

Does housing wealth contribute to wealth inequality?

par Guillaume Allègre and Xavier Timbeau

[In a response to *Capital in the twenty-first century*, Odran Bonnet, Pierre-Henri Bono, Guillaume Chapelle and Etienne Wasmer \(2014\)](#) attempt to show that the conclusion of the book in terms of the explosion of wealth inequality is not plausible. They point out what they see as an inconsistency in the thesis: according to the authors, the capital accumulation model used by Piketty is a model of accumulation of productive capital, which is inconsistent with the choice to use housing market prices to measure housing capital. To correctly measure housing capital, one should use rent and not housing prices. By doing this, the authors conclude that capital/income ratios have remained stable in France, Britain, the United States and Canada, which contradicts the thesis of Piketty.

In [OFCE briefing note n°9 \(“Does housing wealth contribute to wealth inequality? A tale of two New Yorks”\)](#), we show that the authors minimize the contribution of housing to inequality. In particular, we do not believe that trends in housing prices have “second order redistributive effects”. As is often the case, the disagreement is in part due to a lack of consensus on what really matters when discussing inequality: wealth inequality or income inequality or consumption inequality? If we follow the authors, only the consumption from wealth income should matter. We emphasize a theoretical inconsistency in the authors’ main argument. In fact, they value housing capital as the sum of the present values of rents, under the assumption that what matters is the housing service, then they use a dynastic model in which what matters is the transmission of wealth and not the discounted value of the housing service.

In short, our conclusion is that with regard to inequality, wealth matters, housing wealth is in fact wealth, and should be measured in a manner consistent with the measure of other types of wealth. By doing so, one finds that housing wealth does contribute to the growth of wealth and consequently, Piketty's thesis is not refuted.

For more on this, see: [Allègre, G. and X. Timbeau, 2015: "Does housing wealth contribute to wealth inequality? A tale of two New Yorks", OFCE briefing note, n°9, January.](#)

On debate in economics

By [Guillaume Allègre](#), [@g_allegre](#)

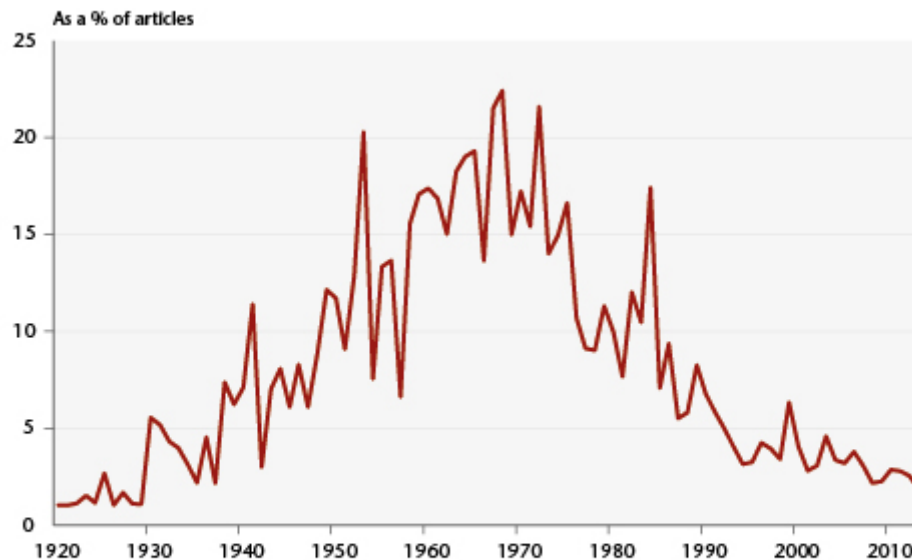
To Bernard Maris, who nurtured debate on economics with his talent and his tolerance

