Extended redistribution, including all monetary transfers and public services, improves the standard of living of 57% of people in France

Taxes and social security contributions finance pensions, welfare benefits and public services, whether individually provided, such as education or health, or collective, such as defence or research. All such public transfers, whether deducted from or received by households, create a so-called extended redistribution. This redistribution extends to all public services and including pensions corresponds to an annual net transfer of 500 billion euros (25% of net national income in 2019) and contributes to a significant reduction in income inequality. In 2019, 57% of people are receiving more than they pay in France. This share of people who are net beneficiaries – those who receive more than they pay – of extended redistribution amounts to 49% of the median standard of living, compared to over 85% among the poorest 30% and 13% among the top 5%, essentially through pensions for the latter. Before transfers, better-off households have an income 18 times higher than that of poor households, compared to 3 times higher after transfers.

Extended redistribution enhances the standard of living of 90% of individuals belonging to a household where the reference person is aged 65 or over; these are the main recipients of health spending and the pay-as-you-go pension system. On the other hand, nearly 70% of individuals aged 50-59 are net contributors to extended redistribution. Aside from pensioners, net beneficiaries of extended redistribution are mainly the poorest, in addition to families with children and households with fewer qualifications; for manual and white-collar workers, the redistribution assessment is close to neutral, while executives, self-employed workers and company managers are net contributors – those who pay more than they receive –, along with intermediate profession to a lesser extent. Redistribution also reduces inequality between residents of the Paris metropolitan area with higher primary incomes and those in region outside Paris. The net contributors are therefore wealthy, working households, aged between 40 and 60, and are predominantly executives or residents of urban areas.

How is income affected by public transfers? The usual monetary approach to answering this question consists of comparing the direct taxes paid by households to the cash **benefits** that they receive. In addition, INSEE is developing an extended approach to redistribution [André *et al.*, 2023a]. Based on the idea that any tax deducted ultimately holds a direct or indirect benefit for households, it includes all public transfers, paid or received, and in particular a monetary valuation of public services. In terms of **taxes**, it includes not only direct taxes and other deductions such as taxation of products and production. Additionally, it encompasses social security contributions from employers and employees. This approach is based on distributed national accounts (DNA) which distribute all national income between different categories of households.

A country's national income is produced by the various economic units resident in the country: households, companies and public bodies. These are aggregated into **net national income (NNI)** once the capital depreciation linked to infrastructure, housing and facilities has been deducted. Allocating the entire NNI to households then makes it possible to analyse the reduction in inequality brought about by all public transfers [Accardo *et al.*, 2021].

The distribution of **income before transfers** describes the distribution of national income between households before any redistribution mechanism. **Income after transfers** is income received by households after considering all public transfers, regardless of whether these are contributions paid by households or transfers received. Due to public transfers being fully taken into account, the total income before transfers is equal to the total income after transfers; redistribution takes place between households.

The difference between income before and after transfers therefore measures **extended redistribution**. Each household contributes and receives different types of transfers (cash, in kind or collective) with these amounts being distributed based on detailed microeconomic sources ► **sources**. As a result, households with an income after transfers which is higher than their income before transfers are said to be net beneficiaries, and households with an income after transfers which is lower than their income before transfers are said to be net contributors.

This approach is based on the recommendations of a group of experts on the measurement of inequality and redistribution, initiated by INSEE [Germain *et al.*, 2021], in turn inspired by the statistical

► 1. Distributed National Accounts in 2019 for France, by Usual Standard of Living Group

Nature of income or transfer	Total		Transfers by usual standard of living group (euros by CU)				
	Billion euros	Euros equivalized	Poor Households	Modest Households	Median Households	Upper-Middle Households	Better-off Households
Extended Primary Income (NNI)[1]	**2,026.0**	**43,560**	**10,890**	**21,660**	**36,240**	**54,420**	**136,590**
Factor Income	**1,704.3**	**36,640**	**6,620**	**16,390**	**29,520**	**46,060**	**124,790**
Labor income (gross)	1,264.3	27,180	4,830	13,470	24,940	37,860	72,920
Mixed income (self employed)	112.6	2,420	470	700	940	2,140	13,880
Property income	201.2	4,320	1,260	2,040	3,280	5,090	15,160
Retained earnings	126.2	2,710	70	170	370	960	22,830
Public primary income (base price)	**54.2**	**1,160**	**360**	**690**	**1,160**	**1,580**	**2,490**
Public property income and net interest paid	-17.8	-380	-250	-280	-330	-430	-860
Taxes on production	71.9	1,550	610	970	1,490	2,000	3,340
Income before transfers (base price)	**1,758.4**	**37,810**	**6,980**	**17,080**	**30,680**	**47,630**	**127,270**
Taxes and contributions	**-1,117.7**	**-24,030**	**-7,410**	**-12,030**	**-19,870**	**-30,520**	**-72,530**
Taxes on products and production	-339.5	-7,300	-4,520	-5,550	-7,050	-8,790	-12,650
Taxes on income and wealth	-313.1	-6,730	-680	-1,710	-3,920	-7,710	-32,600
Social security contributions	-465.2	-10,000	-2,210	-4,770	-8,900	-14,020	-27,270
Monetary transfers	**520.3**	**11,190**	**8,100**	**10,180**	**10,780**	**12,670**	**15,360**
of which : pensions	177.6	3,820	6,160	4,610	3,270	2,670	2,820
Non monetary transfers	**610.3**	**13,120**	**17,290**	**14,160**	**12,280**	**11,670**	**10,600**
Benefits in kind	415.0	8,920	12,960	10,000	8,080	7,490	6,430
Benefits from collective services	195.2	4,200	4,330	4,160	4,200	4,180	4,170
Extended Income after transfers	**1,758.4**	**37,810**	**25,330**	**29,550**	**33,770**	**40,970**	**78,480**
Disposable income[2]	**1,423.3**	**30,600**	**11,710**	**19,840**	**27,070**	**36,370**	**78,730**
Net transfers, euros per CU (A)-(B)	///	///	18,350	12,470	3,090	-6,670	-48,790
Net transfers, billion euros	///	///	110.2	157.7	37.4	-73.2	-232.2
Net transfers, share of income before transfers (%)	///	///	262.8	73.0	10.1	-14.0	-38.3

1 The gap between income before transfers at base prices and the NNI consists of taxes and subsidies on products, such as VAT; it is distributed here based on consumption (see section). ► **box**.
2 Households, excluding public administrations (GOV), and including undistributed profits (see section 3 in Accardo *et al.* (2021)); net of consumption of fixed capital.
Note: This table is also available by twentieth of the standard of living in supplementary data on insee.fr.
Reading: Poor households receive an income before transfers (at base prices) of 6,980 euros per consumption unit (CU) on average, compared to 127,270 euros per CU for better-off households.
**Scope**: France.
Source: Insee, DNA 2019 ; authors' calculation.

and economic literature [Alvaredo *et al.*, 2020 ; Piketty *et al.*, 2018]. This study is based on the latest data available and extends to the year 2019, making use of the results previously published for the year 2018 [Accardo *et al.*, 2021]. It supplements the previous publication with a detailed assessment of the net beneficiaries and contributors of extended redistribution. Additionally, it presents results on the distribution of income and extended redistribution according to dimensions other than standard of living: age, level of education, family configuration, occupation and location ► **methods**.

