What does it mean to be rich? Some conceptual and empirical issues

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Abstract

Over the past decade, a growing literature has shed light on the rise of inequalities at the very top of the income distribution. There is no doubt that such extreme inequalities do threaten social cohesion and that some public policies are needed in order to tackle this issue. The design of these policies requires setting some benchmarks that could serve, at least, as guidelines to promote efforts towards the reduction of inequalities. In the same way that the fight against poverty can usefully benefit from researchers' efforts to define poverty, the fight against extreme inequalities could also benefit from some definition of rich people. Nevertheless, very little attention has been given to the definition of the rich in the academic literature. The purpose of the paper is to try to fill this gap. It draws on previous definitions of an affluence line and proposes some estimates for three countries (France, Ireland and the UK).

Keywords

Rich, poverty, affluence line, inequality, reference budgets

Introduction

Over the past two decades, there has been a growing literature on 'top incomes'.[1] One of the main findings of this research is that inequalities have not only been rising quite sharply in many

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1. Piketty's best seller *Capital in the Twenty-First Century* is probably the most prominent example of this literature.

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countries, but also that the income surplus has been overwhelmingly captured by a very small proportion of the population. This is notably the case in the USA.

This issue was exacerbated after the financial turmoil that took place in 2007-2008. The Occupy movement and its famous slogan 'We are the 99 per cent' focused its criticism on the concentration of economic wealth among the top 1 per cent of American people. In many European countries, the majority of the population would probably express the same sentiments. The private debt of banks and other financial institutions was largely converted into public debt that ordinary citizens had to assume at the expense of their working and living conditions. The issue has attracted such a growing concern that international institutions have devoted reports to this issue (Dabla-Norris, Kochhar, Suphaphiphat, Ricka and Tsounta 2015; Kelley 2015, World Bank 2016). In the public debate as well as in the economic literature, there is growing attention on 'rich' people.

Surprising as it may be, despite the growing interest in these extreme inequalities, very little attention has been given to the definition of the rich in the academic literature. Whereas social scientists have for long devoted a great deal of effort to defining poverty, this is not the case for rich or wealthy people. The lack of such definition favors the anomie that affects our societies. We know that there are more and more rich people and that they are probably getting richer, but we do not know precisely where we stand and, more importantly, where we would possibly like to go. This issue thus remains a black hole in public policy. One of the objectives of this paper is to try to fill this gap and to propose a definition of 'the rich'.

Nevertheless, as relevant as the concept may be, it would not be very useful for the design of any public policy if it could not translate in some measure or indicator. This is, perhaps, the most difficult task. This difficulty is not specific to this subject. For instance, although there is now some agreement among social scientists about how we should conceptually and theoretically define poverty, there is still much controversy about how we should empirically measure it in order to set a poverty line. Another objective of this paper is to discuss this empirical issue and propose a method for defining an affluence line[2] that could achieve, as will be argued, the greatest consensus within society.

It is necessary to make clear that the focus here is on a rather narrow definition of rich people, that is people who are rich in a material or economic sense: a dimension that could be broadly defined in terms of the control people have over material resources. This is, of course, a necessary condition for being part of the 'club' of the rich. Yet, as with poverty, richness is a multidimensional phenomenon. Culture, social relations and symbolic power are also fundamental dimensions that should be included in a comprehensive definition. Sociologists are well aware of this reality and there is no doubt that most of them will be disappointed by such an economic definition.[3] Moreover, within this narrow definition of economic richness, we will not make any distinction between the various forms of economic richness. For instance, we will not make any distinction between work incomes and capital incomes. In other words, in this paper, we only consider the quantitative dimension of economic richness, although this may be seen as a relatively unconvincing approach to defining rich people. Finally, a more severe limitation of this paper is perhaps that it does not take into account the distribution of wealth, except by the way of monetary income flows that derive from capital.

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2. Throughout this paper, we use the term 'affluence line' as most authors do when they discuss this issue.
3. Cf. the work of two French sociologists, Monique Pinçon-Charlot and Michel Pinçon. The research of these two scholars is focused on the wealthiest families and the super-rich.

Table 1. World GDP per capita (annual real growth rate).

Period	Growth rate
before 1820	0.0%
1820-1950	0.9%
1950-2015	2.0%
1950-1980	2.6%
1980-2015	1.4%

Source: Maddison up to 2008.[4] Author's update for the period 2008-2015.

Focusing on this narrow economic definition of richness is not, however, totally useless since it may help to identify some objectives that could inform the public debate and contribute to the definition of public policies targeted to the reduction of inequalities.

The paper is organised as follows. The first section of the paper briefly sets the scene and provides some historical perspective on inequalities. Sections 2 and 3 review the few existing definitions of an 'affluence line' and discuss their strengths as well as their limitations. Section 4 elaborates on some existing definitions that should attract, we argue, a large consensus. Section 5 discusses some basic methodological issues and section 6 and 7 propose some empirical estimates. The last section makes some concluding remarks and identifies some directions for future research.

1. A brief historical overview

Facing the extreme global inequalities of the world today, there is no need to make the case for any academic discussion of the phenomenon. There are obviously very poor and extremely rich people all around the planet. The picture is not new. Over the course of the human history, one can see that similar situations have been a key characteristic of most human societies all around the world. A radical change has taken place, however, since the industrial revolution. Until the beginning of the 19th century, the growth of global output was in line with the growth of population, with a stagnation in GDP per capita. Per capita income started to increase between 1820 and 1950, by just under 1 per cent per year, and this growth accelerated in the aftermath of the Second World War (Table 1).