You have reasons for not liking economists. This is what Marion Fourcade, Etienne Ollion and Yann Algan explain in an excellent study, [The Superiority of Economists](#), with the main conclusions summarized in a blog post: ["You don't like economists? You're not alone!"](#) Although the study mainly concerns the United States, it is also applicable to Europe. It presents an unflattering portrait of economists, and in particular elite economists: they have a strong sense of superiority, are isolated from other social sciences, and are comforted by their dominant position of economics imperialism. The study also shows that the discipline is very hierarchical (some economics departments are "prestigious" and others less so) and that internal controls are very strong (in particular because the vision of what constitutes quality research is much more homogeneous than in other disciplines). This has an impact on publications and on the hiring of economists: only

those who have sought and/or been able to accommodate this “elitist” model will publish in the infamous top field journals, which will lead to them being recruited by the “prestigious” departments.

This would not be all that serious if the job of economists were not to make public policy recommendations. Furthermore, the “superiority” of economics is based largely on the fact that the discipline has developed tools to make quantitative evaluations of public policy. Economics is thus, in part, a science of government, while the other social sciences have adopted more critical postures towards established categories, structures and powers. The consequence of all this – the discipline’s hierarchies, the internal controls and the lack of appetite for critical positions – is that debate is now virtually banned in academic economics (another reason not to like economists?). The figure below shows that the number of articles written in response to another published article has dropped dramatically since the 1970s: while these then represented 20% of articles published in the five major academic journals, today they represent only 2%. Debate and criticism are virtually absent from the major journals, as are heterodox paradigms. These are relegated to the supposedly less prestigious journals, which does not lead to being hired into the top departments. However, there is also a strong sense in the discipline that debate and criticism must be engaged at the academic level, a level where criticisms are subject to peer review (with effects on selection, reputation, etc.). You have to be crazy and ask permission to publish a criticism, but no madmen are applying for permission, so no criticism is published. The Anglo-Saxons use the term Catch-22^[1] to describe this type of situation.

Figure: Debate In the five main economic journals, 1920-2013



Note: The series shows the percentage of articles in the five main economics journals containing the words "comment", "reply" and "rejoinder". The five journals (Anglo-American) are: *Economic Review*, *Econometrica*, *Journal of Economic Literature*, *Journal of Political Economy*, and *Quarterly Journal of Economics*.

Source: Joe Francis, "The Rise and Fall of Debate in Economics", <http://www.joefrancis.info/economics-debate/>

If there is no longer any debate in academic journals, is it taking place elsewhere? In France, Thomas Piketty's *Capital in the Twenty-First Century* seems to be the tree that is hiding the forest. The book's success globally has pushed a number of people to take a position, but can we really speak of a debate in France and Europe? [2] In the face of Piketty's success, Michel Husson ("[Le capital au XXI^e siècle. Richesse des données, pauvreté de la théorie](#)" [[Capital in the 21st Century – Wealth of data, poverty of theory](#)]) and Robert Boyer ("[Le capital au XXI^e siècle. Note de lecture](#)" [[Capital in the 21st Century – Reading notes](#)"]) have made some interesting criticisms based on, respectively, a Marxist and a regulationist approach. However, despite the quality of these critiques, it is apparent that this is not the focus of today's debate: if the global or European tax on capital proposed by Piketty does not come into being, it will not be because Marxist and / or regulationist arguments have carried the day. It is rather arguments based on the tax incentives for growth and innovation that are more likely to convince the authorities. This line of argument is supported by Philippe Aghion, among others. With regard to the taxation of savings

and wealth, and despite the similar partisanship of these two French economists (they both signed calls for Ségolène Royal in 2007 and then François Hollande in 2012), Aghion and Piketty and their co-authors do not agree on anything (which André Masson demonstrates in a forthcoming issue of the *Revue de l'OFCE*). Piketty proposes a highly progressive wealth tax and a new tax merging the CSG wealth tax and the income tax (IR), which would tax investment income, including capital gains, as well as labour income. Aghion proposes the exact opposite: he would rely more on VAT, avoid merging the IR and CSG taxes (a “bogus good idea”), and set up a “dual capital/labour system” with a “progressive tax on job income and a flat tax on income from productive capital”. It’s a good subject for debate, which will nevertheless not take place in the scientific journals, or elsewhere.