Before transfers, better-off households have an income 18 times higher than that of poor households, compared to 3 times higher after transfers

Using **base price**, i.e. after deducting taxes on products, primarily value added tax (VAT) ► **box**, and not market price as per Accardo *et al.* (2021), income before transfers in 2019 amounts to 37,810 euros per consumption unit (CU) on average ► **figure 1**. The reduction in income gaps after transfers is significant. So, if we focus first on the two categories at the opposite ends of the income distribution scale, **better-off households**, which represent 10% of the population, have on average 127,270 euros per CU of income before transfers, i.e. 34.4% of the total, compared

► 2. Poor and Better-Off Households Incomes Before and After Extended Redistribution
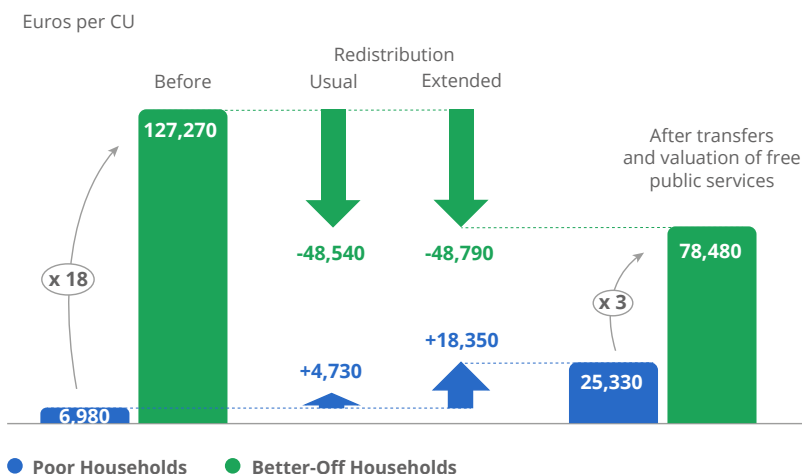
Notes: Retirement pensions and unemployment benefits are included in the extended redistribution (and not in income before transfers). Usual redistribution is calculated here based on disposable income using household sector accounting conventions and also includes undistributed profits (see section 3 in Accardo *et al.* (2021)).
Reading: Income before transfers (at base prices) of better-off households is 18 times higher than that of poor households, compared to three times after the extended redistribution effect due to all public transfers.
Scope: France.
Source: Insee, DNA 2019 ; authors' calculation.

to 6,980 euros per CU for **poor households** (2.4% of total income before transfers, 13% of the population), i.e. a ratio of 1 to 18 ► **figure 2**. After extended redistribution, better-off households benefit from an **extended standard of living** (income after transfers per consumption unit)

of 78,480 euros, compared to 25,330 euros for poor households, i.e. a ratio of 1 to 3.

This reduction in inequality occurs through two main channels. On the one hand, 72,530 euros per CU is deducted from the income of better-off

households, compared to 7,410 euros from poor households. On the other hand, households receive transfers in amounts decreasing in line with income, excluding pensions, up to 23,450 euros per CU for poor households and 13,420 euros per CU for better-off households.

25% of national income is redistributed and 57% of people are net beneficiaries

Net contributing households pay a total net amount of 500.2 billion euros, which corresponds to the total received by net beneficiary households, as the extended redistribution is exhaustive. In 2019, 24.7% of the net national income is redistributed between net contributors and net beneficiaries. Over 95% of people in the poorest 15% are net beneficiaries of extended redistribution, while 13% of the wealthiest 5% falls into this category ► **figure 3**. This share of net beneficiaries is equal to 57% of the entire population. Among **median** households 49% are net beneficiaries. The income before transfers of all net contributors is, as an annual average, 75,250 euros per CU, paying in a net balance of 36% of their income before transfers, compared to 14,470 euros for all net beneficiaries, receiving a net balance of 135% of their income before transfers.

Transfers received significantly reduce inequality, due to the scale of health and education spending as well as targeting of welfare monetary benefits
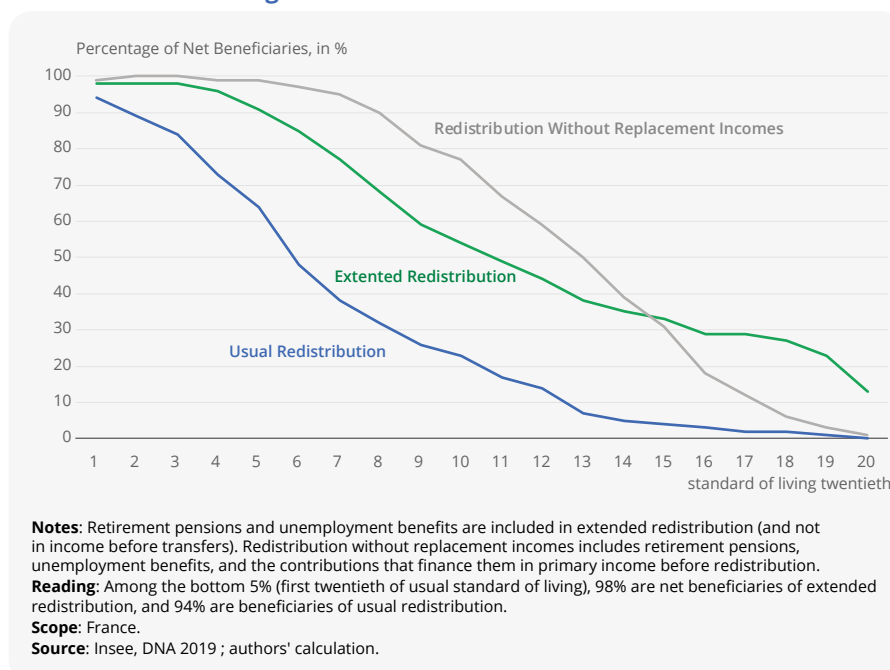
The impact on reducing inequality can be measured by breaking down the

Gini coefficient ► **figure 4** by income and transfer types. Rated on a scale from 0 (no inequality) to 1 (all income held by a single individual), primary inequality is 0.441 when classifying individuals according to the usual standard of living. 64% is accounted for by wage inequalities (0.282 Gini points) and 34% by income from assets, the self-employed and companies (0.149 Gini points), 20% of which is accounted for by income paid and 14% by **retained earnings**. Assuming that retained earnings follow the profile of dividends received by households, these benefit the wealthiest 5% by 78% and the poorest 50% by 3%,

compared to 16% and 23% respectively for wages.