This radical change soon raised renewed concern about distributional issues. This may be illustrated in various ways. From an economic point of view, the issue was raised in the 19th century by many economists, including the British economist John Stuart Mill. In his *Principles of Political Economy*, Mill wrote for instance that 'it is only in the backward countries of the world that increased production is still an important object: in those most advanced, what is economically needed is a better distribution.'[5]

A century later, in the aftermath of World War II, the aceleration of growth also rapidly exacerbated this distributional issue and the question came to the forefront of the political agenda

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4. The Maddison-Project, available at http://www.ggdc.net/maddison/maddison-project/home.htm,, 2013 version.

5. The full sentence argues for restraining the population ('. . . a better distribution, of which one indispensable means is a stricter restraint on population'). Mill is often presented as the 'father' of the Wage Fund theory according to which there is a fixed amount of capital available to pay for the costs of production and the wages needed to sustain workers. Therefore, Mill's solution to increasing the wage rate above subsistence level was to control the growth of the population. The Wage Fund doctrine has been much criticised and general acceptance of the theory lost ground.

in many countries. In 1964, US President Lyndon Johnson launched the American War on Poverty. In the mid-60s, the French government created an official institution, CERC,[6] to analyse the distribution of productivity gains among the various stakeholders (shareholders, employees, clients, suppliers etc.) In the mid-1970s, the mission of this institution was renewed to explicitly analyse inequalities and the distribution of incomes. In the UK, the creation of The Royal Commission on the Distribution of Income and Wealth in the mid-1970s shared the same objective (Stanford, 1980). These few examples show that when a society is getting rapidly richer, there is an awareness of the need for a better distribution, from both an economic and social point of view.

Few people, if any, would deny that our world has become richer over the past two centuries. Richer, we would say, in an 'absolute' sense. This requires some clarification. Social scientists working on income inequalities are aware of the long-standing controversy on 'relative' *vs* 'absolute' poverty. As stated by Atkinson (1988), 'The term "absolute" can scarcely be used in the same sense as in the physical sciences'. Therefore, poverty must be considered as a relative concept insofar as it has to take into account two fundamental dimensions, space and time (Concialdi 1997). In other words, poverty cannot be considered as an absolute concept that would make sense in the same way everywhere and at any time. Poverty can only be considered as absolute if we disregard one of those two dimensions.[7]

The same is true for richness. If we disregard the dimension of space and consider the situation of the world as if all human beings were embarked in the same boat – that is as if all incomes were equally distributed – we may come to some absolute measure of richness as we did in Table 1. In this absolute, but completely hypothetical, sense, we can say that the world has become richer.

Whether this increase in global output per capita has translated into increased well-being for the population of the planet as a whole, and to what extent, is another and rather different issue. As pointed out by Milanovic (2011), today we almost certainly face a higher level of relative, and certainly absolute, global inequality than at any point in human history. Perhaps more importantly, the composition of global inequality has changed from being driven two centuries ago by income differences within countries ('class' differences) to income differences between countries ('locational' differences). For these two reasons, if we assume some aversion for inequality, we can be quite sure that global welfare did not increase to the same extent as World GDP per capita did. Today, as well as two centuries ago, a better distribution could still make a significant contribution to welfare and the definition of an affluence line may help to take us in that direction.

2. Statistical definitions and their limitations

The literature on top incomes usually focuses on people above a given percentile of the income distribution (the top x per cent of the distribution). The smaller the x, the higher the probability that people above this percentile are rich. Considering the top 1 per cent has become, in this respect, a widely popular, if not totally accepted, definition of 'rich' people. This way of analysing rich people is useful in studying the concentration of incomes (or wealth) and its variation over time. It does not, however, provide any definition of rich people as such and it

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6. Centre d'études des revenus et des coûts.
7. Some advocates of absolute empirical poverty lines, for instance Bourguignon and Morrisson (2002), clearly disregard the dimension of time. As they write: "The poverty lines are then taken to be constant over time."

also misses the possibility that the rich might well be a changing proportion of the population, which is also an important issue.

To overcome this limitation, some authors use an income threshold, whether absolute or relative, to define rich people. An absolute threshold is generally set at such a high level that there would be no dispute, at least among ordinary citizens, about the fact that people above this threshold may be considered as rich in the common sense meaning of the term.[8]

Relative thresholds usually mimic the definition of standard monetary poverty lines by setting a threshold at a given distance from median income: people are considered rich if their income is above x times the median income. For instance, Franzini et al. (2016) define affluent, rich and super-rich as people whose incomes are respectively above 3 times, 5 times or 10 times the median income. Similarly, as far as asset wealth is concerned, Atkinson (2006) identifies as rich anyone who owns assets above a given threshold that is a multiple of the average income.[9] This is going a (small) step further since it relates the definition of rich people to the actual income distribution and, consequently, implicitly acknowledges the fact that this relationship might be a key feature of some definition of rich people. In the same vein, Danziger et al. (1989) define the rich 'as persons living in families with incomes exceeding nine times their poverty lines'.

Whether absolute or relative, all these definitions share the same limitation: they do not provide any rationale for the definition of these thresholds. Therefore, the empirical lines that are defined in this way are purely conventional and open to never-ended debates. To try to overcome this problem, some authors have proposed, and argued for, normative definitions.

3. Normative definitions: bringing people together

As far as we know, two authors have proposed definitions of an affluence line. These proposals share some common characteristics, in particular, concerning the need for some kind of justice, but they rely on rather different rationales.