In fact, Piketty and Aghion are addressing the issue of the taxation of wealth from opposite angles: Aghion approaches it in terms of growth, while Piketty approaches it in terms of inequality. Why their models differ is understandable: they are not trying to explain the same phenomenon. Piketty’s concern is to explain changes in inequality, whereas Aghion is trying to explain changes in growth. Although they deal essentially with the same phenomena, the two approaches do not so much oppose each other as go off at right angles. Yet from the perspective of policy makers, a confrontation between the two is essential: otherwise how is it possible to choose between the different recommendations of Piketty and Aghion?

Part of this post was published on the blog of *Libération*, L'économiste : <http://leconome.blogs.liberation.fr/leconome/2014/12/de-la-sup%C3%A9riorit%C3%A9-des-%C3%A9conomistes-dans-le-d%C3%A9bat-public.html>

[1] The expression is taken from a novel by Joseph Heller with the same name. The novel takes place in wartime, and to be exempt from combat missions you have to be declared crazy. To be declared crazy, you have to apply. But according to Article 22 of the regulations, the very act of applying proves that the applicant isn't crazy.

[2] In the United States, on the other hand, there was debate about the book. For example, Greg Mankiw ([pdf](#)), Auerbach and Hassett ([pdf](#)) and David Weil ([pdf](#)) all made recent critiques.

Doesn't real estate capital really contribute to inequality?

By [Guillaume Allègre](#) and [Xavier Timbeau](#)

[In a response to *Capital in the twenty-first century*, Odran Bonnet, Pierre-Henri Bono, Guillaume Chapelle and Etienne Wasmer \(2014\)](#) attempt to show that the book's conclusions regarding an explosion in wealth inequality are "not plausible". The authors point out an inconsistency in Thomas Piketty's thesis: the model of capital accumulation is implicitly a model of the accumulation of productive capital, which is inconsistent with the decision to include real estate capital at its market value in measuring capital. If valued correctly, the ratio of capital to income would have remained stable in France, Britain, the United States and Canada, which

contradicts the thesis of Piketty's work.

In [OFCE Briefing Note, no.9/2015 \("Does housing wealth contribute to wealth inequality? A tale of two New York"\)](#), we respond that the authors minimize the contribution of housing to inequality. In particular, we do not believe that trends in real estate prices have "second order effects (actual distributional effects) that are attenuated". As is often the case, the disagreement is due in part to a lack of consensus about what kind of inequality actually matters: inequality in wealth? Income? Consumption? The potentially divergent dynamics of these inequalities? The disagreement is also due to the type of model used. The authors use a dynastic model in which property is passed from parents to children and grandchildren. In this model, changes in real estate prices do not have any real effect. This model is not relevant to accounting for inequalities generated by property in a society where people are mobile and have different life projects from their parents.

The housing bubble could fuel the development of inequality. Home ownership in the world's metropolises is more and more becoming a closed club for the wealthy, which partitions young people between those with social, educational or financial capital, who can acquire property, and those who can only rent or move to less prosperous areas, with the consequence of further reducing their access to different types of capital. Would it not be better to build enough for everyone to find housing at a price that is in line with the amenities offered? Isn't it apparent that this latter situation is more egalitarian than the former?

For more on this, see: [Allègre, G. and X. Timbeau, 2014 : "Welcome to Nouillorc : Le capital-logement ne contribue-t-il vraiment pas aux inégalités?", Note de l'OFCE, no. 42 of 25 June 2014.](#)

Why read Piketty?

By [Jean-Luc Gaffard](#)

Thomas Piketty's book *Capital in the twenty-first century* has met with an extraordinary reception, one that is commensurate with both the empirical work performed and the political issue addressed, that is to say, the spectacular increase in inequality in the United States. Paul Krugman and Joseph Stiglitz, both of whom are concerned about current trends in American society that they consider are threatening democracy, believe Piketty's work confirms their fears.