As in 2018 [Accardo *et al.*, 2021], public transfers significantly reduce primary inequality in 2019. After transfers, inequality measured at base price according to the pseudo-Gini coefficient amounts to 0.188, a reduction of 0.253 Gini points. The reduction in inequality is mainly driven by transfers in kind accounting for 53% of the reduction, particularly due to health and education spending, and by monetary benefits (40%). Considering the assumptions adopted to distribute them, taxes slightly

► **3. Average Net Effect of Extended Redistribution in 2019, by Usual Standard of Living**

Notes: Retirement pensions and unemployment benefits are included in extended redistribution (and not in income before transfers). Redistribution without replacement incomes includes retirement pensions, unemployment benefits, and the contributions that finance them in primary income before redistribution.
Reading: Among the bottom 5% (first twentieth of usual standard of living), 98% are net beneficiaries of extended redistribution, and 94% are beneficiaries of usual redistribution.
Scope: France.
Source: Insee, DNA 2019 ; authors' calculation.

► **4. Decomposition of Primary Inequalities and Contributions of Public Transfers to their attenuation (2019, pseudo-Gini indicator points)**
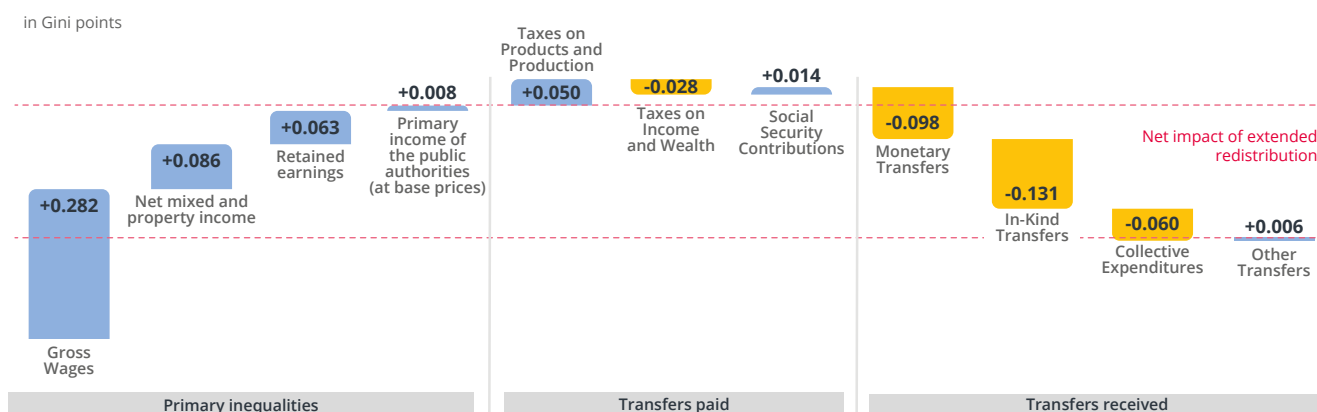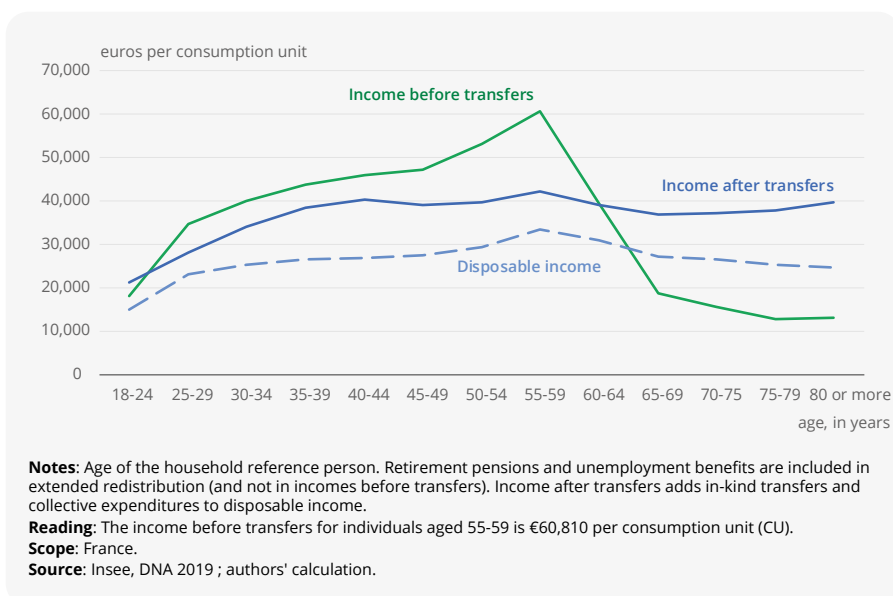
Note: Retirement pensions and unemployment benefits are included in extended redistribution (and not in incomes before transfers).
Reading: The contribution to the reduction of inequalities from in-kind transfers amounts is of 0.131 Gini point.
Scope: France.
Source: Insee, DNA 2019 ; authors' calculation.

increase inequality: taxes on products and on production have +20% effect, which is partially offset by progressive taxes on income and wealth (-11%). Social security contributions also slightly increase inequality (+5%) across the population. Measuring inequality using indicators other than the Gini coefficient leads to qualitatively similar results.
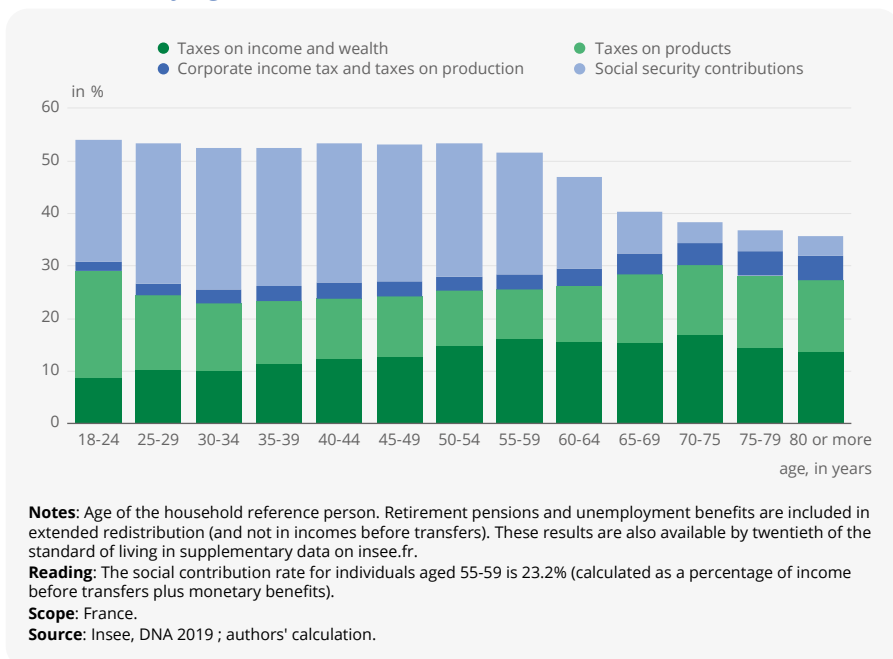
Welfare benefits paid in cash play a significant role in reducing poverty. Unlike retirement pensions and other income replacements, welfare monetary and housing benefits are targeted at the 30% of the population with the lowest income and decrease sharply with income. The wealthiest 30% receive 45% of retirement pensions. Transfers in kind are less targeted at the poorest people than monetary benefits (excluding pensions), but they represent a total amount 2.3 times higher. Health and education spending accounts for 75% of these transfers in kind, which decrease slightly with standard of living. This is explained in particular by higher amounts of health reimbursements paid to the poorest people, linked to the poorer state of health experienced by this section of the population [Fouquet, Pollak, 2022]. Finally, collective public services show an almost flat-rate profile [Accardo *et al.*, 2021]; alternative assumptions on the distribution of non-localisable **collective expenditures** show they would increase slightly for the top income, but would lead to similar results ► **methods**.

