality. • This share has increased over time.
Alavutunkki et al. (2019)	Global	1975 – 2010	Household income and consumption	Gini index	VAT	FE and IV	VAT increases inequality when inequality is measured based on disposable income, but not for consumption
Altig and Carlstrom (1999)	USA	1984 – 1989	Household gross income	Gini index	Tax reform	CGE	The behavioural impact of changes in the marginal tax rate structures introduced in TRA86 contributed to increase pretax income inequality

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Alvaredo et al. (2013)	UK, US, France, Germany	1900– 2010	Individual earnings (gross and net)	top 1% share	Tax policies	Graphical analysis	There is a strong correlation between the reductions in top tax rates and the increases in top 1 percent
Amarante et al. (2011)	Uruguay	1998 – 2007	Equivalised household disposable income	Gini index	Means-tested benefit	Microsimulation	<ul style="list-style-type: none"> Modifying the targeting of the program does not affect inequality. The impact on children's education is positive.
Amate-Fortes et al. (2017)	27 EU countries	1996 – 2011	–	Gini index, s80/s20	Determinants of inequality	Tobit, GMM, PCSE	Social spending does not seem to affect inequality
Amir et al. (2013)	Indonesia	2008	Per capita household disposable income	Gini index	PIT and CIT	CGE	<ul style="list-style-type: none"> The income tax reform led to an increase in income inequality. The tax cut is more beneficial to households in the highest income categories.
Anderson et al. (2017)	Low and middle income countries	1990 – 2016	Mix of concepts	Gini and Theil indices, income shares (and ratios)	Social expenditures	Meta-regression analysis	<ul style="list-style-type: none"> Negative relationship between government spending and income inequality. Positive effect for military spending. The coefficient for health and education spending is also positive and statistically significant at the 1% level.
Ansari et al. (2014)	Iran	2001	Household income	Percentiles	Agricultural subsidies	SAM	The removal of subsidy from food industry sector has a larger negative impact on inequality than removing it from the food production sector.
Antòn (2012)	Mexico	2025 – 2050	Individual earnings and pensions	Gini index	Pensions	Microsimulation	An upward shift in pension coverage is an effective tool to achieve improvements in income distribution.
Arabsheibani et al. (2006)	Brazil	1988 – 1998	Individual earnings	Quantiles	Education expansion	Quantile regression	<ul style="list-style-type: none"> Although increases in returns to education are more pronounced at the top of the earnings distribution, this did not in practice led to increased inequality. Levels of education and other labour market-rewarded endowments have increased and offset the rate of return effect.
Aronson et al. (1999)	US	1979 – 1990	Household equivalent income (disposable and market)	Gini index	Tax system	Inequality decomposition	The net impact of tax changes during the 1980s was a reduction in the redistributive impact of taxation
Aronsson and Palme (1998)	US, UK, Spain	1979 – 1990	Personal earnings gross and net (tax units) equivalised	Gini index	Direct taxes	Inequality decomposition	Reduction in the redistributive impact of taxation

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Atkinson et al. (2017)	UK	2014	Household disposable income	Gini, Theil, MLD and Atkinson (0.5) indices	Tax progressivity, child benefits, social insurance, basic income, minimum wage	Static microsimulation model (not behavioral)	<ul style="list-style-type: none"> Progressive taxes+increase in child benefits + strengthening social insurance decreases the Gini index by 9% and around 20% other inequality measures. Progressive taxes+increase in child benefits + basic income decreases the Gini index by 18% and around 35% the other inequality measures. Rising minimum wage makes no changes in the Gini index because those affected by the policy experiment a withdrawal of mean-tested benefits.
Autor et al. (2017)	USA (Detroit)	1999 – 2003	Individual gross earnings	Quantiles	Labour programs	IV quantile regression	<ul style="list-style-type: none"> Direct-hire placements are estimated to significantly increase subsequent earnings – equalising. Temporary help placements have uniformly zero or negative effects on the earnings distribution, and these effects are large and significant at high quantiles – disequalising.
Azzoni et al. (2009)	Brazil	2002 – 2007	Household income - not specified	Gini index	Conditional cash transfer	Microsimulation	Limited reduction of inequality
Barbetta et al. (2018)	Italy	2011	individual gross earnings	Gini index	Personal income tax	Inequality decomposition	<ul style="list-style-type: none"> Half of the total redistributive effect is due to just two tax credits (employment and retirement income). 40 per cent is due to the marginal rate schedule.
Bargain and Callan (2010)	France and Ireland	1998 – 2001	Household equivalent income (market and disposable)	Gini and Atkinson (0.5, 1) indices, p90/p10	Tax and welfare system reform	Inequality decomposition (extended Shorrocks to consider behavioral responses)	<ul style="list-style-type: none"> France: policy impacts have tended to equalize incomes. Ireland: inequality fell because of non-policy related factors, mainly changes in the distribution of gross income as unemployment fell sharply.
Bargain (2012)	UK	1998 – 2001	Household equivalent income (market and disposable)	Gini and Atkinson (0.5, 1) indices, p90/p10	Tax and welfare system reform	Inequality decomposition (extended Shorrocks to consider behavioral responses)	<ul style="list-style-type: none"> The redistributive measures of the Labour government have mitigated the increase in inequality that would have occurred otherwise. The behavioural response is very limited.
Bargain et al. (2017)	Colombia, Ecuador	2012/2014	Per capita disposable and market household income	Gini index	Taxes and social transfers	Microsimulation	The Ecuadorean system is more redistributive.
Bartels and Bönke (2013)	UK and Germany	1984 – 2009	Equivalised household income (disposable and gross) and individual income	Variance	Unemployment insurance, tax and transfers	Incidence analysis	Both welfare states provide the same level of stability and redistribution over time

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Been et al. (2017)	OECD	1995 – 2011	Equivalised household disposable income	s80/s20	Pension system	FE regression	A relatively higher private share of pension provision in a country is associated with higher levels of income inequality among the elderly.
Behrman (2011)	Chile	2004	Individual gross earnings	Gini index	Education expansion	OLS	<ul style="list-style-type: none"> Well-targeted programs reduce the Gini coefficient of individual earnings. These reductions are much larger (from 1.5 to 3 times) for programs targeted towards individuals with low wage rates rather than those targeted to those with low schooling attainment.
Beissinger et al. (2016)	Germany	mid 2000	Individual gross earnings	Skill premium	Unemployment and employment protection	Microsimulation	Hartz reforms led to a decrease of unemployment at the cost of increasing inequality.
Benabou (2002)	USA	1995	Household disposable income	Standard deviation	Education subsidy and progressive taxation	Dynamic heterogeneous-agent economy	<ul style="list-style-type: none"> Education subsidy and progressive taxation lead to reductions of income inequality. Subsidizing education yields slightly higher reductions.
Benczúr et al. (2018)	Hungary	2008 – 2013	Equivalised household disposable income	Gini index, q90/q10, q90/q50, q50/q10	PIT	Microsimulation	Flat tax reform may have boosted income inequality.
Bennett and Vedder (2015)	USA-states	1970 – 2004	Family income	Gini index	Promotion of high education	FE with clustered standard errors	U-shaped relationship between attainment rates of higher education and income inequality.
Bergh and Fink (2008)	120 countries	1970 – 2000	Mix of concepts	Gini index	Public expenditure in higher education	OLS with robust standard errors	Subsidies in higher education do not lower income inequality.
Berliant and Strauss (1993)	USA	1985 – 1987	Individual earnings (gross and net)	Gini index	Tax reform	Microsimulation	Disposable income increased after the federal Tax Reform Act of 1986.
Bitler et al. (2008)	Canada	1992 – 1995	Individual gross earnings	Quantiles	Work incentives	Quantile regression	<ul style="list-style-type: none"> The impact of the Self Sufficient Program on the earnings distribution is zero at the bottom of the distribution, becomes positive for much of the upper third, and falls to zero. Impacts of this program were zero after the subsidy was no longer available.
Blundell et al. (2018)	Britain and USA	1979 – 2015	Household disposable income	CV	Taxes and social transfers	Inequality decomposition	<ul style="list-style-type: none"> Britain: taxes reduce labour inequality by 10% and transfers by 30%. In the US, by 3% and 35% respectively, but not enough to offset the increase in gross labour income inequality.