Armed with an impressive mass of data and a solid historical knowledge reinforced by a reading of the great novels of French and English literature, Piketty foresees the advent of a second *Belle Epoque*, the decades-long period preceding the First World War. This would mean a return to a patrimonial capitalism based on inheritance, when income and capital are concentrated in the hands of the top percentile of the population and the ratio of capital to income rises significantly. More fundamentally, Piketty highlights the existence of a longstanding trend towards stagnation and rising inequality, which is reflected in a rate of return on capital that is sustainably higher than the economy's rate of growth, a little like Marx insisted on the existence of a tendency for the rate of profit to fall. The twentieth century, and in particular the period following the Second World War, was characterized by strong growth associated with decreases in inequality and in the importance of capital relative to income – but this period was merely a parenthesis that is now closed. The thesis defended is that capitalist society has returned to low growth and rising inequalities fuelled more by the transmission of wealth than by the

remuneration of individual talent.

The book is nevertheless ambivalent. There is a gap between the wealth of data collected and the simplicity of the theory that is supposed to account for it. On the one hand, an overly simple, essentially a-institutional model adopts a growth rate that is ultimately exogenous and ignores the heterogeneity of capital, making distribution a technical given that does not feed back into growth. On the other hand, the wealth of the data and the insights associated with it encourage reflection about the ins and outs of the distribution of income and wealth, returning it to its central place in economic theory and restoring its social dimension.

A belief runs through the book: that, regardless of what economic policies are implemented, growth is again returning to a low level because there is no longer any catch-up going on and potential productivity gains are largely exhausted. Inheritance then begins to play a key role in the distribution of wealth and feeds the rise of inequality. This fundamental pessimism justifies the simplicity claimed for the theoretical explanation. If this pessimism is to be shared, however, the foundation needs to be improved by examining the causes and effects in the formation of rent and by breaking with a neo-classical analysis of growth that is without any real relevance to the subject at hand. There is nothing natural about the evolution of the distribution of income and wealth, which depend on political choices and social norms. The question, then, is whether the choices and norms of the years of the *Belle Epoque* still have any meaning, and whether policy can still counteract the forces of what must be called decline that threaten modern capitalist societies.

Reading Piketty thus gives rise to an implicit challenge: to develop an analysis that, following an intuition that we owe to the classical economists, is based on the idea that the growing importance of rent, as distinguished from profit, would fuel an increase in the purchase of nonperforming assets

or luxury goods at the expense of the accumulation of capital, and would thereby constitute an obstacle to growth.

These various issues are examined in the *Note de l'OFCE*, no. 40 of 2 June 2014, "[Le capital au XXI^e siècle : un défi pour l'analyse](#)" [*Capital in the twenty-first century : a challenge for analysis*], which follows on from the previously published working document by Guillaume Allègre and Xavier Timbeau (see the blog [here](#)).

The critique of capital in the 21st century: in search of the macroeconomic foundations of inequalities

By [Guillaume Allègre](#) and [Xavier Timbeau](#)

In his book *Capital in the 21st Century*, Thomas Piketty offers a critical analysis of the dynamics of capital accumulation. The book is at the level of its very high ambitions: it addresses a crucial issue, it draws on a very substantial statistical effort that sheds new light on the dynamics of distribution, and it advances public policy proposals. Thomas Piketty combines the approach of the great classical authors (Smith, Ricardo, Marx, Walras) with impressive empirical work that was inaccessible to his illustrious predecessors.

Thomas Piketty shows the mechanisms pushing towards a convergence or divergence in the distribution of wealth and highlights how the strength of divergence is generally underestimated: if the return on capital (r) is higher than

economic growth (g), which historically has almost always been the case, then it is almost inevitable that inherited wealth will dominate built-up wealth, and the concentration of capital will reach extremely high levels: “The entrepreneur inevitably tends to become a rentier , more and more dominant over those who own nothing but their labour. Once constituted, capital reproduces itself faster than output increases. The past devours the future.”