Relative to income before transfers plus monetary benefits, and taken as a whole, the structure of the overall French fiscal rate is slightly degressive at the two extremes of the standard of living distribution; i.e. they are relatively lower for the wealthiest households and higher for the poorest households. In 2019, like in 2018, the tax rate varies little between these two extremes, around a value of 55%. Taxes on income and wealth follow a progressive profile [Accardo *et al.*, 2021]. However, taxes on products (value added tax, excise duties on alcohol, tobacco and fuel) represent a higher proportion for the poorest households. The regressive effect of indirect taxation prevails for the poorest households, then balances out with the progressive effect of direct taxation. Among top 10%, the tax share of their income decreases, primarily due to an increase in savings, which are not taxed at the time of saving, and secondarily, due to the reduction in social security contributions [André, 2022]. However, these findings should be treated with caution as income and consumption are measured with more uncertainty at the extremes and their scale depends on the concept of income used.

► **5. Distribution of Income Before and After Transfers, by Age**

Notes: Age of the household reference person. Retirement pensions and unemployment benefits are included in extended redistribution (and not in incomes before transfers). Income after transfers adds in-kind transfers and collective expenditures to disposable income.
Reading: The income before transfers for individuals aged 55-59 is €60,810 per consumption unit (CU).
Scope: France.
Source: Insee, DNA 2019 ; authors' calculation.

► **6. Deductions as a Percentage of Income Before Transfers Plus Benefits in 2019, by Age**

Notes: Age of the household reference person. Retirement pensions and unemployment benefits are included in extended redistribution (and not in incomes before transfers). These results are also available by twentieth of the standard of living in supplementary data on insee.fr.
Reading: The social contribution rate for individuals aged 55-59 is 23.2% (calculated as a percentage of income before transfers plus monetary benefits).
Scope: France.
Source: Insee, DNA 2019 ; authors' calculation.

People over 60 are the main beneficiaries of the redistribution extended to all public transfers

Primary income changes with age, for example with higher income from assets following periods of accumulation or investment. The transfers received also vary with different stages of life, from the birth of a child to the pay-as-you-go pension system.

The profile of income before transfers varies greatly depending on the age of the reference person of the household: increasing up to 60 years and then decreasing ► **figure 5**. At the start of working life, income before transfers mainly consists of wages; later the share

of capital income and mixed income of the self-employed increases with age.

After extended redistribution, the profile of income after transfers increases until age 40, then remains pretty much stable for the 40+ age groups. The extended redistribution is mainly targeted towards those over 65, with more than 90% net beneficiaries, due in particular to the pay-as-you-go pension system.

Therefore, the drop in income before transfers after age 65 is virtually offset by retirement pensions. Conversely, more than half of those under 60 are net contributors to extended redistribution. Nearly 70% of individuals aged 50-59 are net contributors;

this figure amounts to 58% for those aged 25–29. By considering pensions as deferred income and therefore primary income and removing the contributions paid to finance these pensions, the redistributive profile of transfers according to age is automatically less pronounced [André et al., 2023b].

The **usual standard of living** profile based on age is similar to that of income after transfers from extended redistribution; its level is automatically lower on average. With the monetary approach to redistribution, i.e. measured by the usual standard of living, the only age categories with more than 50% net beneficiaries are the 18-24 and 65+ cohorts. However, the transfers received by these individuals on average, net of their contributions, have decreased significantly over the last decade [Cusset et al., 2021].

Taxes represent more than 50% of the primary income of households under the age of 60, compared to less than 40% for those over 65

The profile of taxes in relation to income before transfers plus monetary benefits does not vary greatly up to the age of 54 and decreases at older ages. For working age groups, this taxation rate amounts to 53% between the ages of 25 and 54. A decrease is evident from age 65, with a rate of 40% for those aged 65-69 and 36% for those over 80 ► **figure 6**. This is explained by the absence of social security contributions from the resources of older people, which are mainly composed of income from assets and retirement pensions. The profile of other taxes by age only varies slightly, at an average value of

31%. Additionally, households under the age of 29 have lower average incomes than other working age groups, but similar taxation rates.