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Böhm et al. (2015)	USA	2000	Individual net earnings	Skill premium	Education expansion	GEM	<ul style="list-style-type: none"> The expansion of higher education is followed by rising inequality and temporarily lower wages at the bottom of the earnings distribution. The trickle-down effect is observed after five decades.
Bogliacino and Rojas-Lozano (2017)	17 LAC countries	2000 – 2014	Equivalised household disposable income	Gini, Theil, Palma and Atkinson indices	Taxes, minimum wage and social expenditure	OLS	Only minimum wage seems to have a negative effect on inequality, although not for the Palma index.
Bradley et al. (2003)	14 high income countries	1970 – 1990	Household market / household disposable income	Gini index	Taxes and social transfers	OLS (clustered)	Taxes reduce income inequality.
Bravo et al. (2010)	Chile	2002 – 2004	Individual gross earnings	Standard deviation and ratio of quantiles	Voucher for education	Microsimulation	Vouchers for education lead to a small decline in inequality.
Breen and Chung (2015)	US	1986 – 2010	Equivalised household disposable income	Half Squared CV	Education expansion	Inequality decomposition	The contribution of differences in the educational level to income inequality is small.
Brewer et al. (2017)	US - states	1990 – 2013	Individual pre-tax and post-tax earnings	Gini index	Tax exemptions for the elderly	Incidence analysis	The redistributive effect of tax exemptions for the oldest is very modest.
Brink et al. (2007)	Sweden	1999	Household income (market and disposable)	Gini and Atkinson indices and p90/p10	Child-care fee system (maximum fee vs child benefits)	Discrete choice labour supply model	<ul style="list-style-type: none"> The maximum fee reform increases the ratio p90/p10. Child benefits reduce the ratio p90/p10. The Gini index does not vary.
Brito et al. (2017)	Brazil	1995 – 2014	Household market income	Gini index	Minimum wage, social transfers and pensions	Inequality decomposition	Reduction of the Gini index by 14%, of which 64% was due to the increase in the minimum wage, 19% due to pensions and 4% due to social benefits.
Brown et al. (2011)	Germany	2002	Individual gross earnings	Gini index	Hiring subsidies	Microsimulation	Hiring subsidies have a stronger inequality-reduction effect than low wage subsidies.
Brunello et al. (2009)	12 European Countries	1962 – 2000	Individual gross earnings	Quantiles	Compulsory education	Quantile regression	<ul style="list-style-type: none"> Additional schooling reduces wage dispersion. The better-endowed individuals have lower returns to investment in education.

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Cabrera et al. (2015)	Guatemala	2010	Household equivalent income (disposable and market)	Gini index	Tax system	Incidence analysis	The tax-transfer system does little to reduce inequality because of the small size of social spending, even after considering the monetary value of education and health services
Caucutt (2004)	USA	–	Disposable income	Gini index	Education vouchers for attending private schools	GEM	<ul style="list-style-type: none"> • Vouchers lead to an increase decrease in inequality. • Extending the model to incorporate peer effects may be perceived to weaken or overturn the results.
Caminada and Goudswaard (2001)	The Netherlands	1981 – 1997	Equivalised household disposable income	MLD	Social transfers	Incidence analysis	Social transfers are major contributors to reductions in overall reduction in inequality.
Caminada et al. (2019b)	OECD countries	1982 – 2014	Equivalised household income (disposable and gross)	Gini index	Tax-transfer system	Secuential accounting decomposition	Tax-benefit systems in 2013 are more effective at reducing inequality than in the mid-1980s.
Caminada et al. (2019a)	31 Countries	2007 – 2013	Equivalised household disposable/ market income	Gini index	Fiscal consolidation after 2008 crisis	Microsimulation	On average, the share of social transfers in total redistribution is 76%, while income taxes account for 24%.
Cardak (2005)	USA	–	Disposable income	Gini index	Education vouchers for attending private schools	OLG model	Vouchers lead to an increase in income inequality.
Casalone and Sonedda (2013)	Italy	2004	Household equivalised income (disposable and market)	Quantiles	PIT	Microsimulation	The Personal Income Tax reform led to a decrease in the Gini index from 0.39 to 0.31
Castro (2018)	15 EU countries	1990 – 2012	Household gross income	Gini index	Public spending in education. Fiscal consolidation.	Dynamic model - LSDV, FE and RE and IV	<ul style="list-style-type: none"> • Inequality decreases significantly when government spending on social protection increases. • Consolidation via expenditure cuts is also significant but not via tax expansion. • Education expenditure has no impact on income inequality.

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Celikay and Sengur (2016)	31 countries (28 EU + Iceland, Macedonia and Turkey)	2004 – 2011	–	Gini index	Public education expenditures	Panel error corrected models	Public education has a negative impact on income inequality in the long term.
Chang et al. (2018)	105 Countries	1984 – 2014	Monetary income	Gini index	VAT	GMM	VAT increases income inequality.
Chang et al. (2018)	32 OECD	2010	Household equivalent income (disposable and market)	Gini index	Optimal tax progressivity	CGE	<ul style="list-style-type: none"> • Inequality could be reduced by increasing the progressivity of the tax system. • The optimal progressivity in the income tax schedule is higher than the current level.
Checchi and van de Werfhorst (2017)	41 cohorts from 20 European countries	1950 – 2009	Individual gross earnings	Gini index	Determinants of inequality	FE, IV 2SLS, GMM	<ul style="list-style-type: none"> • Inequality in the quality of education affects inequality in earnings. • The effect of quality is stronger than the effect of attained level. • Increasing schools/teachers and universities autonomy reinforce their potential competitiveness.
Chen (2005)	USA	1980	Household income	Gini index	Education vouchers for attending private schools	OLG model	Vouchers lead to an increase in income inequality.
Chen et al. (2012)	Canada	1980 – 2005	Market income	Gini index	Social transfers and taxes	Inequality decomposition	<ul style="list-style-type: none"> • Taxes contribute negatively to income inequality. • The effect of social transfers depends on the region analysed.
Chen et al. (2013)	China	2002	Individual gross earnings	Gini and Theil indices, MLD, CV	Education expansion	Inequality decomposition	<ul style="list-style-type: none"> • Education explains over 10% of urban inequality in 2002. • The contribution of education to inequality has increased substantially since 1988.
Canberra Group (2001)	16 OECD	1978 – 2012	Household equivalent income (disposable and market)	Gini index	Fiscal consolidation	PVAR	We find that tax-based consolidations reduce income inequality, but at the cost of weaker economic activity.
Clark and Leicester (2004)	UK	1979 – 2001	Household equivalent income (disposable and market)	Gini index, CV, MLD, s90, s10	Tax reform	Microsimulation	<ul style="list-style-type: none"> • Income tax cuts in the late 1970s and 1980s increased inequality. • Higher direct tax rates in the early 1980s and 1990s, together with more generous means-tested benefit had an equalising effect equalising.
Claus et al. (2013)	14 Asian countries	1970 – 2009	Mix of definitions	Gini index	Taxes and social transfers	FE	Large redistributive effect of personal income taxation. Social protection enlarges income disparities

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Coady and Harris (2004)	Mexico	1996	Household income (disposable and market)	Aggregate welfare	Flat tax reform	GEM	The program reduced inequality when is financed by cutting food subsidies. Financing it by VAT might increase inequality.
Coady and Dizioli (2018)	110 countries	1980 – 2010 (five – year intervals)	Disposable income	Gini index	Education expansion	Dynamic model (GMM and System GMM)	Educational inequality affects income inequality positively and its coefficient seems to be greater in developing economies.
Čok et al. (2012)	Slovenia	2004 – 2010	Individual net earnings	Gini index and CV	PIT	Microsimulation	Tax reforms started in 2004 benefited all taxpayers, but the biggest relative winners were the poorest individuals.
Comerford and Eiser (2014)	Scotland	2016	Household income (disposable and market)	Aggregate welfare	PIT	Microsimulation	The policy that seems to have the greatest effect on income inequality is the increase on the basic tax rate.
Conesa and Krueger (2006)	USA	2004	Household income (disposable and market)	Gini index	PIT	CGE	<ul style="list-style-type: none"> • Lower marginal tax rates for high-income people increase labour supply and savings incentives. • The desired amount of redistribution and insurance is accomplished by the fixed deduction. However, inequality increases because the tax burden of the middle class increases.
Cooper et al. (2015)	USA	1984 – 2011	Household Equivalised (market, after-tax, disposable)	log(90/10)	Tax system	Incidence analysis	<ul style="list-style-type: none"> • The tax system reduces income inequality substantially in all states. • Federal taxes are progressive while state taxes are regressive.
Cornia (2010)	17 LAC countries	1990 – 2007	Equivaished household disposable income	Gini index	Social security	FE	Positive relationship between public expenditure on social security and income inequality.
Correia (2010)	USA	2008	Household income	welfare inequality	PIT	CGE	The replacement of progressive PIT with a flat consumption tax reduces inequality thanks to deductions, which increase the progressivity.
Countryman (1999)	Canada	1975 – 1996	Household market income	Gini index and MLD	Unemployment insurance	Incidence analysis	Reduction of inequality between 1-2% due to unemployment insurance.
Coyne (2015)	33 African countries	2005	Household income	Gini index	School quality	OLS	<ul style="list-style-type: none"> • Colonial languages are not widely spoken as first languages, so most people depend on formal education to learn them. • If these languages are used as the media of instruction, students who are unable to master the language are unlikely to master any other material, thus leading to educational and income inequality.
Creedy et al. (2010)	New Zealand	2006/07	Individual and household equivalent and total (market, gross and disposable)	Gini and Atkinson (0.2 - 1.5) indices	Taxes and social transfers	Incidence analysis	<ul style="list-style-type: none"> • Taxes and transfers are equally redistributive when equivalent income is considered. • When individual or household income is used, taxes have a much larger equalising effect.