Roughly forty years ago, Jan Drewnowski (1978) put forward a definition of an affluence line. According to Drewnowski, the main reasons for introducing the concept of the affluence line were: (1) Scarcities which constitute limits to development, (2) Social justice, (3) Societal deterioration which is brought about by affluence. These arguments largely echoed the challenges that were attracting growing concern among international organisations at that time.[10] And, there is no doubt that these challenges still deserve close attention today. In order to cope with these issues, Drew-nowski defined an affluence line as 'the level above which consumption need not and should not rise'; this affluence line should be based, Drewnowski argued, 'on absolute standards for needs satisfaction.' Hence the conclusion: 'Just as it is possible establish minimum standard levels of all these needs which would be acceptable as a basis for a poverty line, for an individual or family it is also possible to establish full satisfaction standard levels of these needs which would constitute the affluence line for individuals and families.' In other words, Drewnowski proposed to establish

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8. A popular example is to be found in the Forbes magazine that publishes each year the famous *The World's Billionaires List*. It also calculates the cost of a basket of goods and services necessary to 'live extremely well' and the related index, the Cost of Living Extremely Well Index (CLEWI).
9. See Atkinson (2006). Atkinson proposes the following thresholds: people are rich if they own assets worth at least 30 times the average country income. Super-rich and mega-rich are people whose assets are worth respectively 30 x 30 (900) times or 30 x 30 x 30 (2700) times the average income.
10. Drewnowski has been intimately involved in the "Social indicators movement."

minimum and maximum standards of need satisfaction which could serve as a basis for the definition of public policies in order to cope with the three main challenges that he identifies.

Nevertheless, Drewnowski did not suggest any guideline to empirically set these two benchmarks and, to the best of our knowledge, no attempt has been made since then in that empirical direction. The recent book by Kate Raworth (2017) *Doughnut Economics* in some way echoes Drewnowski's preoccupations. In Raworth's book, the social foundation is the inner ring of the doughnut: it represents the minimum of level resources needed to lead a good life and can be compared with the minimum standard of need satisfaction proposed by Drewnowski. The outer ring of the doughnut consists of the Earth's environmental limits. It defines, *de facto*, an upper limit of need satisfaction; however, this limit is not based on social standards of full satisfaction of needs but on ecological limits.

The second normative approach of an affluence line was developed much more recently by Marcelo Medeiros (2006). It is primarily an economic one. This author defines the rich in relation to the poor using a redistributive criterion. The affluence line is defined as 'the value that delimitates the aggregated income required to eradicate poverty by the way of transfers from the rich to the poor'. The rationale for this definition is based on a moral argument: because 'poverty is morally unacceptable . . . there should be complete aversion to it.' Empirically, the methodology relies on the standard view that utility declines as income raises.[11] Consequently, this provides an argument for eradicating poverty by means of transfers that should occur from the richest individual to the poorest one, going step by step: 'When the level of resources of the richest individual reaches the level of the second richest individual, both start transferring equal amounts of resources to the poorest, the same occurs to the following individuals as their level of resources are reached.' This continues up to the point where the resources necessary to eradicate poverty have been transferred from the richest individuals to the poorest ones. At this point, 'the original income of the last richest individual included in the transfer process will be the value of the affluence line, above which, with the same income, all the originally richest individuals will be found.'

There is no doubt that there are strong moral arguments in favor of this definition of an affluence line, even though some economists do not seem to be convinced.[12] Doyal and Gough (1991) made a significant contribution to this debate by arguing for a right to minimal need-satisfaction. Analysing the logical, but rather complex, relationship between rights and duties within a community, Doyal and Gough argue that it would be inconsistent to ascribe duties to individuals and 'not to help them attain the minimal wherewithal to do just that.' There is thus, as they state, a right to minimal need-satisfaction. As Doyal and Gough put it, 'the link between severe need and entitlement is a powerful one supported by both reason and feeling.' In the following section, we propose a quite close but slightly different logical argument.

4. Individuals and society: a logical argument

The individual and the society are mutually dependent: this comes as a truism for most social scientists. It is not the case, however, if we consider mainstream economics where the relationship

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11. ' . . . the individual well-being generated by additional amounts of resources decreases as the volume of such resources increases" (Medeiros 2006).
12. Briefly reviewing the definitions of rich people, Franzini et al. (2016) state that 'The choice of making the definition of richness dependent on poverty is not very convincing'. It is a pity, however, that the authors do not bother to explain why such a definition is 'not convincing.'

between the individual and society is often overlooked, either because there is no society or because society is just some kind of byproduct of market arrangements that is driven by purely individualistic interests. This position has been vividly criticized by Trygve Haavelmo when, in 1989, he received the "Bank of Sweden Prize in Economic Sciences in the memory of Alfred Nobel," the so called 'Nobel Prize'.

In his Nobel Prize lecture, Trygve Haavelmo (1989) raised a potentially disturbing question that all scientists should - at least one day in their lives - ask themselves. The question is: 'Is econometrics a useful instrument for economic policy?' Fortunately, in this case, the short answer is yes, 'econometrics can be useful'. But this possibility 'depends on good economic theory' and, unfortunately here, 'existing theories are not good enough.' Why is this so? Because economic theory starts 'by studying the behaviour of the individual' and then tries 'to construct a model of the economic society in its totality by a so-called process of aggregation.' 'This is actually beginning at the wrong end,' says Haavelmo. It is interesting here to fully quote the considerations upon which Haavelmo bases his statement.

'In today's world there are more than five billion people. If they should try to live without being members of some society, I suppose most of them would be dead in a few weeks. There is of course the old moral question of whether the individuals are there for the sake of society, or *vice versa*. I think the question is meaningless in the world we live in today. Putting it in a somewhat demagogic way I would say that *without society there would be practically no individuals, and without individuals there would of course not be any human society*. This observation has nothing whatever to do with any thoughts in the direction of a totalitarian view as opposed to an individualistic view.' (emphasis added.)

