

Modeling basic income in France: from incentive effects to amount of payment – on the factual issues of the basic income

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1. Introduction¹

BOURGUIGNON & CHIAPPORI (1998:34) develop a synthesis of the French redistribution system that encompasses all taxation and allocation mechanisms.

“As a whole the current redistribution system in France:

- *is complex and inflexible,*
- *is globally marginally progressive,*
- *is so only by the means of the benefit systems and, to a lesser extent, through the higher rates of the income tax,*
- *is inefficient, since it creates extremely high marginal rates, both at the top and at the bottom of the income pyramid,*
- *is strongly biased against labor income versus saving income.”*

We demonstrate here how a basic income concept combined with a flat tax on income, an annual flat tax on wealth and a set of specific benefits for disabled, elderly or otherwise disadvantaged people defines a redistribution system with opposite characteristics. Although the redistributed amounts can be very similar both for the State and for the individuals, the alternative system designed here is much more simple, fair and efficient.

For this work we used and adapted the microsimulation tool developed by LANDAIS, PIKETTY, SAEZ (available for download since January 2011 on www.revolution-fiscale.fr) which makes it possible to compare redistributive characteristics of the current system versus our proposal, with unprecedented accuracy for this kind of study (basic income or negative income tax) at least in France.

2. Four main economic characteristics of the current redistribution system

Putting aside the ethical consideration of a rich country where the proportion of poor families has been increasing steadily since the beginning of the century or the “we are the 99%” slogan of the Occupy protesters who refer to the increasing income disparity, we focus on the economic analysis of a redistribution system inherited from decades of social and fiscal reforms.

BOURGUIGNON & CHIAPPORI (1998) identifies four main characteristics. Note that they are common to many welfare states:

1. The general shape of the system can be identified as a “redistributive S”.
2. The high marginal tax rates on the lower incomes create a poverty trap.

¹ I thank Richard Parncutt, Stanislas Jourdan and Laurent de Jerphanion for their valuable contributions.

3. The high marginal tax rates on the higher incomes have a discouraging effect, with several negative consequences.
4. The tax and social security contributions have a discouraging effect on the demand for work from enterprises, which contributes to increase unemployment.

We first need to bring these statements up to date, given the number of changes that happened within the French redistribution system for the last 15 years.

The “redistributive S”

Computed with an Excel-based tool on a sample including 1000 families in 1994, with values in French Francs per year, the following graph displays how primary income (abscissa) is modified by the redistribution system to shape the disposable income (ordinate).