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Cruz-Martinez (2017)	18 LAC countries	2000 – 2010	Household disposable income	Gini index	Social protection	FE	The welfare state development (composite indicator) is not effective in reducing income inequality
Darcillon (2016)	18 OECD countries	1980 – 2012	Equivalised household market income	Gini index	Employment protection	Dynamic specification – IV-2SOLS.	Negative correlation between employment protection and income inequality.
De Agostini et al. (2018)	UK	2010 – 2015	Household disposable income	Quantiles	Taxes and social transfers	Microsimulation	Increases in tax-free income tax allowances paid for by real cuts in benefits and tax credits are regressive.
Gregorio and Lee (2002)	worldwide	1965 – 1990	Mix of concepts	Gini index	Education expansion	Seemingly unrelated equations	<ul style="list-style-type: none"> • Education expansion reduces inequality. • Educational inequality has a positive impact on income inequality.
Ferreira de Mendonça and Martins Esteves (2014)	Brazil	1999 – 2008	Disposable income	Gini and Theil indices, s10/s40	Determinants of inequality	System GMM	<ul style="list-style-type: none"> • Social transfers have a positive impact on inequality. • This result suggests that benefits may not be reaching the poorest families.
de Moura et al. (2013)	Brazil	1987 – 2006	Household disposable income	Gini and Theil indices	Social security	Counterfactual kernel densities (normal decomposition)	The social security system is not an effective mechanism for income redistribution
Debowicz and Golan (2014)	Mexico	2008	Household disposable income	Gini index	Conditional cash transfer	GEM	<ul style="list-style-type: none"> • Extending the coverage of the Oportunidades program to the poor increases school attendance, reduces child labour supply, and increases the equilibrium wages of children who remain at work. • With a relatively low fiscal cost, Mexican social policy could further reduce income inequality.
Decoster et al. (2010)	5 high income countries	1999–2005	Household non-durable expenditures	Gini index	VAT vs PIT	Microsimulation	Indirect taxes lead to negative welfare effects for households in low-income deciles.
Doerrenberg and Peichl (2014)	OECD countries	1981 – 2005	Household (different concepts)	Gini index	Taxes and social transfers	OLS and IV	<ul style="list-style-type: none"> • Differences in social expenditure within countries explain varying levels of inequality, • Progressive taxation seems to be less effective than transfers.
Dosi et al. (2017)	-	–	Individual disposable income	Gini index	Flexibilization of firing conditions	Agent-based model	More flexible firing conditions increase income inequality.
Du (2015)	China	2012	Per capita disposable and market household income	Gini and GE(-1, 0, 1, 2) indices	VAT reform	Incidence analysis	The reform improves redistribution by lowering the level of regressivity

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Duncan (2014)	Russia	2001	Individual earnings and household income and consumption (gross and disposable)	Gini index	PIT	Microsimulation	Fat tax reduces inequality because the indirect behavioural responses had a larger effect on the distribution of income than the direct tax effect
Duncan and Peter (2016)	Global (165)	1981 – 2005	Mixture of definitions	Gini index	Progressivity of national income tax	IV	<ul style="list-style-type: none"> • Progressivity reduces income, inequality. • It has a significantly smaller impact on consumption-based inequality.
Echevarria and Iza (2011)	Spain	2004	Lifetime net income	Gini index	Pension system	GEM	<ul style="list-style-type: none"> • An increase in the (normal and early) retirement age and the minimum pension lowers inequality. • An increase in the early retirement penalty increases inequality.
Eckstein and Zilcha (1994)	–	–	Individual earnings (after tax)	Lorenz curves	Compulsory education	OLG model	Compulsory years of schooling, financed by a proportional tax rate on wage income, reduce the level of earnings inequality.
Enami et al. (2019)	Iran	2011/12	Household income (disposable and market)	Gini index	Taxes and social transfers	Incidence analysis	Transfers are generally more effective in reducing inequality.
Engel et al. (1999)	Chile	1996	Equivalised household income (disposable and market)	Gini index	Tax system	Incidence analysis	<ul style="list-style-type: none"> • The scope for direct income redistribution through progressivity of the tax system is rather limited. • The tax system in place in 1996 was slightly regressive.
Etgeton (2018)	Germany	cohorts 1940 to 1944	Consumption	Ratio p90/p50, p90/p10	Pension system	Dynamic discrete choice model	<ul style="list-style-type: none"> • Decreasing the risk of involuntary job loss is effective in combating inequality because involuntary job loss leads to a drop in consumption during retirement. • Uniformly improving health increases inequality.
Farzanegan and Habibpour (2017)	Iran	2009	Per capita disposable and market household income	Gini index	Taxation of resource rents	Inequality decomposition	Universal transfers are more effective in addressing income inequality than targeted policies.
Fasang (2012)	Germany and UK	Cohort 1932 to 1940 get 65 years in 1991 – 2006	Household and individual disposable income	Gini index	Pension system	Sequence analysis	The liberal welfare state in Britain generates more unstable retirement trajectories than the conservative-corporatist welfare state in Germany, but this is not associated with higher income inequality among retirees in Britain.
Ferrarini and Nelson (2003)	10 high-income countries	1995	Household disposable income	Gini index	Social transfers	Inequality decomposition	<ul style="list-style-type: none"> • The equalizing effect of gross unemployment compensation is greatest in Finland followed by Sweden, Denmark and Belgium. • The equalizing effect of net unemployment compensation is greatest in Belgium followed by Sweden, Finland and Denmark.

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Ferreira et al. (2008)	Brazil	1981 – 1994	Household gross income	GE	Education expansion	Inequality decomposition and microsimulation	<ul style="list-style-type: none"> • Increase of income inequality from 1981-1993 due to the expansion in the levels of formal education in the labour force. • This was because of the convex nature of the returns to schooling in Brazil. • 1993–2004 is a period of reducing inequalities thanks partly to the decreasing returns of schooling.
Fields (2005)	-	–	Individual gross earnings	Lorenz curves	Minimum wage	Microsimulation	Restriction to wage salaries in the modern sector will only lead to a reduction of income inequality if the labour demand is inelastic.
Figari et al. (2017)	6 EU countries	2001, 2003, 2004	Equivalised household disposable income	Gini and Atkinson (1, 1.5) indices	Ownership deduction	Microsimulation	Small inequality-reducing effect of net imputed rent taxation
Flachsbarth et al. (2018)	Peru	2004 – 2012	Household disposable income	Gini index	Social transfers	Inequality decomposition	Public transfers contribute to inequality reduction in Peru primarily due to the introduction of Juntos.
Forster et al. (2019)	135 low and middle income countries	1980–2014	Disposable household income	Gini index	Fiscal policy (general)	2SOLS - IV seems valid	<ul style="list-style-type: none"> • The marginal effect of an additional fiscal policy condition from the IMF is an increase of 1.7 points of the Gini index. • This effect persist in the medium term (over three years) but becomes weaker. • In many U.S. states, higher-education policies can influence the supply of college graduates. • The increased supply of college graduates is shown to contribute, albeit with a delay, to the containment of increasing wage differentials between college-educated and high-school-educated workers.
Fortin (2006)	US states	1979 – 2002	Individual earnings	Skill premium	Expansion of higher education	OLS, IV	<ul style="list-style-type: none"> • The increased supply of college graduates is shown to contribute, albeit with a delay, to the containment of increasing wage differentials between college-educated and high-school-educated workers.
Frenette et al. (2009)	Canada	1980 – 2000	Equivalised household income	log(90/10)	Tax-transfer system	Incidence analysis	The tax-benefit system in 2000 was much more redistributive than in 1980.
Friedlander and Robins (1997)	4 states in the US	mid – 80s	Individual gross earnings and individual income after transfers	Quantiles	Active vs passive employment programmes	Quantile regression	<ul style="list-style-type: none"> • Employment- focused programs benefit only individuals above the median of earnings distribution, while having a negative effect at the very top. • Training programs have a positive above the median.
Fritzell (1993)	Canada, Sweden, USA, UK, Germany	1979 – 1986	Equivalised household disposable income	Gini and Theil indices, CV	Taxes and social transfers	Incidence analysis	Market income inequality increased in all countries, but only Germany and Canada counterbalanced this increase with redistribution policies.
Fuest et al. (2008b)	Germany	2006	Individual income (disposable)	Gini index	PIT	Microsimulation	<ul style="list-style-type: none"> • The abolition of a set of deductions combined with a reduction of income tax rates to preserve revenue neutrality reduces inequality. • Inequality increases if a flat rate schedule is implemented.