The book thus seeks the basis for inequality in macroeconomics ($r > g$), whereas the usual suspects are found at the microeconomic level. In [OFCE Working document no. 2014-06 \[in French\]](#), we argue that this macro-foundation for inequality is not convincing and that the same facts can be interpreted using a different causality, in which inequality arises from the operation of (imperfect) markets, scarcity rents and the establishment of property rights. It is not $r > g$ that turns entrepreneurs into rentiers, but the establishment of mechanisms that allow the extraction of a perpetual rent that explains the historical constancy of $r > g$.

This different interpretation of the same phenomena has consequences for public policy. The *ex post* taxation of capital, where necessary, can only be a second-level choice: first the constraints of scarcity have to be removed and the definition of property rights and the rights of owners and non-owners must be defined. Are landlords going to be free to charge any rent they like? Can they limit other construction around their property? How much protection is labour law going to give workers? To what extent can they influence managerial decisions within the company? In our opinion it is the answers to these questions that determine the relationship between economic growth and the return on capital, as well as capital's weight in the economy. The point is to prevent owners of capital from exploiting a favourable balance of power. In this respect, while its shape has changed, capital in the twenty-first century is much like it was in the late

nineteenth century. Dealing with it will require more than a tax on capital.

For more information, see: “La critique du capital au XXI^e siècle : à la recherche des fondements macroéconomiques des inégalités”, [*Document de travail de l'OFCE, n°2014-06*](#).

Is the French tax-benefit system really redistributive?

By [Henri Sterdyniak \[1\]](#)

France has set up benefits such as RSA income support, PPE in-work negative income tax, CMU universal health care, the minimum pension, housing allowances, and exemptions from social security contributions for low-wage workers. From the other side, it has a tax on large fortunes; social insurance and family contributions apply to the entire wage; and capital income is hit by social security contributions and subject to income tax. France's wealthy are complaining that taxation is confiscatory, and a few are choosing to become tax exiles.

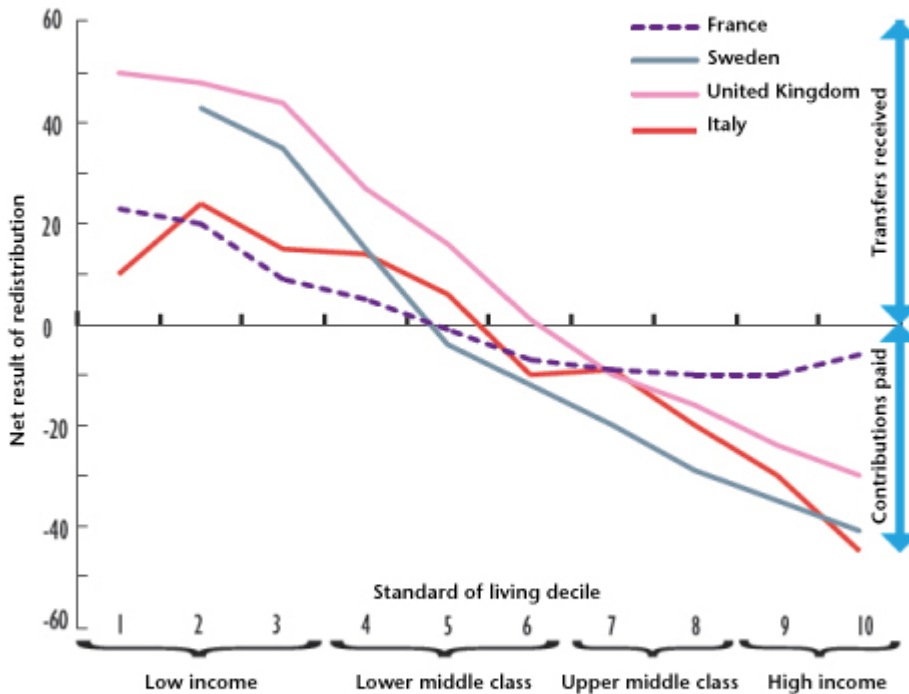
Despite this, some people argue that the French tax-benefit (or socio-fiscal) system is not very redistributive. This view was recently lent support by a study by Landais, Saez and Piketty: the French tax system is not very progressive and even regressive at the top of the income hierarchy [\[2\]](#): the richest 0.1% of households are taxed at a very low rate. But redistribution through the tax-benefit system is effected not just through taxes but also through social benefits. We must therefore look at both these aspects to evaluate how redistributive the system is. This is especially true as