Most transfers are received by households aged 60 or over due to retirement pensions and health spending
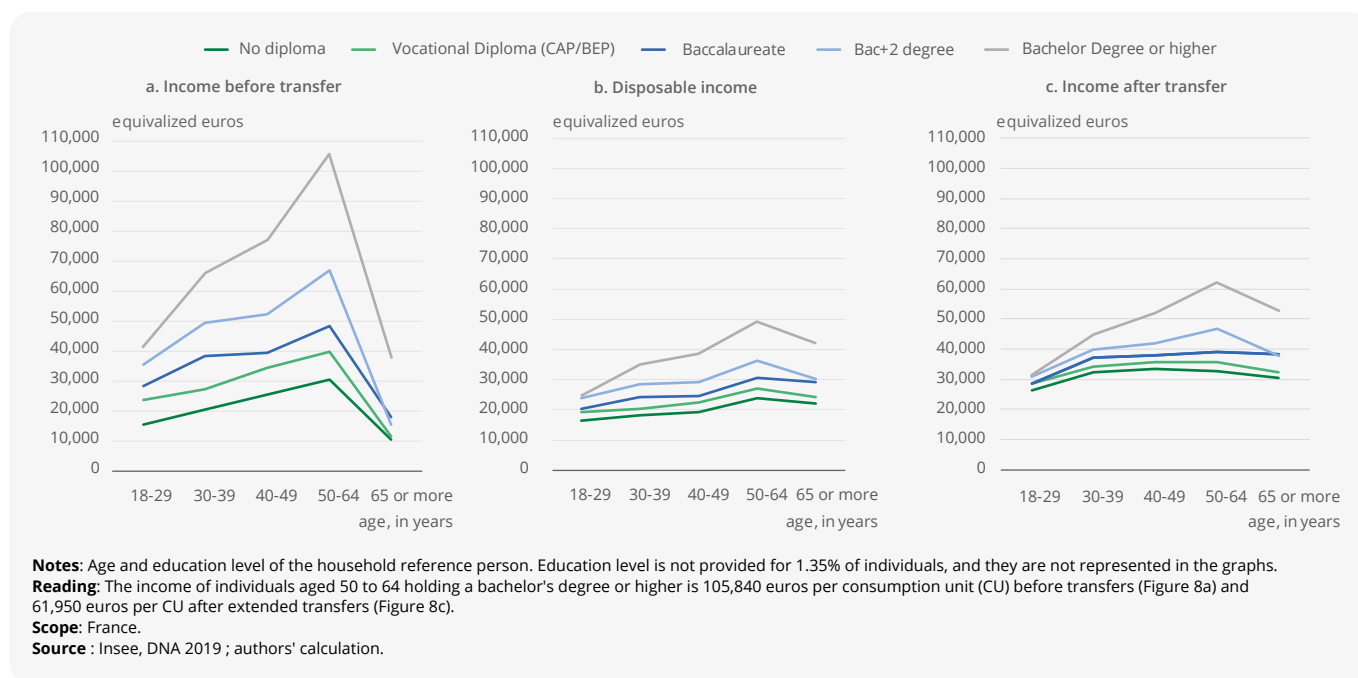
The transfers received, whether in cash or in kind, vary depending on age. On

average, they amount to 14,350 euros per CU for those aged 18-24, compared to more than 25,900 euros per CU for those aged 60 or over ► **figure 7**. The fact that the pension system and health spending is concentrated on the oldest households explains these variations. Health reimbursements increase throughout life, starting at 1750 euros per CU per year for 18-24-year olds, rising to 4,300 euros per CU for 60-64-year olds and up to 10,420 euros per CU for people aged 80 and over. Health spending is very

► **7. Average Transfers Received in 2019 by Households, by Age**

Notes: Age of the household reference person. These results are also available by twentieth of the standard of living in supplementary data on insee.fr.
Reading: The amount of healthcare-related transfers paid to individuals aged 55-59 is 2,900 euros per consumption unit (UC).
Scope: France.
Source: Insee, DNA 2019 ; authors' calculations.
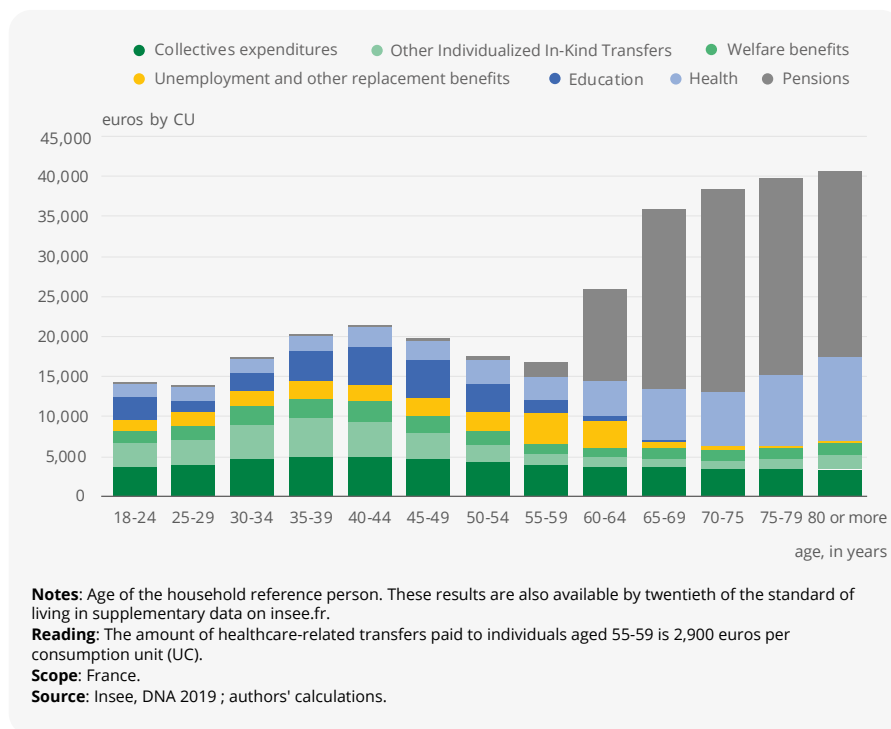
► **8. Income Distribution in 2019 by Age and Education Level of the Household Reference Person**

Notes: Age and education level of the household reference person. Education level is not provided for 1.35% of individuals, and they are not represented in the graphs.
Reading: The income of individuals aged 50 to 64 holding a bachelor's degree or higher is 105,840 euros per consumption unit (CU) before transfers (Figure 8a) and 61,950 euros per CU after extended transfers (Figure 8c).
Scope: France.
Source : Insee, DNA 2019 ; authors' calculation.

unevenly distributed by age; households over 60 (29% of the population) receive 61% and those over 70 (15% of the population) receive 40%.

Conversely, education spending is concentrated on households where the reference person is aged 18 to 49. On average, it amounts to 4,950 euros per CU for 40-44-year olds and is supplemented by family benefits concentrated on 25-49-year olds. In total, the amount of transfers received excluding pensions peaks at 21,200 euros for those aged 40-44 and dips between 60 and 74 years old.

Income gaps before transfers according to level of education and age are significantly reduced by extended redistribution

Income gaps before transfers according to the level of education of the reference person of the household are high and increase with age ► figure 8. For those who have completed three or more years of higher education, the average income before transfers amounts to 41,270 euros per CU in the 18-29 age group, reaching 105,840 euros per CU between 50 and 64 years old. In addition, the gap in income before transfers by level of education increases up to age 65. For those without qualifications, income before transfers increases from 15,580 euros per CU in the 18-29 age group to 30,440 euros per CU for 50-64-year olds. Primary income inequality according to level of education is most significant for those over the age of 65, with a ratio of 3.6 between the least educated and the most educated, compared to 2.6 in the 18-29 age group.

In all age categories, public transfers clearly reduce the gaps between levels of education. The income after transfers of the most educated is 1.4 times higher than that of those without qualifications in the 30-39 age group, compared to 3.2 for income before transfers. For the 50-64 age group, this ratio amounts to 1.9 after transfers, compared to 3.5 for income before transfers. Furthermore, the gap in income after transfers between the two working age categories of 18-29 and 50-64 amounts to 24% for those without qualifications, compared to 98% for the most qualified. On average, those without qualifications are net beneficiaries of extended redistribution to the tune of 14,960 euros per CU on average per year, and those with the highest level of education are net contributors of 22,050 euros per CU on average.