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Fuest et al. (2008a)	Germany	2007	Equivalised household disposable income	Gini and Theil indices	PIT	Microsimulation	<ul style="list-style-type: none"> A flat PIT rate with low allowance achieves rather small efficiency gains, which come at the price of a significant increase in inequality. The increase in income inequality can be avoided by combining a higher tax rate with a higher basic allowance.
Gao (2008)	China	1998 – 2002	Equivalised household disposable income	Gini and Atkinson indices	Social transfers	Incidence analysis	Social benefits reduced income inequality in China.
Gao et al. (2013)	China	1988 – 2007	Household income (market and disposable)	Gini index	Social transfers	Incidence analysis	<ul style="list-style-type: none"> The Chinese welfare state is highly divided along urban-rural lines: the urban social benefit system has consistently reduced income inequality and has remained progressive over time. The rural system is minimal and had little impact on reducing income inequality and has been largely regressive.
Gao et al. (2019)	China	2002 – 2013	household market / household disposable income	Gini index	Taxes and social transfers	Incidence analysis	Social policies played an important redistributive role and helped curtail the widening income inequality gaps (especially pensions).
Garfinkel et al. (2006)	10 OECD countries	1995 – 2000	Equivalised household income (disposable and full)	P10/P50, p90/p50, p90/p10	Impact of in-kind benefits and indirect taxes	Incidence analysis	The consideration of in-kind benefits and indirect taxes substantially narrows cross-national differences in the net value of social welfare transfers and reduces inequality within and across countries.
Garner and Terrell (1998)	Czech Republic and Slovakia	1989 – 1993	Equivalised household disposable income	Gini index	Taxes and social transfers	Inequality decomposition	<ul style="list-style-type: none"> The raise in earnings inequality is mitigated by changes in the tax and transfer components in both countries. Transfers contributed more in the Czech Republic and taxes in Slovakia.
Gastaldi et al. (2008)	Italy	1995 – 2000	Household equivalent income (disposable and market)	Gini index	PIT	Inequality decomposition (novel approach)	The tax system in 2000 is more redistributive than in 1995.
Gastaldi and Liberati (2009)	Italy	1991 – 2000	Equivalised household income (disposable and extended)	Gini index	Social transfers	Incidence analysis	Child benefits have been an effective way to redistribute income.
Gertel et al. (2008)	Argentina	2002	Equivalised household disposable income	Gini index	Conditional cash transfer	Inequality decomposition	The Program Plan Jefes y Jefas led to a 5% reduction of the Gini index.

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Gilbert et al. (2001)	UK	1991 – 1998	Individual gross earnings	Gini index and CV	Minimum wage	Microsimulation	Reduction of inequality that is more pronounced in remote rural areas (9% reduction) than in urban areas (4%)
Goetz et al. (2011)	US – states	1999 – 2007	Family income	Gini index	Tax system	OLS	Lower taxes, tax incentives and financial assistance programs reduce income inequality.
Golden and Wallerstein (2011)	16 OECD countries	1980 – 2000 (five-year intervals)	Individual gross earnings	$\log(q90/q10 - 1)$	Unions	Weighted OLS	Negative correlation between union density and inequality
Goñi et al. (2011)	6 LAC and 8 European countries	1997 – 2005	Household income (market, gross, post-tax, disposable)	Gini index	Taxes and social transfers	Incidence analysis	In most Latin American countries the fiscal system is of little help in reducing inequality.
González-Torrabadella and Pijoan-Mas (2006)	Spain	1999	Household income (disposable and market)	Gini index	PIT	CGE	Flat tax would increase inequality unless there is a generous tax exemption, in which case the aggregate economic output would also decrease.
González and Martner (2012)	18 LAC countries	1990 – 2010	Mix of concepts	Gini index	Determinants of inequality	OLS	<ul style="list-style-type: none"> • Higher rates of tertiary and secondary education have a negative impact on income inequality. • Social spending, transfers and subsidies reduce inequality. • Tax progressivity also affects income inequality negatively.
Gruber (2010)	USA	2005	Individual gross earnings	Percentiles	Tax exclusion for employer-sponsored insurance	Microsimulation	The employer-sponsored insurance (ESI) is regressive because both tax rates and ESI expenditures rise with income.
Guvenen et al. (2013)	USA and 7 European countries	1983 – 2003	Individual gross earnings	p90/p50, p90/p10, p50/p10	Labour tax	Life cycle model	Countries with more progressive labour income tax schedules have (i) significantly lower before-tax wage inequality. (ii) Experienced a smaller rise in wage inequality since the early 1980s.
Hanni et al. (2015)	17 LAC countries	2011	Per capita disposable and market household income	Gini index	Taxes and social transfers	Incidence analysis	Besides compressing the net wage structure, progressive taxation distorts the incentives to accumulate human capital, hence reducing the cross-sectional dispersion of gross wages.
Hanushek et al. (2003)	–	–	Individual disposable income	Gini index	Educatoion subsidy, wage subsidy or negative income tax	GEM	With externalities in production, governmental subsidies of education raise the GDP and create a more equal income distribution.
Hatch and Rigby (2015)	US - states	1980 – 2005	Individual market inequality	Gini index and top 1% share	Taxes on the wealthy, taxes on the poor, spending on the poor	Factor analysis and FE	<ul style="list-style-type: none"> • Policies affecting taxing and spending on the poor had a larger effect on the overall distribution. • Taxes on the wealthy affected top 1% inequality.

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
He and Sato (2013)	Urban China	1995 – 2002	Household income (market and disposable)	Gini index	Social security coverage	Incidence analysis	<ul style="list-style-type: none"> • Redistribution is very similar in both years. • Inequality in disposable income raised because of the increase in market income inequality.
Heer and Trede (2003)	Germany	1996	Individual earnings (gross and net)	Gini index	Tax reform	CGE	Tax reform using (1) Flat income rate or (2) consumption tax both raise the level of inequality (2%)
Heer (2006)	Germany	2005	Individual earnings	Gini index	Unemployment insurance	Microsimulation OLG	Hartz reforms led to an increase in inequality.
Herauld and Azpitarte (2015)	Australia	1994 – 2009	Household equivalent income (disposable and market)	Gini index	Tax system	Inequality decomposition	Rise in net income inequality took place despite the decline in market income inequality.
Herauld and Azpitarte (2016)	Australia	1999 – 2008	Household equivalent income (market and disposable)	Gini index and percentile ratios	Taxes and social transfers	Inequality decomposition	The direct effect of tax-transfer policy reforms accounts for half of the observed increase in disposable income inequality.
Herrington (2015)	US and Norway	2000	Individual gross earnings	Gini index	Tax and education systems	Overlapping generations-GEM	A flat income tax does not reduce inequality.
Hirvonen et al. (2018)	Ethiopia	2014	Consumption gross and net	Gini index	Tax system	Incidence analysis	Neither tax nor social protection are effective in reducing inequality.
Huber and Stephens (2014)	18 high-income countries	1995	Market income after tax, pre transfers)	Gini index	Unions and public education expenditures	FE and RE	<ul style="list-style-type: none"> • Both union density and wage coordination have a negative effect on income inequality. • Education spending also presents a negative coefficient.
Huggett and Ventura (1999)	USA	1995	Individual gross earnings	Gini index	Pension system	Partial equilibrium life-cycle model	The social security reform led to no major changes on inequality.
Hwang (2016)	South Korea	1998 – 2010	Individual income (after tax)	Gini index	Pension system	Inequality decomposition	The pension system is regressing.
Iosifidi and Mylonidis (2017)	17 OECD	1970 – 2001	Household disposable income	Gini, s80/s20	Tax system	IV	Increasing the tax burden on labour or consumption relative to capital leads to higher income inequality.
Ivančev and Jovičić (2011)	Serbia	2006 – 2009	Household disposable income	Gini index	Social transfers	Incidence analysis	Social policy has no impact on income inequality levels.
Iyer et al. (2012)	USA	1995 – 2006	Individual net earnings	Gini index	Tax system	Inequality decomposition	<ul style="list-style-type: none"> • Decrease in real progressivity attributed to regressive taxation of capital gains. • Increase in inequality even though progressivity increased for labour income.