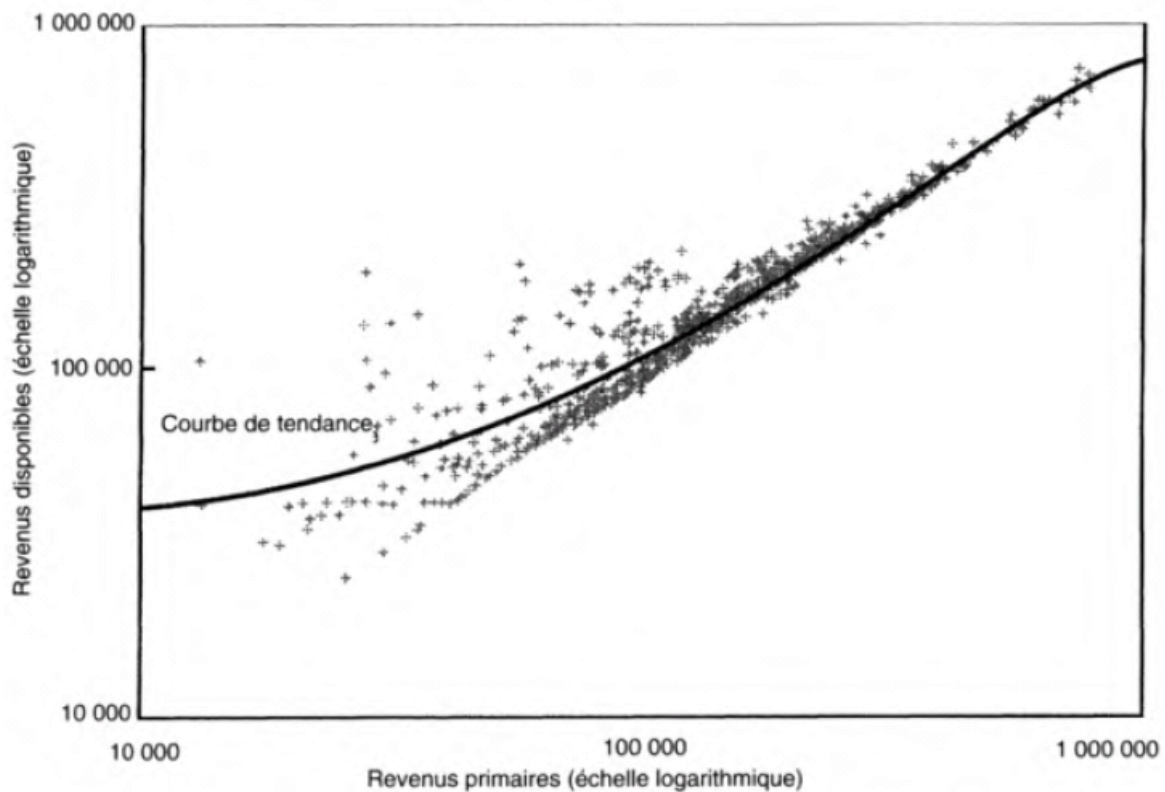


Figure 1 – The “redistributive S” in 1994, BOURGUIGNON & CHIAPPORI (2008:11)

Using a logarithmic scale we see the trend as a flat “S”. In 1994 the redistribution system undoubtedly increased the disposable income of the worst-off and lowered it for the higher revenues.

Have we seen this curve change in the recent years?

Actually the “S” is getting flatter than ever, because of two main reforms. First the main income tax (IRPP, *impôt sur le revenu des personnes physiques*) based on an annual declaration of the previous year income is undermined by hundreds of exemptions granted by politicians to various lobbyists whereas a new tax (CSG, *contribution sociale généralisée*) proportional to all incomes achieves a much better result by collecting about 5% of the GDP. The IRPP which is a fairly progressive tax now represents only 2.5% of the GDP.

Second, the minimum welfare payment to the worst-off (RMI, *revenu minimum d’insertion*) which created a huge welfare trap was replaced by a progressive scheme (RSA, *revenu de solidarité active*). This removes most of the disposable income plateau for low revenues.

As an important consequence we discover that the current average redistribution function is now very close to a straight line in France. The following graph shows in grey a representative sample of 10 000 families calculated in 2010 with values in euro per month (logarithmic scales). The strong red line displays the average curve which is a flattened “S”. The dispersion is limited: most dots are kept in a corridor (+/- 500 €/month).