Source: Trygve Haavelmo, 'Econometrics and the Welfare State', Lecture in memory of Alfred Nobel, 1989.

Taking as a starting point the fact that individuals *need* society, at least as much as society needs individuals, it is possible to derive a set of logical arguments from this statement. First, it implies that one major goal of individuals living in a society should be to preserve the existence of this society: this is a necessary condition for the existence, and even the survival of individuals. This in turn also logically implies that all members of the society should be able to participate in the society, at least at a minimal necessary level. Otherwise, there would not be anything that could be called a society: some members would be excluded, and this would, one day or another, threaten the existence of the society and, consequently, the existence of individuals.

The logical conclusion is that every society should enable its members to participate in social life and, concretely, to have the necessary minimum of resources to be able to participate in society. Given the fact that, at any point of time, the resources available in the society to satisfy needs are limited, their distribution should therefore be bounded by two thresholds. The lower limit is the amount of resources minimally needed for any individual to participate in society, and the upper limit is the affluence line, that is the amount of resources above which any extra resource 'captured' by some individuals would, *de facto*, prevent other members from minimally participating in society.

To avoid any possible misinterpretation of this argument, two points deserve some clarification. First, defining an affluence line does not imply any moral judgment about rich people so defined and, second, neither does it imply any consideration about the society in which we would like to live.

Identifying rich people as proposed here is intended to serve as a benchmark, or a guide for designing public policies. It does not say anything about the justice or fairness of the income distribution, nor does it imply that rich people, so defined, should necessarily be blamed. To answer these questions, it would be necessary to investigate the way in which resources have been acquired and, also, the way in which rich people spend their resources. For instance, if the salary scale for defining the incomes of civil servants allowed for salaries that were above the 'affluence line', people receiving such high salaries could not be blamed for this situation. This would just be a sign that there was some contradiction in the way society was organised. Conversely, one can imagine situations in which people, whether rich or not, have acquired their resources by illegal means and this would obviously be immoral. On the expenditure side, some rich people might voluntary decide to 'redistribute' their resources so as to contribute to a fairer society or, what seems to be *de facto* more likely in the real world, to spend these resources in order to maintain their power over the rest of the population. Thus, we cannot directly draw conclusions about the just nature of these situations only by considering the situation of individuals within the income distribution and the fact that they may be considered as rich.

Another important point is that the definition of an affluence line derives from a purely logical argument. This has nothing to do with any conception of what the society should be and on which rules, institution and values it should be based. This issue is first and foremost a matter of political choice. For instance, devising an affluence line does not imply that the society *should* absolutely set a cap on incomes. To be honest with the reader, that is indeed the preference of the author. But, this is a matter of individual preference and some other people may reject this point of view for various reasons.

Whatever the preferences that we may have as citizens, this would not make an affluence line meaningless. At least, an affluence line may help to evaluate the current state of our societies. At a global level, for instance, the extreme inequalities that we observe today do clearly show that there is no something as a global society. This will not come as a surprise. An affluence line may usefully fuel the debate on this issue and, hopefully, we think, serve as an alert to the potential collapse of global society.

At a national level, where the concept of society makes most sense today, the same conclusions can be drawn. Any citizen is perfectly free to reject our definition of an affluence line. But in doing so, this would logically also imply rejecting the need for society and implicitly advocating some form of opting out from the society. There is in fact growing evidence that these forces are gaining in influence. The development of gated communities, the large-scale use of fiscal heavens to individually escape participation into some form of public purse, are some examples of these forces.

In sum, the affluence line can be thought of as an answer to the following question: 'If we were to enable all members of the society to participate in it and to meet their basic needs, what should the maximum income be? To what extent could we afford some kind of inequality?' The affluence line is a tool that is intended to inform public debate on these issues and not to impose any political option nor, in particular, a specific way to redistribute incomes. What might be confusing is the way the affluence line is empirically computed, starting from the richest individual and going step-by-step down to the least rich individual just above the affluence line. We think, as Medeiros does, that this methodology is the most relevant one.

Overall, there are strong ethical arguments to support the relevance of the question and, hence, the hypothetical situation in which members of the society are able to participate in it. And, second, we also think that the methodology proposed by Medeiros is the most relevant one to answer this question.

5. Devising an empirical affluence line: basic methodological choices

Based on the above arguments, we propose to define an affluence line in the following way: the affluence line represents the level of income above which all extra incomes would be transferred to the rest of the population in order to enable all members of the society to fully participate in it. To empirically devise an affluence line, we need to set a benchmark that represents the minimum income necessary to participate in the society, what we will call the 'needs satisfaction line' (NSL). We also need a database with incomes comparable with this benchmark.

The first point is obviously a crucial one: the higher the benchmark (NSL), the lower the affluence line (AL), and *vice versa*. Since empirical estimates may be quite sensitive to this choice, it is important to discuss the relevance of the benchmark used to assess what is actually needed to participate in the society. As discussed above, there is no consensus today about any empirical poverty line. In his article, Medeiros uses an arbitrary threshold which is the value of the 33th percentile of the population in ascending order of *per capita* household income. Any such reference is open to never-ending criticism.