Landais, Saez and Piketty take into account the VAT paid on consumption financed by social benefits, but not the benefits themselves, meaning that the more a poor household benefits (and spends) from social benefits, the more it seems to lose on redistribution.[\[3\]](#)

Four researchers from Crédoc, the French Research Center for the Study and Monitoring of Living Standards, have published a study [\[4\]](#) that takes benefits into account. They nevertheless conclude: “The French tax system, taken as a whole, is not very redistributive.” The study uses post-redistribution standard-of-living deciles to review the benefits received and the taxes paid by households (direct taxes, indirect taxes and social contributions) as a percentage of disposable income, and compares France, Italy, the United Kingdom and Sweden. In France, net transfers (levies less benefits) represent only 23% of household disposable income in the first standard-of-living decile (the poorest), against 50% in the United Kingdom (see figure). At the other end of the scale, in France transfers lower the disposable income of the richest households by only 6%, versus 30% in the UK, 40% in Sweden, and 45% in Italy. France is thus considered to have the lowest level of redistribution, with little distributed to poor people and low taxes on the rich.

Figure. According to the CREDOC, the French tax-benefit system is not very redistributive

Summary of transfers received and contributions paid, as a % of disposable income, by standard of living decile



Source: Credoc calculations using data from the Luxembourg Income Study, 2006.

Note: People in the lowest standard of living decile (i.e. the poorest 10%) receive a net gain from redistribution equal to 23% of their disposable income. This net gain is calculated as the difference between their social transfers (social, sickness and pension benefits) and their contributions (income tax, social charges, indirect taxes).

Yet the French tax-benefit system is considered by international institutions as one of those that minimize inequalities the most. For instance, the OECD (2011) wrote: "Redistribution through taxes and benefits reduces inequality by just over 30% in France, which is well above the OECD average of 25%".

The OECD provides statistics on income inequality (measured by the Gini coefficient) before and after transfers. Of the four countries selected by the Crédoc, it is France where the Gini is reduced the most as a percentage by transfers (Table 1), to an extent equivalent to the level in Sweden, and significantly greater than the reduction in Italy and the UK. Euromod winds up with a substantially similar classification (Table 2).

Table 1. Gini index of income distribution (in 2010) according to the OECD

	Before transfers	After transfers	Impact of transfers
Germany	0.496	0.286	-42.3
Denmark	0.429	0.252	-41.3
France	0.505	0.303	-40.0
Italy	0.503	0.319	-36.6
United Kingdom	0.523	0.341	-35.2
Sweden	0.441	0.269	-39.0
United States	0.499	0.380	-23.8

Source: OECD (2013). The Gini index lies between 0 (perfect income equality) and 1. The distribution of income becomes more equal as the index approaches 0.

Table 2. Gini index of income distribution (in 2010) according to Euromod

	Before transfers	After transfers	Impact of transfers
Germany	0.518	0.380	-48.1
Denmark	0.443	0.334	-54.0
France	0.483	0.349	-50.1
Italy	0.497	0.373	-36.8
United Kingdom	0.524	0.477	-38.0
Sweden	0.429	0.317	-46.2

Source: Euromod, 2012.