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Jacobs et al. (2010)	The Netherlands	2006	Household disposable income	Theil index	PIT	CGE	If the PIT rate becomes flat there is a trade-off between employment and inequality.
Jacobs and Myers (2014)	USA	1951 – 2010	Household income	Gini index	Unions	OLS with corrected standard errors	The proportion of workers in unions has a significant and negative effect on national income inequality.
Jalles (2017)	27 emerging economies	1980–2014	Mix of definitions	Gini index	Fiscal consolidation	FE and dynamic impulse response	Fiscal consolidations tend to lead to an increase in income inequality and reduce the redistributive role of fiscal policy.
Janský and Röhryová (2016)	Czech Republic	2011	Equivalised household disposable income	Gini index	Tax system	Microsimulation	Direct taxes tend to reduce income inequality, while the regressive nature of indirect taxes raises inequality.
Joo (2011)	USA	1995 – 2007	Household income (market and disposable)	Gini index	Child benefits (cash and in-kind)	Incidence analysis	The impact of children's federal programs on income inequality has become weaker between 1995 – 2007
Josifidis and Supic (2019)	35 OECD	1980 – 2015	Individual market income	Gini index	Education expansion	GMM	U-shaped relationship between human capital and income inequality.
Jouini et al. (2018)	Tunisia	2010	Household income (Market/disposable/consumable/final)	Gini and Theil indices, q90/q10	Taxes and social transfers	Incidence analysis	Tunisia's redistributive fiscal policy significantly reduces inequality.
Judzik et al. (2017)	Argentina	1996 – 2014	Household gross income	Gini index	Social transfers and pensions	Inequality decomposition	Social transfers play a small redistributive role in Argentina.
Kalb and Thoresen (2010)	Norway and Australia	2003	Household disposable income	Gini index	Family policy	Microsimulation	<ul style="list-style-type: none"> • Australian family support is income tested. • Norwegian programs are universal. • The level of redistribution of this program is higher in Australia.
Kang (2004)	Nepal	1995	Household income (market and disposable)	Gini index	Social transfers	Incidence analysis	Public transfers did not contribute to lowering of income inequality.
Karoly (1994)	USA	1970 – 1980	Household equivalent income (market and disposable)	Gini index	Tax reform	Incidence analysis	The rise in pre-tax income inequality dominates any increase in post-tax inequality due to a reduction in the progressivity of the tax system during the 1980s
Keane and Prasad (2002)	Poland	1985 – 1997	Equivalised household income (disposable and gross)	Gini index, MLD, CV	Tax-transfer system	Incidence analysis	Disposable income inequality decreased thanks to transfers during the transition.
Klazar and Slintáková (2012)	Czech Republic	2004	Lifetime earnings with and without pension benefits	Gini index	Pension system	Incidence analysis	The pension system redistributes income from towards the poor participants and from men to women, thus reducing income inequality.

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Klein and Winkler (2019)	17 OECD	1980 – 2011	Gross and disposable equivalised household income	Gini index	Fiscal consolidation	Local projections	Lower-income ones and from men to women.
Kogan (2017)	USA	1940 – 2012	Individual market income	Gini and the share of the top 1% and 10%	Rigth to work laws	Differences in differencces and leads and lags	Right to work laws led to no significant changes in income inequality
Kolm and Tonin (2015)	8 European countries	2005 – 2012	Equivalised household disposable income	Percentiles	Conditional vs unconditional benefits	GEM	<ul style="list-style-type: none"> Workers are willing to accept lower wages when benefits are conditional on work. Lower wages, in turn, increase job creation and lower the unemployment rate, thus also boosting participation.
Kornstad and Thoresen (2006)	Norway	2003	Equivalised household disposable income	Percentiles	Child benefits	Microsimulation	The working families' tax credit had a strong equalising effect.
Koske and Wanner (2013)	22 OECD countries	–	Individual earnings	p90/p50, p90/p10, p50/p10	Determinants of inequality	Bayesian model averaging	<ul style="list-style-type: none"> Higher education decreases inequality. Employment protection, unemployment and unionization affect the 90/10 share and the bottom tail but not the top tail (90/50 share). Labour tax reduces earnings inequality.
Koutsampelas and Tsakoglou (2015)	Greece	2005	Eqivalised household income (disposable and extended)	Absolute Gini and Atkinson indices	Public expenditure in education	Incidence analysis	Public spending in education is progressive (benefit more the worse off) in relative terms. However The analysis shows that primary education transfers decrease (absolute) inequality, secondary education transfers have an ambiguous effect and tertiary education transfers appear to be clearly regressive.
Kramer et al. (2016)	Bosnia, Slovenia	2011	Gross and net individual income	Gini index	Tax system	Microsimulation	The PIT system exhibits a higher redistributive effect in Slovenia than in Bosnia.
Lambert et al. (1991)	Cote D'Ivoire	1980 – 1986	Household disposable income	Theil index	Export tax	Microsimulation	An increase in the export tax substantially increases income inequality
Lee and Lee (2018)	95 countries	1980 – 2014 (five – year intervals)	Disposable income	Gini index	Educational expansion and educational inequality	FE and IV-FE	<ul style="list-style-type: none"> Educational inequality has a significantly positive effect on income inequality. The coefficient of educational attainment is not significant.
Lehmus (2014)	Finland	2006	Gross individual labour income	Gini index	PIT	CGE	A reform that goes from progressive to a flat PIT rate tends to increase inequality.
Lehmus (2014)	Finland	1996–2008	Gross and net labour income	Gini index	Labour tax	Dynamic GEM	Changes in the Gini index due to the labour tax cuts are moderate.
Leigh (2008)	USA - states	1977 –2002	Individual pre-tax hourly wages	Gini index	Tax policies	Incidence analysis	No evidence that more redistributive state taxes lead to a more unequal distribution of pre-tax hourly wage.

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Lin (2007)	Taiwan	1976 – 2003	Income	Gini index	Education expansion	OLS	<ul style="list-style-type: none"> Increasing the average level of schooling can significantly reduce income inequality. A higher dispersion of education inequality will widen income inequality.
Baihui (2017)	China	2002 – 2009	Household income market and disposable	Gini index	Taxes and social transfers	Inequality decomposition	<ul style="list-style-type: none"> Government's net transfers mitigated the increase in household market income inequality. The redistributive impact becomes stronger over time.
Liu and Martinez-Vazquez (2015)	Global	1970 – 2009	Mixture of definitions	Gini index	Tax system	IV	<ul style="list-style-type: none"> Direct taxes are more effective in reducing net income inequality. Indirect taxes affect expenditure inequality relatively more.
Lobao and Hooks (2003)	USA	1970 – 1990	Household income	Gini index	Social transfers	FE and RE	Public transfers play an important role in reducing income inequality.
Luh and Wei (2019)	Taiwan	1999 – 2013	Household disposable income	Gini index and variance of log(income)	Pension system	Inequality decomposition	<ul style="list-style-type: none"> The Old Farmer Pension program led to an increase of inequality until 2004. Thereafter, the program has an equalising impact.
Lustig and Pereira (2016)	9 LAC countries	2009 – 2012	Equivalised household income (disposable and gross)	Gini index	Taxes and social transfers	Incidence analysis	<ul style="list-style-type: none"> Brazil has the most redistributive tax-benefit system and Guatemala the least. Public spending in education and health have higher equalizing effects than other transfers.
Ma et al. (2015)	China	1997 – 2009	Household income (disposable and market)	Gini index	PIT	Inequality decomposition	China's levels of progressivity and tax burden are similar to those of Latin American countries.
Mahadevan et al. (2017)	Indonesia	2015	Household disposable income	Gini index	VAT (Hotels and restaurants)	CGE	VAT is only effective in reducing inequality if tax revenue is spent in cash transfers and expenditure in education and health.
Mahoney (2013)	US	1989 and 2000	Household gross earnings, household income (market and extended)	Gini index	Tax, social transfers and public education	Inequality decomposition	My main findings show that school spending, when converted into a component of income, served to reduce extended-income inequality through improvements in vertical equity.
Mardones (2015)	Chile	2011	Household disposable income	Gini index	Public education expenditures and subsidy for higher education	CGE	Both policies have a similar equalising effect.