Reference budgets based on the Minimum Income Standard (MIS) methodology developed over the past ten years offer a much better alternative to such arbitrary benchmarks. There are two reasons for this. First, the aim of reference budgets is explicitly to calculate the minimum budget necessary to fully participate in the society. It therefore fits our goal exactly. Second, reference budgets bring together the expertise of the citizens and the codified knowledge of experts. We will not discuss here the various advantages of this methodology and its conceptual foundations.[13] The key point is that reference budgets are grounded in the process of social validation. This is not to say that reference budgets match all the conditions for setting such a minimum budget perfectly, and there is probably some room to empirically strengthen this methodology. But, there is no doubt that reference budgets offer the best, or the least bad, estimate that we can get today to empirically devise some minimum budget for participating in society.

The second question is which concept of income we should use to compare reference budgets. This in turn raises some other issues. The income concept that is directly comparable with the reference budgets is the household's disposable income. To be more precise, this disposable income is a monetary measure and does not include the social transfers in-kind that go to households (health, education for instance). Since the size of these in-kind transfers may vary across countries, this means that the affluence lines based on reference budgets (or any other purely monetary indicator) will partly reflect these differences.

Another issue that is often overlooked in the literature is related to that of the accuracy of income data. Income data based on surveys underestimate the actual incomes, and consequently the standard of living, of households. The reason for this is twofold. First, these survey data do not take into account imputed rents and, second, they do not fully cover all incomes received by the households for various reasons (under-reporting, errors, fraud, etc.). Comparing these survey data
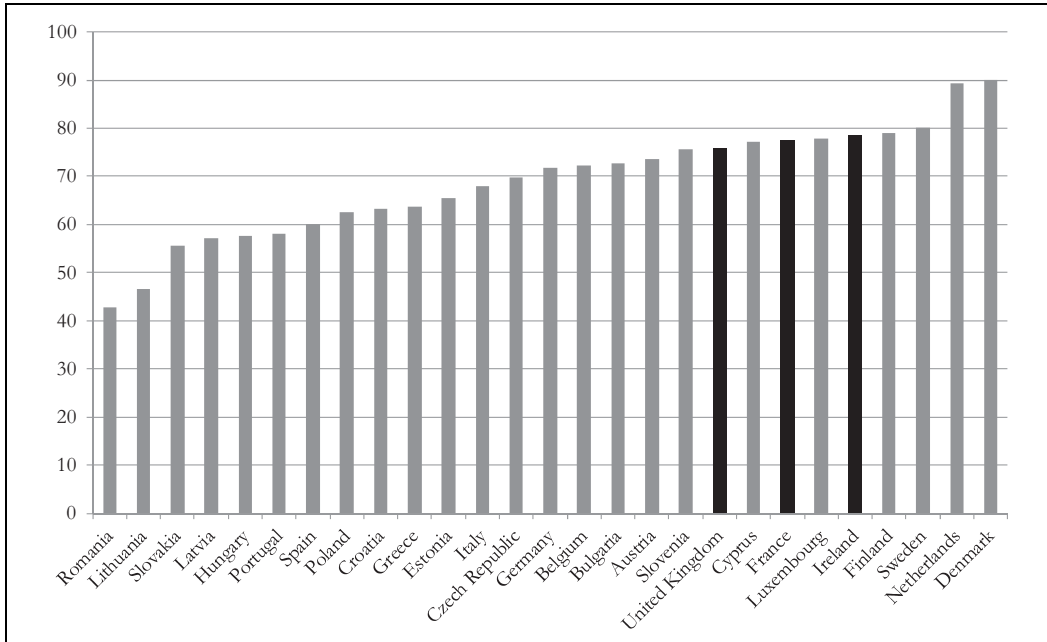
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13. See Concialdi (2014).

Figure 1. Average equivalent disposable income in SILC surveys as a % of average equivalent disposable income in national accounts (2011).
Source: Eurostat, author's calculations.

with reference budgets that are supposed to exactly and fully measure the actual incomes of households can therefore be misleading.[14]

This difficulty is much more acute in international comparisons, since the underestimation of incomes in households' surveys varies greatly across countries. This is shown in Figure 1.

Compared with national accounts' figures, the average equivalent disposable income taken from households' surveys ranges from around 40 per cent in Romania to 90 per cent in Sweden. For the three countries considered in this paper (France, Ireland and the United Kingdom), however, differences are very small.

Here we propose to take into account part of the discrepancy between survey data and macro-economic estimates in a 'conservative' way, that is in a way that will minimise the gap between minimum reference budgets and actual incomes and, consequently, maximise the affluence line. Because of the difficulty of estimating both the value of the imputed rents and their distribution across households (Eurostat 2013), we decided to stick to a simple conventional rule by increasing all households' incomes below the NSL by the same percentage corresponding to the average estimated share of imputed rents in households' incomes.[15]

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14. For a full discussion of this issue, see Concialdi (2002).

15. In national accounts, the imputed rent is mainly captured in the households' operating surplus (for "pure" households, excluding the operating surplus of self-employed). In France, the households' net operating surplus represents a little less than 10 per cent (8.4 per cent in 2015) of the households' net disposable income. For all countries under review, we

Another important methodological issue is related to the comparison of households with different needs. The per capita income used by Medeiros does not make any adjustment for these differences in needs. This does not account for economies of scale within households and, more generally, it does not accurately capture the actual living conditions of people.

In the economic literature, this probem is dealt with by using average equivalence scales. The methodology of reference budgets is different since these budgets are established directly for various family types. One of the main outcomes of this kind of research is, precisely, to assess the relevance of average equivalence scales for low income households. For instance, French reference budgets show that the average equivalence scale overestimates the needs of couples without children but underestimates the needs of lone parents. It is therefore not a straightforward matter to compare these reference budgets with the distribution of equivalent incomes computed with average equivalence scales in the surveys. Our choice was to take as a benchmark the reference budget for a single person of working age and to compare this benchmark with the distribution of equivalent disposable incomes computed with an average equivalence scale. In the case of France, this methodological strategy underestimates the NSL slightly and consequently the overall amount of transfers.[16] Thus, there is a small upward bias in the estimation of the affluence line.