Table 3. Poverty rate (60% threshold)

	2005	2012
Germany	12.2	16.1
Denmark	11.8	13.1
France	13.0	14.1
Italy	18.9	19.4
United Kingdom	19.0	16.2
Sweden	9.5	14.2

Source: Eurostat, 2012.

The *Portrait social* [Social Portrait] by the INSEE provides a careful summary of how redistributive the French socio-fiscal system is (Cazenave *et al.*, 2012). It seems that inequality is reduced significantly (Table 4) in France: the inter-decile ratio (D10/D1) falls from 17.5 before redistribution to 5.7 afterwards. [5] According to the INSEE, 63% of the reduction in inequality comes from social benefits and 37% from levies, which confirms the need to take benefits into account in order to assess redistribution.

Table 4. Standard of living fractiles before redistribution according to the INSEE*

	D1	Q1	Q2	Q3	Q4	Q5	D10
Average income before redistribution	4 128	7 266	15 591	21 474	28 626	55 292	72 195
Average disposable income (DI)	9 948	11 266	15 847	20 145	25 602	44 919	56 654
Net transfers	5 820	4 000	256	-1 329	-3 024	-10 373	-15 541
Net transfers as % of DI	59	36	2	7	-12	-23	-27

* in euros per year per consumption unit. D1: the 10% of people with the lowest living standard; Q1: the 20% of people with the lowest living standard, etc.; D10: the 10% of people with the highest living standard.
Source: INSEE, 2013, Portrait social.

The vision presented by Crédoc of the redistributivity of the French tax-benefit system is thus unusual... and, to put it frankly, wrong.

The study is based on data from the *Budget des familles* [Family budget] survey that is not matched with fiscal data and which is generally considered less reliable than the Euromod survey or than the tax and social security figures used by the INSEE. This may explain some important differences between the Crédoc figures and those of the INSEE: for example, according to the INSEE, non-contributory transfers represent 61% of the disposable income of the poorest 10%, but only 31% according to Crédoc (Table 5).

Like the INSEE, the Crédoc study ignores employer national health insurance contributions (which hit high wages in France, unlike most other countries) and the ISF wealth tax (which exists only in France). Furthermore, it does not distinguish between contributory contributions (which give rights to a pension or unemployment benefits) and non-contributory contributions (such as health insurance or family contributions), which do not give rights. However, low-wage workers are not hit by non-contributory contributions in France, as these are more than offset by exemptions from social security contributions on low wages.

Table 5. Redistribution for the extreme deciles
A comparison of INSEE and CREDOC

	D1		D10	
	INSEE	CREDOC	INSEE	CREDOC
Primary income (pre-distribution)	41.5	39	127.4	93
Contributory benefits		38		32
Non-contributory benefits	60.2	31	0.6	1
Social contributions	-2.1	-8	-10.1	-16
Direct taxes	0.4	0	-17.9	-10
Total: Net disposable income	100	100	100	100
Indirect taxes	-22	-36	-10	-13
Net transfers (excl. indirect taxes)	+58.5	+59	-27.4	7
Net transfers (incl. indirect taxes)	+36.5	+23	-37.4	-6

Source: Authors' calculations based on INSEE (2013) and CREDOC (2013).

Most importantly, the study contains two errors that heavily distort the conclusions. The first methodological error is that, contrary to the INSEE, the authors include contributory transfers, in particular pensions [6], in social transfers. But for retirees, public pensions represent a very large part of their disposable income, particularly in France. Since the pension system ensures parity in living standards between retirees and active employees, then retirees show up in all the standard of living deciles and the tax-benefit system does not seem to be very redistributive, as it provides benefits to wealthy retirees. And contrariwise, if a country's pension system does not assure parity in living standards between retirees and active employees, then the tax-benefit system will seem more redistributive, as it provides pensions only to the poor.