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Marsh (2015)	Global	2000 – 2009	Equivalised household disposable income	Gini index	Determinants of inequality	OLS	Social spending not significant.
Martinez-Vazquez et al. (2012)	Global (150)	1970 – 2009	Household gross and net income, consumption	Gini index	Taxes and social transfers	GMM	<ul style="list-style-type: none"> Progressive personal income taxes have a positive impact on income distribution. Corporate income taxes also have a positive effect on income distribution but this effect is eroded away with the degree of globalization or openness.
Martinez-Vazquez and Vulovic (2014)	20 LAC countries	1972 – 2008	Mix of definitions	Gini index	Tax system	RE and IV	Direct taxes in Latin America do not play a significant role in dampening economic inequality.
Martorano (2014)	Uruguay	2006 – 2009	Pseudo-individual income gross and net	Gini index	Labour and capital income tax	Incidence analysis	The new tax on labour income lowered inequality by 2 points.
Martorano (2015)	Hungary and Iceland	2009 – 2012	Household equivalent income (market and disposable)	Gini index	Tax reform	Incidence analysis	<ul style="list-style-type: none"> The Hungarian tax reform led to a drop in redistribution. Iceland's tax reform increased the ability of government to redistribute leading to a decrease of inequality.
Mattila-Wiro (2009)	Finland	1995–2000	Equivalised household disposable income	Gini index and GE(2)	Work incentive trap reform (cuts at the top marginal rates and reductions of social benefits)	Microsimulation	The reform lead to very marginal changes in the inequality measures.
McKee and Todd (2011)	Mexico	2002	Individual earnings	Gini and Theil indices, interquartile range and CV	Conditional cash transfers	Dinardo simulation	<ul style="list-style-type: none"> The educational expansion leads to an increase in inequality for men and a slight decrease for women to the large induced increase in female employment. Progresas has small impact on inequality because: (1) Increasing returns at higher schooling levels. (2) Targeting children from poor backgrounds imperfectly targets future low-earning adults, because of substantial intergenerational mobility.
Meng et al. (2013)	China (16 provinces)	1988–2009	Individual earnings (only male)	Variance of log(earnings)	Determinants of inequality	Inequality decomposition	College expansion contended the increase in market income inequality.
Mertens and Montiel Olea (2018)	USA	1946 – 2012	Individual gross earnings	Average of the top 10 and the bottom 90	Marginal tax rates	IV	Tax cuts targeting the top 1% have short-run positive effects on economic activity, but to increase inequality in pretax incomes.

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Milanovic (1994)	5 socialist countries	1988 – 1989	Household gross income	Gini index	Tax-transfer system	Incidence analysis	<ul style="list-style-type: none"> • Cash social transfer in socialist economies in the years immediately preceding the collapse of socialism accounted for a similar proportion of gross income than in developed welfare economies. • Transfers are paid on the basis of demographic characteristics, hence reducing their redistribution role to the extent that some characteristics were related to income variables.
Miyazaki and Kitamura (2016)	Japan	1984 – 2009	Household (market, after-tax, disposable)	Gini index	PIT	Incidence analysis	Tax reforms of 1987 and 1989 had a negative impact on inequality.
Morgan and Kelly (2013)	19 LAC	1980 – 2000	Eqivalised household income (market and disposable)	Gini index	Government expenditures	Error corrected model	<ul style="list-style-type: none"> • Human capita spending has a long-term negative effect on income inequality. • Social spending has no effect neither short or long term.
Muinelo-Gallo and Roca-Sagalès (2011)	43 middle and high income countries	1972 – 2006	Household disposable income	Gini index	Social expenditures	OLS, FE and RE and GMM	<ul style="list-style-type: none"> • Direct taxes have an equalising effect. • The coefficient of indirect taxes is not significant. • Public expenditure has a significant and sizeable negative effect on income inequality.
Mulenga and Ataguba (2017)	Zambia	2010	Household consumption	Atkinson index (0.4)	Finance of the health system	Incidence analysis	Financing health services through indirect taxes in Zambia induces a significant pro-poor redistribution.
Nantob (2016)	46 low and middle income countries	2000 – 2012	Mix of concepts	Gini index	Tax system	GMM	Linear (positive) relationship between taxes and income inequality.
Nieuwenhuis et al. (2019)	18 OECD countries	1981 – 2008	Household disposable income	CV	Family policy	FE regression	<ul style="list-style-type: none"> • We did not find that family allowances and tax benefits for families with children were associated with Female labour force participation (FLFP) nor the level of inequality. • Reconciliation policies are positively associated with higher FLFP rates and reductions in income inequality.
Nugraha and Lewis (2013)	Indonesia	2008	Household Equivalised (market, after-tax, disposable)	Gini index and percentile ratios	Tax system	Incidence analysis	<ul style="list-style-type: none"> • Income inequality is improved only marginally by government imposition of income tax. • Household's production is a strong equaliser.
Nyamongo and Schoeman (2007)	South Africa	1989 – 2003	Individual net earnings	Gini index	PIT	Incidence analysis	The redistributive effect of the tax system decreases over time.
O'Donoghue et al. (2018)	Ireland	2007 – 2012	Income	Gini index	Tax-transfer system	Incidence analysis	Benefits and transfers had an equalising effect on the market income distributions that offset the increase of inequality over the financial crisis.

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Obadic et al. (2014)	15 EU countries and 13 Eastern-European	2000–2011	Wage income	Gini index	Taxes on labour, consumption and capital	FE and RE	<ul style="list-style-type: none"> • Consumption and capital taxes do not seem to have a significant effect on income inequality. • Social contributions (social security taxes) and labour income tend to reduce income inequality.
Obi and Ndhleve (2011)	2 rural communities in South Africa	2007	Household income + pensions (no tax)	Gini index	Pension system	Inequality decomposition	Agriculture income and pensions/grants exhibit the greatest inequality reducing effect followed by wage income.
Ochmann (2016)	Germany	2000	Equivalised household disposable income	Gini, GE(-1, 1)	Germany's year 2000 tax reform	Microsimulation	The tax reform had a Minimal impact on inequality (unequalising effect).
Odedokun and Round (2001)	35 African countries	1965 – 1999	Mix of concepts	Gini index	Determinants of inequality	OLS	<ul style="list-style-type: none"> • Total expenditure has a negative effect on inequality. • Subsidies have a positive effect.
Oliver (2008)	14 OECD countries	1980 – 2002	Individual gross earnings	q90/q10	Wage scales	OLS with corrected standard errors	Wage scales prevent from raising earnings inequality
Ouedraogo (2015)	30 SSA countries	1985 – 2012	Equivalised household disposable income	Gini index	Tax policies	Mean Group technique	Pro-cyclical fiscal policy leads to more income inequality.
Ozawa and Wang (1994)	US	1990	Household (market, after-tax, disposable)	Gini index	Taxes, social transfers and in-kind benefits	Incidence analysis	Public income transfers are more powerful than taxes in equalizing the income distribution (overall reduction is 21.6%)
Paetzold and Tiefenbacher (2018)	Germany	2010	Equivalised household disposable income	Gini and Atkinson (1) indices	Labour vs property taxes	Microsimulation	Moving from taxing labour to taxing property increases the revenue with minimal impact on the distribution of income.
Palme (1996)	Sweden	1991	Household equivalent income (disposable and market)	Generalised Gini index	Tax reform	Inequality decomposition	<ul style="list-style-type: none"> • The reform leads to a slight reduction in disposable income inequality (Gini index). • As the weight given to the bottom of the distribution increases, the results suggest a raise of inequality.
Panori and Psycharis (2019)	Municipal level greece	1994 – 2012	Household income	Gini index	Educational expansion and educational inequality	GMM	<ul style="list-style-type: none"> • Increasing the level of education led to higher income inequality. • Educational inequality affects negatively to income inequality.
Pàstor and Veronesi (2016)	34 OECD countries	1980 – 2013	Disposable income	Gini index and s10	Tax policies	OLS	There is a negative relationship between taxes and income inequality.