The main methodological choices may be summarised as follows: the minimum income necessary to participate in the society is the reference budget for a single person of working age; this minimum income is compared with the actual distribution of equivalent incomes to calculate the amount of transfers necessary to raise all people at least to this minimum; from this amount of transfers an estimate of the imputed rent 'perceived' by people below the NSL is deducted; the affluence line as the income to which the richest individuals should be capped in order to collect the necessary transfers is then calculated.

6. A macroeconomic view

A first and quite simple question is whether a society can actually satisfy the basic needs of its population. Some estimates for France are proposed here.

Taking the reference budget published by the ONPES (2015) for a single person as a norm, it is possible to estimate the minimum national income necessary to satisfy the minimum needs of all the French population and, consequently, the macroeconomic surplus that would be left if this goal were met. For the year 2013, a little less than 60 per cent (58 per cent) of total household income would be necessary to satisfy the minimum needs of all French households. The macroeconomic surplus would be around 40 per cent (42 per cent). Thus, the answer is yes: France can satisfy the minimum needs of its population to enable all people to fully participate in the society.

In the case of France, it is possible to take a long-term view of this indicator. Before the ONPES set about drafting its own reference budgets, there was already another similar indicator in France, namely the 'budgets per family type' developed by the French National Union of Family Associations (UNAF) for the past 60 years (since 1952). The objective of these budgets is similar to the one set by the ONPES since it offers a 'decent life minimum' benchmark for different family types.

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have increased the incomes of all households below the NSL by 10 per cent. This share may vary from one country to another. However, these variations would not substantially alter our results.

16. If we consider all the family types covered by the French research on reference budgets, the gap would be 1.6−2.7 per cent higher with the equivalence scales taken from reference budgets than with the average equivalence scale.
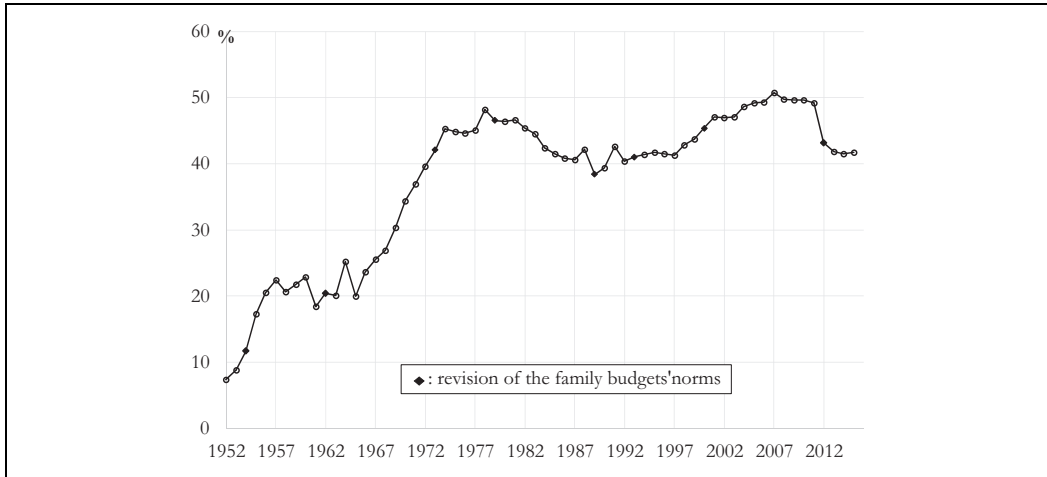
Figure 2. An estimate of the macroeconomic surplus in France (as a percentage of households' gross disposable income).
Source: ONPES Reference budgets; UNAF Family budgets and author's calculations.

The methodology, however, is different since it relies, when they exist, on the stock of existing norms and standards.

Taking the reference budget of the ONPES as a benchmark for the year 2013, we estimated the same budgets for the period 1952-2015 using the UNAF budgets as a proxy for variations in the ONPES budget. The figures obtained are obviously rough estimates which are mostly useful for analysing the variations of this macroeconomic indicator rather than its absolute levels.

Figure 2 shows that the macroeconomic surplus has been fluctuating over the past 40 years within a quite narrow interval: between 40 and 50 per cent of the household's disposable income. Before that period, however, the picture was rather different. The macroeconomic surplus was quite low in the aftermath of World War II and increased rapidly between the mid-60s and the mid-70s.

This last result should not come as a surprise and is consistent with estimates produced in the early-50s by some researchers. These estimates were based on the minimum budgets discussed at that time between employers and employees in order to define a minimum wage. Taking these budgets as a standard, some researchers calculated that nearly all the national income would have been necessary in 1953 in order to satisfy the minimum needs of the French population (Malignac 1950, Sauvy and Malignac 1954). In other words, the French society could hardly "afford" much inequality at that time.

One may wonder whether some EU countries could not be in the same situation today as France was in the middle of the 20th century and, in that case, whether an affluence line would make sense for the design of public policies. Unfortunately, we do not have sound estimates of reference budgets for all EU countries. A pilot project funded by the European Union made some advancement in that direction, devising full budgets for a few countries and estimating food budgets for the remaining countries (Goedemé et al. 2015). Nevertheless, these results are still very preliminary and further research is needed to assess the robustness of these budgets. However, rough estimates suggest that in Romania, for instance, which is among the poorest countries of the EU, national

income could finance the minimum needs of the whole population. This is illustrated by the account below.