► 9. Distributed National Accounts for France in 2019, by Different Grouping of Households

euros by CU

Age	18-29 years	30-39 years	40-49 years	50-64 years	65 years or more
Share of population (in %)	7.5	19.4	24.6	26.5	21.9
Income before transfers	**29,840**	**42,050**	**46,750**	**51,730**	**15,290**
Taxes and contributions	-17,920	-24,570	-27,450	-30,920	-15,400
Benefits in cash	3,670	4,740	4,820	8,950	25,340
Non monetary transfers	10,430	14,390	15,860	11,070	13,030
Income after transfers (extended)	**26,050**	**36,500**	**39,730**	**40,290**	**38,030**
Usual standard of living	20,570	27,770	29,820	35,660	30,800

Diploma	No diploma	Vocational Diploma	Baccalaureate	Bac+2 degree	Bachelor and more
City size	25.9	26.3	1,600	12.0	19.7
Income before transfers	**18,920**	**29,410**	**35,970**	**49,030**	**71,050**
Taxes and contributions	-14,160	-19,040	-22,640	-29,420	-42,930
Benefits in cash	14,180	10,850	9,880	8,810	10,010
Non monetary transfers	14,960	12,950	12,620	12,320	11,780
Income after transfers (extended)	**33,880**	**34,090**	**35,640**	**40,310**	**49,000**
Usual standard of living	23,920	26,630	28,850	34,450	44,790

Gender of head of family and couples	Women no child	Men no child	Women with one child or more	Men with one child or more	Couples
Share of population (in %)	9.3	7.2	8.9	1.7	68.7
Income before transfers	**22,640**	**32,860**	**22,500**	**38,700**	**44,400**
Taxes and contributions	-16,770	-21,500	-15,220	-22,800	-27,520
Benefits in cash	15,440	11,500	7,240	6,930	10,920
Non monetary transfers	9,120	8,990	17,630	16,950	14,130
Income after transfers (extended)	**30,150**	**31,450**	**32,280**	**39,590**	**41,590**
Usual standard of living	26,280	28,110	19,500	28,560	33,740

Family type	Isolated parents	Single no child	Couples one or two children	Couples 3 children or more	Couples no child
Share of population (in %)	10.7	16.6	32.2	12.3	24.2
Income before transfers	**25,140**	**27,090**	**53,480**	**38,750**	**36,900**
Taxes and contributions	-16,460	-18,830	-30,910	-22,890	-25,610
Benefits in cash	7,190	13,730	5,080	6,000	18,720
Non monetary transfers	17,520	9,060	14,150	22,120	11,330
Income after transfers (extended)	**33,470**	**30,720**	**41,480**	**43,970**	**40,880**
Usual standard of living	20,970	27,070	33,610	27,350	36,100

Occupation	Manager, business owners and farmers	Intermediate professions	Employees	Blue collar	Retired people
Share of population (in %)	22.56	15.70	11.03	18.73	29.48
Income before transfers	**80,580**	**48,390**	**30,690**	**30,310**	**14,300**
Taxes and contributions	-45,340	-28,240	-19,170	-18,250	-14,310
Benefits in cash	4,870	4,010	5,180	5,000	23,190
Non monetary transfers	12,420	12,490	14,290	13,450	13,010
Income after transfers (extended)	**51,570**	**36,370**	**30,970**	**30,620**	**36,060**
Usual standard of living	46,770	29,950	21,850	22,360	28,540

City size	Rural	Small town*	Mid-sized cities**	Large cities***	Paris Urban Area
Share of population (in %)	23.92	17.37	16.71	25.19	16.79
Income before transfers	**34,930**	**34,390**	**31,300**	**36,670**	**54,070**
Taxes and contributions	-22,290	-21,930	-20,810	-23,460	-32,980
Benefits in cash	10,890	11,430	12,120	11,110	10,490
Non monetary transfers	12,750	13,370	13,860	13,120	12,610
Income after transfers (extended)	**36,090**	**37,060**	**36,270**	**37,170**	**43,630**
Usual standard of living	29,630	29,490	27,960	29,880	37,+040

Notes: Age, education level, and occupational category of the household reference person. Retirement pensions and unemployment benefits are included in extended redistribution (and not in incomes before transfers) ; *5,000 to 20,000 inhabitants, ** 20,000 to 200,000 inhabitants, ***200,000 to 2,000,000 inhabitants.
Reading: Women without children receive an average of 22,640 euros per consumption unit (CU) of income before transfers and 30,150 euros per CU of income after transfers.
Scope: France.
Source: Insee, DNA 2019 ; authors' calculation.

Extended redistribution also works in favour of single-parent families, couples with three children, and women, but its results are somewhat neutral for manual labourers and white-collar workers

Inequality and extended redistribution can be examined from other angles. For example, many transfers, such as statutory minimum incomes, family benefits and income tax, are adjusted according to the composition of the household. This composition changes with age and also plays a key role in primary income inequality as a result of formations of partnerships, relationship breakdowns and the presence of children.

Among the various family configurations, single-parent families have the lowest income per CU before transfers, with 25,140 euros per CU ► figure 9; there is a marked difference between women (22,500 euros per CU) and men (38,700 euros per CU) in this configuration. Non-monetary transfers contribute significantly to reducing the

gap in standards of living based on family configuration, particularly due to education spending. Considering both gender and cohabitation, the main beneficiaries of extended redistribution are women living alone without children (9% of the population). The balance between the benefits they receive in kind or in cash and the taxes they pay is 47 billion euros. Likewise, single women with children (9% of the population) are net beneficiaries to the tune of 37 billion euros. Whether they have children or not, single women have a lower income before transfers. The main contributors are couples (69% of the population), to the tune of 82 billion euros, while the redistributive assessment for single men, with or without children, is generally neutral.

Redistribution can also be measured according to the socio-professional category of the reference person of the household. The income before transfers of executives, the self-employed and company managers is on average 2.7 times higher than that of manual labourers, compared to 1.7 after transfers. White-collar workers have average incomes before and after transfers close to those of manual labourers at around 30,800 euros per CU. In addition, the transfers received are almost equal for these two socio-professional categories. Retirees are the only category who benefit, on average, from extended redistribution.

Transfers reduce income inequality between residents of the Paris metropolitan area and other urban units

Income before transfers varies little depending on the density of the **urban unit** (between 31,300 and

36,670 euros per CU); the urban unit of Paris is an exception with incomes which are approximately 50% higher (54,070 euros per CU).