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Paulus and Peichl (2009)	15 Western European countries	2003	Equivalised household disposable income	Gini index	PIT	Microsimulation	A revenue neutral flat tax reform can increase income equality and improve work incentives.
Pestel and Sommer (2017)	Germany	2008	Equivalised household disposable income - VAT	Gini index, q90/q10	VAT vs PIT	Microsimulation	First-round effects of shifting taxes from labour income to consumption are regressive. Second-round offset this effect due to work incentives.
Piirits and Vörk (2019)	Estonia	1999 – 2009	Individual disposable income	Gini index	Pension system	microsimulation	Contribution-based insurance components and compulsory defined contribution schemes increases pension inequality
Podder and Chatterjee (2002)	New Zealand	1984 – 1996	Household Equivalised (market, after-tax, disposable)	Gini index	Tax reform	Inequality decomposition	The tax expenditure policies over the period of the reform contributed to increase income inequality.
Popova et al. (2018)	Russia	2014	Equivalised household income (disposable and gross)	Gini index	Tax-transfer system	Incidence analysis	<ul style="list-style-type: none"> • Direct transfers are the most redistributive element. • The impact of the tax system as a whole on inequality in Russia is negligible.
Qazi et al. (2018)	Pakistan	1973 – 2012	-	Gini index	Education expansion	Cointegration	Higher education expansion has a negative effect on inequality in the long run, but has no impact in the short run.
Ramos and Roca-Sagales (2008)	UK	1970 – 2005	Equivalised household disposable income	Gini, MLD, q90/q10	Taxes and social transfers	VAR	<ul style="list-style-type: none"> • An increase in public spending reduces inequality while a rise in indirect taxes increases income inequality.
Reinbold (2016)	USA	2012	Household disposable income (market and disposable)	Gini index (relative and absolute versions)	Taxes and social transfers	Incidence analysis	Taxes and social programs reduced the relative Gini index by 14.8% and the absolute Gini index by 20.3%
Reynolds and Rohlin (2015)	USA	1980, 1990, 2000	Household gross income	Points of the distribution	Empowerment Zone (EZ) program	Propensity score	<ul style="list-style-type: none"> • The federal Empowerment Zone program had little impact on the distribution of income. • Improvements in the areas were concentrated in those portions of each zone that were relatively better-off prior to this program.
Roine et al. (2009)	16 developed countries	1900 – 2005	Individual gross income (tax units)	top 1% and top 10% shares and ratios	Determinants of top incomes (marginal top rate and government social expenditure)	GLS and Dynamic panel data models with corrected standard errors	<ul style="list-style-type: none"> • Government expenditures have a negative impact on the income share of the top 10%, but positive for the bottom 90%. • Its effect on the ratio 1/10 is insignificant. • The increase in the marginal top rate is negative for the top 1 and 10%, positive for the bottom 90% and negative for the ratio 1/10.

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Rudra (2004)	35 low and middle income and 11 high-income countries	1972 – 1996	Household income (market and disposable)	Gini index	Social transfers	FE regression	<ul style="list-style-type: none"> • All categories of social spending help improve income distribution in richer countries. • The effects of social spending are much less favourable in low-income countries.
Rueda and Pontusson (2000)	16 OECD countries	1972 - 1996	Individual disposable income	q90/q10	Unions	2SOLS	Union density and bargaining centralisation reduces inequality.
Rueda (2015)	12 OECD countries	1985 – 2009	Equivalised household market income	Gini index	Active vs passive employment programmes	FE	Negative effect of active policies on income inequality during the period 1985–1996, but neutral for the period 1999-2009.
Salotti and Trecroci (2018)	22 High income countries	1970 – 2010	Household disposable income (mix)	Gini index	Impact of fiscal policy	FE and RE, GMM	Strong distributional impact of social spending, education and government consumption expenditure.
Sánchez-Marcos and Bethencourt (2018)	US	cohorts 1944 to 1948	Consumption and income	Gini index	Pension system	Partial equilibrium life-cycle model	<ul style="list-style-type: none"> • The effect of removing spousal and survivor benefits on income inequality in older household is large. • The effect on consumption inequality is small. • Negative association between social expenditure and income inequality.
Sánchez and Pérez-Corral (2018)	EU	2005 – 2014	Equivalised household disposable income	Gini index	Social expenditures	System GMM	<ul style="list-style-type: none"> • Spending on health and social protection is negatively correlated with income inequality in the emerging States. • In the rest of States, redistribution is achieved only by spending on social protection. • Spending on education does not impact on inequality levels.
Savage et al. (2019)	Ireland	2008 – 2013	Equivalised household market/ gross/ disposable income	Gini index	Fiscal consolidation after 2008 crisis	Incidence analysis	Market income rose sharply, but, as social welfare transfers and taxes played an equalizing role, the Gini index for disposable income remained stable.
Schneider et al. (2016)	24 European	2007 – 2013	Gross income	Gini index	Fiscal consolidation after 2008 crisis	OLS	Austerity increased income inequality in countries belonging to the Eurozone, but reduced income inequality in countries that do not use the euro.
Schneider et al. (2017)	12 European	2006 – 2013	Gross income	Gini index	Fiscal consolidation after 2008 crisis	OLS	Fiscal consolidation Increased inequality by fattening the upper tail of the income distribution while possibly reducing inequality at the bottom of the income distribution.

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Schwarz and Gustafsson (1991)	Sweden	1986 – 1989	Equivalised household disposable income	Gini index	Tax reform	Microsimulation	<ul style="list-style-type: none"> Income inequality increases when the marginal tax rates in a progressive tax system are reduced. Child allowances have the largest effect, although they are not income-tested. Overall, the reform leads to a slight reduction in income inequality.
Shimeles and Nabassaga (2017)	38 countris in SSA	1990 – 2013	Assets and consumption	Gini index	Determinants of inequality	OLS and IV	Inequality could be reduced through decreasing returns to higher education.
Shin (2019)	OECD countries	1979/1971 – 2007	Household disposable income	Gini and the share of the top 10%	Minimum wage	Cointegration	A higher minimum wage and union density are not correlated to inequality.
Silos and Smith (2015)	USA	Individual gross earnings	Individual gross earnings	Gini index and p99/p50	Higher education system	GEM	<ul style="list-style-type: none"> An education system with mandatory specialization generates a lower degree of turnover, lower earnings growth, and lower dispersion of (log) earnings. An system that allows for more breadth and hedging opportunities trades off higher growth rates in earnings (and higher education expenditure) for a slightly more unequal income distribution.
Skoufias et al. (2010)	8 LAC countries	2000 – 2003	Household in-come/consumption	Gini index	Social security vs social assistance	Incidence analysis	Argentina's social assistance (Jefes y Jefas program) has the largest impact on income inequality because it is a fairly well targeted program.
Sotomayor (2004)	Brazil	1976 – 2001	Individual earnings	p80/p20, p80/p50, p50/p20	Education expansion	Inequality decomposition	The climbing levels of inequality evident during the 1980s can be attributed to the disequalising composition effects of an educational expansion.
Spadaro et al. (2013)	Spain	2006	Equivalised household income (disposable and extended)	Gini and Theil indices	Public health expenditure	Incidence analysis	Public health expenditure contributes to decrease inequality.
Stanovnik and Verbič (2013)	Slovenia	1991 – 2009	Individual earnings (gross and net)	Gini index	PIT	Incidence analysis	earnings inequality increase but the increasing progressivity of PIT contended the increase of net earnings inequality.
Steiner and Wakolbinger (2013)	Austria	2010	Household disposable income	Gini index	Social assitance	Microsimulation	Social assistance seems to have no impact on inequality
Stephenson (2018)	5 EU countries	2018	Equivalised household disposable/ market income	Gini, MLD and Theil indices	Flat vs progressive tax income rate	Microsimulation	<ul style="list-style-type: none"> Graduated income tax rates are more effective in reducing inequality. Flat rates might be very progressive combined with income threshold and other benefits.