Affluence line and need satisfaction in a poor country: the case of Romania

According to the pilot project of the EU, the food budget for a single person is around 150 € a month in Romania. Assuming that this food budget represents approximately one third of the total budget, this total budget would amount to 450 € a month or 5400 € a year. According to the SILC survey, the average equivalent income in 2015 was 2670 €. The crude comparison between the two figures would thus lead to the conclusion that it is not possible to satisfy the minimum needs of the entire Romanian population. However, this conclusion would be misleading. As we have seen above, survey figures underestimate the actual incomes of households and this is the more so in Romania where incomes captured trough the SILC survey represent just a little more than 40% of the households' disposable income estimated in national accounts. Rescaling survey data would give an actual average equivalent income around 6400 €. The macroeconomic surplus would thus be much smaller than in France, around 10 per cent or 15 per cent of actual households' incomes.

The macroeconomic surplus is obviously much smaller than in France, placing Romania in approximately the same position as France in the early-50s. In our view, this has some implication for the design of public policies. It stresses the fact that if we want to seriously tackle the issue of inequality, this requires combined public policies that should be implemented at both national (within country inequalities) and international (between countries inequalities) levels. Indeed, the European Structural and Investment Funds do, in some way, contribute to this last objective.

7. Estimates of an affluence line for France, Ireland and the UK

Analysing the reference budgets produced in France, Ireland and the UK with the MIS methodology, we propose here some estimates of the affluence line for each of these countries. These estimates are based on the methodological choices described above. In each country, reference budgets were compared with the distribution of households' equivalent disposable incomes, using the Eurostat database, which provides some details for the bottom as well as for the top of the income distribution. We computed two sets of results, excluding or including estimates of the imputed rent going to low income households below the NSL (see Table 2 below). Detailed calculations for France can be found in the appendix.

The first line of Table 2 gives the relative value of the NSL as a percentage of average disposable income. The second line is an estimate of the transfer necessary to raise all the population at least to the level of the NSL: we call it the 'needs gap'. It is expressed as a percentage of the total households' disposable income. The rest of the table provides estimates of the affluence line that are expressed as a percentile of the income distribution (equivalent disposable income), as a multiple of the median equivalent income; and in absolute terms (again as the value of the corresponding equivalent disposable income).

Concerning the 'needs gap.' results for France and Ireland are very close: around 6 per cent of total disposable income with no imputed rent and between 4.1 and 4.6 per cent if an estimation of

Table 2. Estimates of an affluence line for France, Ireland and the UK (2015).

	No imputed rent			Including imputed rent		
	France	Ireland	UK	France	Ireland	UK
NSL as a % of mean income	72.1	68.3	73.2	72.1	68.3	73.2
'Needs' gap' as a % of total households' income	6.3	6.0	8.7	4.1	4.6	6.6
Affluence line						
Percentile of the income distribution	93-94	91-92	90	96-97	93-94	93-94
Multiple of median equivalent disposable income	2.24	2.01	1.99	2.78	2.23	2.27
Annual equivalent disposable income (€)	48,000	43,500	41,800	59,500	48,500	47,500

Source: Eurostat, Reference budgets and author's calculations.

the imputed rent is included. Results for the UK are at least 2 points higher: 8.7 per cent and 6.6 per cent of total disposable income respectively without and with imputed rents. By contrast, estimates of the affluence line are close for Ireland and the UK, whereas the results for France are somewhat higher than for these two countries.

In the case of France, these results are consistent with those of the surveys that directly ask people their own view about 'what does it mean to be rich?' (IFOP 2013).[17]

Many reasons can be put forward to explain the differences observed across countries and some of these reasons may cancel each other out. It is therefore quite difficult to disentangle all these combined effects. Comparing France to each of the two other countries helps understand how these combined effects work and to explain the differences across countries.

France and Ireland. In relative terms, the value of the NSL is higher in France than in Ireland. Thus, we could expect that the needs gap would also be higher. This is not the case because the share of disposable incomes going to the lowest incomes (bottom 20 per cent, 30 per cent or 40 per cent of the population) is lower in Ireland than in France (Table 3). To fill the needs gap thus requires a somewhat higher transfer. At the top of the income distribution, the concentration of incomes is stronger in France than in Ireland. Both factors explain why the affluence line is set at a higher level in France than in Ireland.

France and the UK. In relative terms, the value of the NSL is very close in both countries. If the needs gap is much higher in the UK, this is mainly because the share of disposable incomes going to the lowest incomes is far lower. This is in fact the main factor explaining why the affluence line is much lower in the UK than in France. A somewhat higher concentration of incomes at the top of the distribution in the UK does not compensate for this effect.

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17. In the survey, people were asked the following question: 'According to you, above which monthly income do you consider a person to be rich?' For a single person, the average answer was 6500 €. This must be considered as a pre-tax income. Since there is no withholding tax in France, people do not have a clear idea of after-tax incomes, especially for high incomes. For a single person, a 6500 € monthly pre-tax income (75 000 € a year) would approximately translate in a 60 000 € annual disposable income, a result which is quite close to our estimate if we take into account imputed rents.

Table 3. Percentage shares of households' total disposable income.

	France	Ireland	UK
top 5%	15.6	14.2	16.0
top10%	24.6	23.3	25.2
bottom 10%	3.7	3.4	2.8
bottom 20%	9.0	8.5	7.7
bottom 30%	15.3	14.5	13.6
bottom 40%	22.5	21.5	20.4

Source: Eurostat.
In France, the top 5 per cent of the income distribution receive 15.6 per cent of total disposable income, that is approximately the same share as the bottom 30 per cent (15.3 per cent).