Without taking local price differences into account, redistribution reduces income differences between urban units. After transfers, income still varies little between categories of municipalities, with the exception of the urban unit of Paris, where it is between 15% and 20% higher. On average, residents of the Paris urban area are the only net contributors to extended redistribution. Redistribution has a generally neutral outcome for other metropolitan areas with more than 200,000 inhabitants, with their inhabitants paying as much as they receive in transfers. People in municipalities outside urban units and in municipalities in urban units with between 20,000 and 200,000 inhabitants are net beneficiaries of extended redistribution. These results are partly linked to the ages of the people living in these areas. Older people are under-represented in the Paris metropolitan area and to a lesser extent in large urban units, to the benefit of less-dense areas and in particular medium-sized towns (of 20,000 to 200,000 inhabitants), which therefore benefit the most from extended redistribution through health spending and pensions.

The difference between the sizes of urban units is particularly marked within the category of more wealthy households: households in municipalities outside urban units, in small urban units and in large metropolitan areas are on average net contributors to extended redistribution, while those in urban units of between 20,000 and 200,000 inhabitants are neutral on average. For poor or less-wealthy households, profiles before and after transfers are similar between the different sizes of urban units, due in particular to transfers received being comparable [André, 2022]. ●

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⤓ For more information look at the downloads available on **www.insee.fr**

▶ Sources

The majority of individual data used to form the distributed national accounts are taken from INSEE's *Enquête revenus fiscaux et sociaux* (ERFS), which brings together socio-demographic information from the *Enquête emploi en continu* (EEC), administrative information on benefits from the CNAF, CNAV and CCMSA, and details of income declared to the tax authorities for the purposes of calculating income tax. The diversity of EEC variables enables highly detailed simulation of socio-fiscal transfers and their distribution according to different household categories ▶ **methods**. The ERFS is based on a sample of approximately 50,000 households, which is equivalent to 120,000 people and representative of the population living in standard accommodation in metropolitan France.

Other databases are also used:

● the *Budget de famille* (BDF) survey is used to distribute indirect taxes;

● the *Histoire de vie et patrimoine* survey complemented by fiscal data on capital tax (ISF) is used to distribute the ISF/IFI (tax on property assets);

● the INSEE *Enquête Logement* is used to impute rents;

● the *Enquête sur les soins et l'assurance maladie* (ESPS) by IRDES (Institute for Research and Information in Health Economics) and DREES (Directorate of Research, Studies, Evaluation and Statistics) is used to distribute health spending, matched with administrative data regarding health insurance reimbursements to provide expenditure presented for reimbursement and AMO (basic mandatory health insurance) reimbursements;

● the *Enquête sur les ressources des jeunes* (ENRJ) by INSEE and DREES is used to account for higher education expenses of students who do not live with their parents;

● the "*Tous salariés*" database derived from employers' administrative declarations gives the wage bill of public employees in order to distribute localisable collective expenses;

● the INSEE FIDELI file is used for property tax [André, Meslin, 2021].

National accounting data (from the table of integrated economic accounts, as well as more precise additional data on public transfers or fraud, for example) are used to proportionally realign the microeconomic data with the macroeconomic aggregates of income and transfers ▶ **methods**. These are the provisional accounts for 2019 (erratum : on April 3rd, 2024, "provisional" replaced "final", which was incorrectly indicated in the version published on September 19th, 2023).

▶ Méthods

Individuals are classified according to different variables available in the ERFS: their standard of living (usual definition), in ten or twenty equal groups, age (in 12 categories) of the reference person of the household: 18-25-year olds, then age ranges of five years and a category of 75 years or over), level of education of the reference person of the household, family configuration of the household, and place of residence (depending on the size of the urban unit). When these variables are cross-referenced, between age and level of education for example, due to sample size, the number of age categories is limited to five (18-29-years, 30-39-years, 40-49-years, 50-64-years and 65-years or over) with five levels of education based on the highest level of education obtained by the reference person of the household and the type of household (single persons without children, couples without children, couples with one or two children, couples with three children, complex households and single-parent families). Classification according to gender is limited to single adults, for whom distribution of income within couples is not an issue. These classifications (in particular according to standard of living) remain unchanged whether we study inequality at the level of income before transfers, disposable income or income after transfers.

Each tax is allocated to an individual according to a principle of tax impact. Generally speaking, the individual supposedly liable for a tax is the one on whom the amount of the tax depends (directly or indirectly): for example, social security contributions are allocated to employees. The income and transfers of each individual are reconciled with national accounting data thanks to a precise link making it possible to find the total national income [André *et al.*, 2023b]. National accounting rules are used here: for example, the income of households that own their main residence is increased by the income they could earn from renting their property (imputed rent), in order to take this advantage into account in comparison to tenant households. This general method of distributional accounting makes it possible to measure, at the household level, adjusted income and transfers of each individual and each category of individuals previously defined, and therefore the net beneficiaries and net contributors of redistribution [André *et al.*, 2023b]. Compared to Accardo *et al.* (2021), on the one hand, it is possible to directly estimate the number of beneficiaries and contributors within groups of individuals and, on the other hand, income at base price is favoured in the comments ▶ **box**.

▶ ▶ ▶

For distribution of transfers, the method is identical to that of Accardo *et al.* (2021). The vast majority of monetary transfers are distributed using the INES microsimulation model [Fredon, Sicsic, 2020] due to the large number of incomes and transfers it contains. The INES model used here for 2019 is based on a 2017 ERFS analysis and the 2011 BDF survey. Certain transfers are not simulated using ERFS data or the INES model due to lack of information and require assumptions [André *et al.*, 2023b]. Three main categories of transfers require particular attention, due to their large amounts: health, education and collective spending. Health spending is distributed according to mandatory and complementary health insurance reimbursements, using the DREES INES-OMAR model [Fouquet, 2021]. Education spending is distributed using ERFS data on children (according to their age and courses followed), and data on the average cost of training taken from education accounts. Students who are not living at home are linked to their parents' households based on the ENRJ survey in order to take intra-family transfers into account. Collective consumption expenditures of national attribution such as defence, foreign affairs and the civil service of general government are distributed on a lump-sum basis; alternative assumptions, for example based on income or wealth, could be made; the profile after transfers is similar in these various situations. Other "localisable" collective consumption expenditure is distributed based on the wage bill of the public servants concerned, excluding hospitals and education (see Accardo *et al.* (2021) for further details).

► Définitions

A **tax** is a transfer paid by households to public administrations and non-profit institutions serving households (NPISHs). A **benefit** is a transfer received by households. It can be in cash, i.e. monetary, or in kind, i.e. in the form of reimbursements or provided directly by public administrations.

The **net national income (NNI)** is obtained by subtracting consumption of fixed capital (CFC), which corresponds to the cost of capital, from the gross national income. Gross national income is the sum of primary income received by resident economic units, themselves broken down within institutional sectors. It is equal to gross domestic product (GDP) minus primary income paid to non-resident economic units and increased by primary income received from the rest of the world by resident units. The balance of net primary income (B5n) is the balance of gross primary income (B5g) once consumption of fixed capital has been deducted. At the economy level, this is the net national income (NNI).