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Su (2004)	–	–	Individual market income	Gini index	Public expenditure in education	Successive generations model	While an allocation policy favouring basic education generates the usual redistribution from top to bottom, one favouring advanced education may result in reverse redistribution from bottom to top.
Sung and Park (2011)	Korea	2007	Household income (market and disposable)	Gini index	Finance of public education with a personal income tax	Inequality decomposition	<ul style="list-style-type: none"> • Consumption taxes are regressive. • Social benefits reduce inequality by 2%. • The most inequality reducing benefits are in kind benefits. • Combining taxes and benefits has positive redistributive effects.
Sylwester (2002)	50 middle- and high-income countries	1970 – 1990	Mix of concepts	Gini index	Education expenditure	OLS	Countries that devote more resources to public education have lower income inequality in subsequent years.
Tekgüç (2018)	Turkey	2006 – 2015	Gross income	Gini index	Social expenditures	Incidence analysis and shorrocks decomposition	Non-contributory transfers have the most equalising effect even more than unemployment and pensions.
Thoresen (2004)	Norway	1991 – 1999	Household equivalent income (disposable and market)	Gini index	Tax reform	Incidence analysis	<ul style="list-style-type: none"> • Rise in the inequality of pre-tax income in the period, which was not accompanied by an increase in the concentration of tax burdens sufficient to maintain the level of tax progressivity. • The effects of behavioural adjustments to lower marginal tax rates at high-income levels are likely to have had a relatively small effect or no effect on pre-tax income inequality. • Increasing longevity leads to a substantial increase in wealth and consumption inequality measured in cross-section, despite stable within cohort heterogeneity. • A reform of the pension system from the defined benefit to defined contribution (DC) further increases consumption inequality. • Minimum pension benefit guarantee and lump-sum indexation.
Tyrowicz et al. (2018)	Poland	1999	Assets	Gini index	Pension system	GEM	
Van Vliet et al. (2012)	15 EU countries	1995 – 2007	Equivalised household disposable income	s80/s20	Pension system	FE	No evidence that shifts from public to private pension provision lead to higher levels of income inequality among older people.
Van Vliet and Wang (2015)	15 EU countries	1997 – 2007	Equivalised household disposable income	Gini index	Social transfers and Social investment	FE	Social investment policies do not generally lead to an increase of income inequality in a large group of European countries.
Vanhoudt (1997)	19 OECD countries	1985 – 1991	Mix of concepts	Gini and the share of the top 1% and the bottom 5%	Active vs passive employment programmes	OLS	<ul style="list-style-type: none"> • Passive labour market policies does not impact on inequality. • Active policies improve the income share of the bottom at the cost of lowering the top 5% income share.
Ventura (1999)	USA	1992	Household income (after tax)	Gini index	PIT and CIT	CGE	Replacing the PIT system by a flat tax increases the concentration of the income distribution.

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Verbist and Grabka (2017)	17 EU countries	2011 (30-year period for Germany)	Equivalised household disposable income	Gini index and MLD	Housing policies	Incidence analysis	The effect of social housing on overall inequality is rather limited for the majority of countries, although the direction is the same for all of them (negative).
Viegas and Ribeiro (2013)	The Netherlands	1995 – 2007	Equivalised household disposable income	Gini index	Fiscal consolidation	CGE	<ul style="list-style-type: none"> • Fiscal consolidation via expenditure cuts or taxes would increase income inequality in the short term. • In the long term, inequality decreases.
Viegas and Ribeiro (2014)	Portugal	2013 – 2030	Disposable income	Gini index	Tax-transfer system reform	GEM	Fiscal consolidation is equality-enhancing.
Viegas and Ribeiro (2016)	The Netherlands	2004 – 2007	Equivalised household disposable income	Gini index	Fiscal consolidation	CGE	After an increase in inequality during transition, fiscal consolidation entails improvements in the distribution.
Voinea and Mihaescu (2009)	Romania	2004 – 2005	Household income (disposable and market)	Gini index, GE (1), CV, Variance of logs	PIT	Microsimulation	Moving from progressive to flat tax rate increases inequality as only the richest 20% are benefited from this reform.
Volscho and Kelly (2012)	USA	1949 – 2008	Individual market income	Share of the top 1%	Unions	OLS and GLS	Union density has long-term positive effects on the distribution of income.
von Weizsäcker (1995)	Germany	1992	Individual net earnings	CV	Pension system	GEM	The study reveals that the design of the pension formula decisively drives the relation between demographics and inequality.
Wallerstein (1999)	16 high-income countries	1980 – 1992	Individual gross earnings	$\log(q_{90}/q_{10} - 1)$	Unions	OLS	Union coverage and wage setting have a negative impact on income inequality.
Wang et al. (2014)	20 middle and high income countries	1985 – 2005	Household equivalent income (market and disposable)	Gini index	Taxes and social transfers	Inequality decomposition	<ul style="list-style-type: none"> • Primary income inequality and redistribution continued to rise after the mid-1990s. • The tax-benefit systems in the mid-2000s were even more effective at reducing inequality compared with the mid-1990s. • Transfers generally contribute more than taxes to inequality reductions.
Whiteford (2010)	22 OECD countries	2005	Household income (market and disposable)	Gini index	Taxes and social transfers	Indicence analysis	<ul style="list-style-type: none"> • Belgium shows the greatest effect of transfers and Australia via taxes. • Swedish tax system is regressive.
Wolff and Zacharias (2007)	USA	1989 – 2000	Household income (market and disposable)	Gini index	Taxes and social transfers	Incidence analysis	<ul style="list-style-type: none"> • Inequality is considerably reduced by net government expenditures. • The inequality-reducing effect of the tax-benefit system was due to expenditures rather than to taxes.

Study	Country	Period	Welfare concept	Inequality measures	Policy	Methodology	Results
Woo et al. (2017)	17 OECD	1980 – 2010	Equivalised household disposable income	Gini index	Fiscal adjustments	SUR FE and Dynamic panel	Fiscal consolidations tend to increase income inequality.
Wu et al. (2006)	US (states)	1981 – 1997	Household income (market and disposable)	Gini, Atkinson and GE indices, CV and relative mean deviation	Tax policies, social transfers, disability insurance and minimum wage policies	Time series	<ul style="list-style-type: none"> • The Earned Income Tax Credit have as large or larger effects on equalizing income in rural areas as in urban areas. • the marginal tax rate on the highest income bracket has an important effect on inequality only in urban areas. • The minimum wage has large and statistically significant effects in urban areas, but does not have a statistically significant effect in rural areas.
Khignesse and Verbist (2019)	Belgium	2012	Equivalised household disposable income	Gini index	Tax deductibility of mortgage loans	Static microsimulation approach	<ul style="list-style-type: none"> • Tax relieves of mortgage loans are regressive. • Suppressing them would decrease inequality by 1.4%.
Yakut-Çakar et al. (2012)	Turkey	2007	Equivalised household disposable income	Gini index and s80/s20	Minimum income	Incidence analysis	The introduction of a minimum income scheme has an equalising effect
Yang and Qiu (2016)	Calibrated using Chinese data	1995	Parents gross earnings	Standard deviation of log(earnings)	Public education expenditure	GEM	In addition to innate ability, education received during the compulsory stage is the most important factor in income inequality enlargement.
Yang and Gao (2018)	China	2002 – 2013	Individual earnings	Gini index, variance and wage gap	Education expansion	Inequality decomposition	<ul style="list-style-type: none"> • The structure effect of education expansion on income inequality is negative. • This effect is offset by the price effect, which is positive and much more significant in magnitude. • Social spending (% GDP) impact on inequality does not seem to be significant. • Welfare state generosity (as the ratio of social transfers to government expense over the ratio of the non-working to the total population) is significant and its impact is higher in democracies.
Yi and Woo (2015)	110 Low- and middle-income countries	1971 – 2008	Equivalised household disposable income	Gini index	Social transfers	GLS and OLS with PCSE	<ul style="list-style-type: none"> • Increasing government spending reduces inequality by 6%. • Subsidising parental spending by 4 % (and generates a larges increase in human capital). • Paid parental leave by 2% but it is the least effective in promoting human capital.
Youderian (2019)	USA	–	Individual net earnings	Variance of log(earnings)	Public expenditures in education, subsidise parental spending, paid parental leave	OLG model	

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Younger et al. (2016)	Tanzania	2011/12	Household expenditure (different concepts)	Gini index	Taxes and social transfers	Incidence analysis	<ul style="list-style-type: none"> • Taxation and social expenditure substantially reduce inequality in Tanzania. • About half of this redistribution comes from very progressive direct taxation. • The rest comes from unusually progressive indirect taxation and progressive in-kind transfers in health and education.
Zhan et al. (2019)	China	2011 – 2018	Individual pre-tax and post-tax earnings	Gini and Theil indices	PIT	Microsimulation	The redistributive effect of PIT will be weakened after the 2018 PIT reform.
Zhou (2014)	China	1996 and 2010	Individual gross earnings	Variance of log(income)	Education expansion	Inequality decomposition	The between-education contribution to inequality is about 40%.