So paradoxically, it is the generosity of the French system towards pensioners and the unemployed that makes it seem to be not very redistributive. Thus, according to Crédoc, the richest 10% receive contributory transfers representing 32% of their disposable income, which means that, in total, their net transfers represent only a negative 6% of their income. This is especially the case as Crédoc does not take into account the old-age pension contributions (*cotisations vieillesse*) incurred by businesses. If, as the INSEE does, pensions (and

more generally all contributory benefits) are considered as primary income, resulting from past contributions, the negative net transfers of the richest decile increase from -6% to -38%.

The other methodological problem is that Crédoc claims to take into account the weight of indirect taxes in disposable income (which INSEE does not). This comes to 36% for the poorest 10%, 23% in the middle of the income hierarchy, and only 13% for the best-off. The highly regressive nature of indirect taxes would make the whole tax system regressive: the poorest pay more than the rich. According to the figures from Landais, Saez and Piketty (2011), indirect taxation is definitely regressive (15% of the disposable income of the poorest, and 10% for the richest), but the gap is only 5%. According to the INSEE [\[7\]](#), the weight of indirect taxes in disposable income is 22% for the poorest, 16% in the middle income range and 10% for the richest. This difference comes from the structure of consumption (the poorest consume relatively more tobacco and petroleum products), and especially the savings rate, which increases as households earn more. In fact, the difference is undoubtedly overstated in an inter-temporal perspective: some households will consume today's savings tomorrow, so it is then that they will be hit by indirect taxation. In fact, the Crédoc study heavily overestimates the weight of indirect taxes by using an extravagant estimate of the household savings rate [\[8\]](#): the overall French household savings rate is -26.5%; only decile D10 (the richest 10%) have a positive savings rate; decile D1 has a negative savings rate of -110%, that is to say, it consumes 2.1 times its income. The poorest decile is thus hit hard by the burden of indirect taxes. But how likely is this savings rate?

National tax-benefit systems are complex and different. Comparisons between them need to be made with caution and rigour. To judge how redistributive the French system actually is, it is still more relevant to use the work of the INSEE,

the OECD or Euromod than this (too) unusual study.

[1] We would like to thank Juliette Stehlé, who provided assistance in clarifying certain points in this note.

[2] See Landais C., T. Piketty and E. Saez, *Pour une révolution fiscale* [For a tax revolution], Le Seuil, 2011.

[3] See also Sterdyniak H., “Une lecture critique de l’ouvrage *Pour une révolution fiscale*” [A critical reading of the work *Pour une révolution fiscale*], *Revue de l’OFCE*, no. 122, 2012. Note also that you cannot arrive at an overall judgment on the progressivity of the system from the case of a few super-rich who manage to evade taxes through tax schemes.

[4] Bigot R, É. Daudey, J. Muller and G. Osier: “En France, les classes moyennes inférieures bénéficient moins de la redistribution que dans d’autres pays” [In France, the lower middle classes benefit less from redistribution than in some other countries], *Consommation et modes de vie*, Crédoc, November 2013. For an expanded version, see: “Les classes moyennes sont-elles perdantes ou gagnantes dans la redistribution socio-fiscale” [Are the middle classes losers or winners from the tax-benefit redistribution], *Cahiers de Recherche*, Crédoc, December 2012.

[5] Also note that the INSEE underestimates somewhat the redistribution effected by the French system since it does not take into account the ISF wealth tax. It also does not include employers’ national health insurance, which in France is strongly redistributive as it is not capped. From the other side, it does not take account of indirect taxes.

[6] And replacement income such as unemployment benefits and sickness benefits.

[7] See Eidelman A., F. Langumier and A. Vicard: “Prélèvements

obligatoires reposant sur les ménages:

des canaux redistributifs différents en 1990 et 2010”
[Mandatory taxes on households: different channels of
redistribution in 1990 and 2010], *Document de Travail de la
DESE de l'INSEE*, G2012/08.

[\[8\]](#) Estimation from EUROMOD (2004): “Modelling the
redistributive impact of indirect taxation in Europe”, *Euromod
Working paper*, June.