8. Concluding remarks

No politician would claim that poverty is a good thing for society and that governments should not eradicate it. But very few. at least at the present time, would also claim that excessive affluence harms society. Nevertheless, as we have tried to demonstrate in this paper, the two issues are linked. Our estimates of an affluence line provide a benchmark to deal with these issues.

Whatever the precision of our figures, it is obvious that some salaries are well above our estimated affluence lines. This is, first of all, true for most civil servants working in international organisations and also for national members of the Parliament in most EU countries. Since these people do explicitly work for the sake of the society, this points to a quite serious contradiction.

This is all the more so in the private sector for executive and management jobs where executives expect a sizeable six-figure salary; not to mention the CEOs who run the organisations. All these people can be considered as rich, or super-rich. In our view, these extreme salaries are a clear sign of the dysfunctional characteristics of our societies.

What can be done? Tony Atkinson answered this question in his last book, developing a sound set of arguments in favour of various proposals (Atkinson, 2015). His main proposals included, at the bottom end of the income distribution, a living wage that is at least 20 per cent higher than the national UK minimum wage; and upgraded universal benefits. At the top end, Atkinson advocated a far more progressive system of taxation and a code of practice for pay above the maximum. These are certainly some of the core issues that should deserve close attention in the near future, at least if we want to bring all members of the society together.

To end this paper, two directions for future research will be outlined. The first one would be to investigate the way in which both incomes and wealth could be taken into account in order to define a comprehensive affluence line. One approach would be to convert households' wealth into income flows as was proposed a few decades ago (Weisbrod and Hansen 1968). The main difficulty here would probably be an empirical one because this necessitates a database that would record both incomes and wealth at the household level.

A second approach axis would be to explore the conceptual foundations and the empirical problems associated with the definition of some international or global affluence line. This could draw on the theoretical work of Doyal and Gough (1991) who defined a universal and hierarchical model of needs. Again, the empirical work would probably be the most difficult task to achieve.

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Appendix

Calculation of the affluence line for France

In order to estimate an affluence line, we need first a benchmark to set the minimum income necessary to participate in society and, second, the distribution of disposable incomes across households.

As we have argued, the most appropriate benchmark is the reference budget derived from the MIS methodology. The level of the estimated affluence line also depends on the concentration of incomes at both extremes of the income distribution. As we have seen when comparing France with the UK, although the level of the benchmark is very close in the two countries – as a % of the average income – there are quite important differences in the levels of the affluence line. And, these differences reflect differences in the concentration of the income distribution.

The Eurostat database provides the distribution of the income distribution for all EU countries with various indicators: the share of equivalent income received by each decile; and the limit of equivalent income for each decile.

These indicators are available for each percentile of the income distribution for the lowest and highest incomes (P1 to P5 and P95 to P99), for the deciles and the quartiles.

The needs gap is the total amount of hypothetical transfers from the rich to the poor that would be necessary to raise all the population at least to the NSL. It may be expressed as a percentage of the total households' disposable income.

We compute the needs gap in four steps: First, the reference budget is expressed as a % of the average income. This is the needs satisfaction line (NSL). For a working age single person, the NSL is equal to 72.1% of the average income in France. Second, from the income share of each percentile, we compute the average income for this percentile expressed as a percentage of the average income in France. Third, deducting the NSL from this average gives the needs gap for each person in each percentile. Fourth, the sum of the weighted gaps – where there is a gap – gives the total needs gap expressed as a percentage of total households' income.

The main advantage of this method is its simplicity. Nevertheless, it underestimates a little the needs gap of the top percentile that would receive positive transfers (P30-P40 in the case of France). Within this population, some people are below the NSL and other above. There is thus some compensation when we take the average income to estimate the needs gap. These calculations will be refined in a future work. The following table presents the details of the calculations for France.

				Needs gap	
NSL=0.721	Population share (%) (1)	Income share (%) (2)	'Average income' (3)=(2)/(1)	Average (4)=(3)-NSL	Weighted (5)=(4)*(1)
P00-P01	1	0,1	0,10	-0,621	-0,621
P01-P02	1	0,3	0,30	-0,421	-0,421
P02-P03	1	0,3	0,30	-0,421	-0,421
P03-P04	1	0,4	0,40	-0,321	-0,321
P04-P05	1	0,4	0,40	-0,321	-0,321
P05-P10	5	2,2	0,44	-0,281	-1,403
P10-P20	10	5,3	0,53	-0,191	-1,905
P20-P25	5	3,0	0,60	-0,121	-0,603
P25-P30	5	3,3	0,66	-0,061	-0,303
P30-P40	10	7,2	0,72	-0,001	-0,005
P40-P50	10	8,1	0,81	0,089	0,895
P50-P60	10	9,1	0,91	0,189	1,895
P60-P70	10	10,2	1,02	0,299	2,995
P70-P75	5	5,5	1,10	0,379	1,897
P75-P80	5	6,1	1,22	0,499	2,497
P80-P90	10	13,9	1,39	0,669	6,695
P90-P94	4	7,0	1,75	1,029	4,118
P94-P95	1	2,0	2,00	1,279	1,279
P95-P96	1	2,1	2,10	1,379	1,379
P96-P97	1	2,3	2,30	1,579	1,579
P97-P98	1	2,6	2,60	1,879	1,879
P98-P99	1	3,1	3,10	2,379	2,379
P99-P100	1	5,5	5,50	4,779	4,779

Note: calculations without any imputed rent.
The sum of the weighted gaps – where these are negative – is equal to 6.32 per cent of total households' income. Refining the calculation for the P30-P40 population would approximately increase the needs gap by 0.2 percentage points.