Extended redistribution integrates all public transfers from different institutional sectors of national accounting, including collective public services. In order to measure the effects of all taxes, benefits and collective expenditure, it compares **income before transfers to income after transfers**. These two concepts of income are defined to correspond to the accounting framework of the national economy. Income before transfers therefore differs from primary income in social statistics, because it includes **retained earnings** from companies and rent imputed to owners ► **methods**. Retirement pensions and unemployment benefits are not included in income before transfers of extended redistribution (unlike **monetary redistribution**). These incomes can be measured at market price by including taxes on products or at **base price**: in this study we focus on revenues at base price ► **box**. **Factor income** corresponds to extended income (measured at market price) from which taxes on products and production are subtracted. It is equal to the sum of gross wage income, mixed income of the self-employed, property income and retained earnings of companies (attributed to households).

Monetary redistribution, or **usual redistribution**, only considers monetary transfers such as direct taxes (income tax, generalised social contribution and housing tax) and welfare benefits (housing benefit, family benefits, statutory minimum incomes), excluding replacement income such as retirement pensions and unemployment benefits. A **"usual" standard of living** is deduced from this by adding these monetary transfers, as received by households, to factor income. In this study, the usual standard of living differs slightly from the (monetary) standard of living used at INSEE for publications on inequality and poverty due to differences in the rules between national accounting and social statistics (see box 3 in Accardo *et al.* (2021)).

Collective consumption expenditure corresponds to non-individualisable public services. Effective collective consumption (P42) corresponds to public goods and services for which the benefit cannot be attributed to one or more households in particular. It benefits the community as a whole or large sections of society (defence, police, justice, community facilities, regulations etc.). Collective consumption is financed by public administrations (S13).

In the monetary sense of redistribution, the (usual) **standard of living** is equal to the (usual) **disposable income** of the household divided by the number of **consumption units** (CU). The standard of living is therefore the same for all individuals in the same household. Consumption units (CUs) are calculated according to the modified OECD equivalence scale, which assigns 1 CU to the first adult in the household, 0.5 CUs to other persons aged 14 or over and 0.3 CUs to children under the age of 14.

This file divides it into five groups based on the median standard of living: **poor** (below 60% of the **median** standard of living, 13% of the population according to estimates from the sources used), **modest** (between 60% and 90%, 27% of the population), median (between 90% and 120%, 26% of the population), **upper-middle** (120% to 180%, 24% of the population) and **better-off** (above 180%, 10% of the population).

When ordering distribution of standards of living, **deciles** are values which divide this distribution into ten equal parts. Therefore, the first decile is the standard of living below which the poorest 10% of people are positioned (marked D1); the ninth decile is the standard of living below which 90% of individuals are positioned (marked D9). Therefore, individuals are classified as belonging to **tenths of standard of living**: the poorest 10% make up the first tenth.

The **Gini coefficient** is a synthetic indicator used to reflect the level of inequality for a variable and for a given population. It varies between 0 (perfect equality) and 1 (extreme inequality). Between 0 and 1, the higher the Gini coefficient the greater the inequality. It is equal to 0 in a situation of perfect equality where the variable has an identical value across the entire population. At the other extreme, it is equal to 1 in the most unequal situation possible, where the variable is equal to 0 over the entire population except for a single individual. Inequality measured in this way can relate to variables of income, wages, standard of living etc. To avoid reclassification, Gini-type coefficients can be calculated by keeping the household order constant, i.e. they are pseudo-Gini coefficients and not specific to each variable. We choose the usual standard of living as a classification criterion to calculate these pseudo-Gini coefficients.

The concept of **urban unit** is based on the continuity of buildings and the number of inhabitants. Urban units are formed in metropolitan France and in the overseas territories (DOM) according to the following definition: a municipality or a group of municipalities with a continuous built-up zone (no break of more than 200 metres between two buildings) which has at least 2,000 inhabitants.

► For further information

- **André M.**, **Germain J.-M.**, **Sicsic M.**, « Comptes nationaux distribués : une nouvelle manière de distribuer la croissance - Une expérience innovante au service du débat public », Courrier des statistiques n° 9, Insee, juin 2023a.
- **André M.**, **Germain J.-M.**, **Sicsic M.**, "Do I get my money back?': A Broader Approach to Inequality and Redistribution in France With a Monetary Valuation of Public Services", Documents de travail n° 2023-07, Insee, mars 2023b.
- **André M.**, « Les prélèvements obligatoires au regard des enjeux redistributifs », Rapport particulier pour le Conseil des prélèvements obligatoires n° 3, février 2022.
- **Fouquet M.**, **Pollack C.**, « L'assurance maladie publique contribue fortement à la réduction des inégalités de revenu », Études et résultats n° 1220, Drees, février 2022.
- **Fouquet M.**, « Le modèle de micro-simulation Ines-Omar 2017 - Note méthodologique détaillée », Les dossiers de la Drees n° 87, décembre 2021.
- **Cusset P.-Y.**, **d'Albis H.**, **Navaux J.**, **Pelletan J.**, « Protection sociale : qui paie le coût du vieillissement de la population ? », Note d'analyse n° 103, France Stratégie, décembre 2021.
- **André M.**, **Meslin O.**, « Et pour quelques appartements de plus : Étude de la propriété immobilière des ménages et du profil redistributif de la taxe foncière », Documents de travail n° 2021-04, Insee, novembre 2021.
- **Accardo A.**, **André M.**, **Billot S.**, **Germain J.-M.**, **Sicsic M.**, « Réduction des inégalités : la redistribution est deux fois plus ample en intégrant les services publics », *in* Revenus et patrimoine des ménages, coll. « Insee Références », édition 2021.
- **Germain J.-M.**, **André M.**, **Blanchet T.**, « Rapport du groupe d'experts sur la mesure des inégalités et de la redistribution », Insee Méthodes n° 138, février 2021.
- **Fredon S.**, **Sicsic M.**, "INES, the Model that Simulates the Impact of Tax and Benefit policies", Courrier des statistiques n° 4, Insee, juin 2020.
- **Alvaredo F.**, **Chancel L.**, **Piketty T.**, **Saez E.**, **Zucman G.**, « Vers un système de comptes nationaux distributifs : méthodes et estimations des inégalités mondiales avec les données WID.world », Économie et Statistique/*Economics and Statistics*, n°517-518-519, 41–59, octobre 2020.
- **Piketty T.**, **Saez E.**, **Zucman G.**, "Distributional National Accounts: Methods and Estimates for the United States", *The Quarterly Journal of Economics*, 133 (2), 553-609, May 2018.
- **André M.**, **Biotteau A.-L.**, **Duval J.**, « Module de taxation indirecte du modèle Ines - Hypothèses, principes et aspects pratiques », Documents de travail n° 60, Drees, novembre 2016.

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