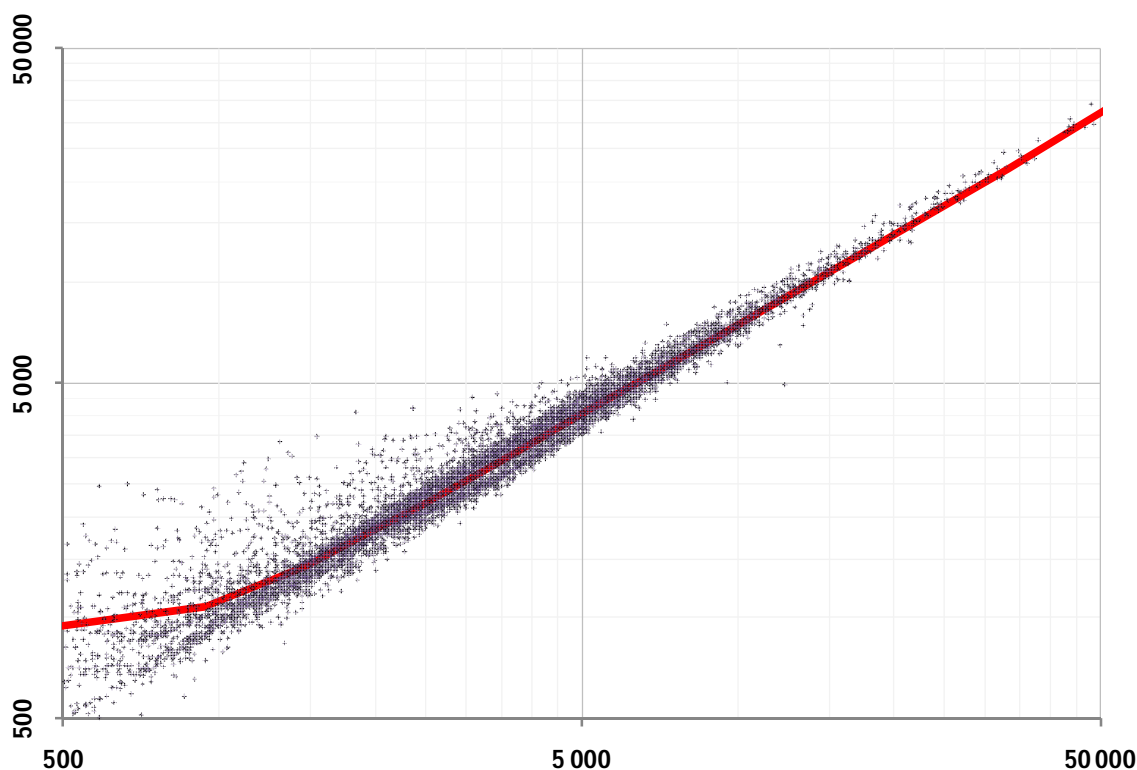


Figure 2 - Overall redistribution in 2010 (source MAUF-MS microsimulation)

We shall analyze further what happens on the two extreme parts of this curve.

The poverty trap

BOURGUIGNON & CHIAPPORI (1998:15) remind us of the two incentive effects identified by the microeconomic theory: the revenue effect and the substitution effect. As the former explains how a given individual may decide to work more in order to reach an appropriate level of total income, the latter figures out how much one is ready to work more at the expense of leisure time. The revenue effect depends on the disposable income, thus on the total taxation rate. The substitution effect depends on the marginal tax rate: the higher the marginal tax rate, the lower the incitation to work more.

Up to 2009, the minimum welfare payment (RMI) was a depressing mechanism: taking a part-time job was discouraged by both the revenue effect and the substitution effect. The new mechanism (RSA) avoids this pitfall but its complexity leads many people to fail resorting to the help they are entitled to.

Discouraging effects towards the high revenues

Putting aside the Laffer curve that tends to illustrate that a high income tax rate is counterproductive in terms of public finance, BOURGUIGNON & CHIAPPORI (1998:22) advocate that most people react to their marginal tax rate. Thus implementing high tax rates on the higher tax bracket is a strong incitation for tax payers to look for retaliation such as tax evasion, expatriation or tax exemptions. All of these have a severe impact on the financial performance of the nation.

Discouraging effects towards the demand for work

The micro-economic theory describes the level of employment as the equilibrium between offer for work by individuals (growing with the salary level) and demand for work by enterprises (decreasing with the salary level). BOURGUIGNON & CHIAPPORI (1998:26) explain how a tax on the salary introduces a difference between what is paid by the employer and what is received by the employee, which causes the equilibrium to shift, decreasing the level of employment.

In France, the wages are set by law above a minimum (SMIC, *salaire minimum interprofessionnel de croissance*) which adds another constraint to the equilibrium, decreasing again the level of employment.

To address this situation, the government introduced a global reduction of social contributions to be paid by the employers for low salaries (*réduction Fillon*), which shifts the equilibrium towards a higher level of employment. This costs €20B in the budget of the nation.

3. Understanding the French redistribution system

The previous section introduces the main concepts required to understand the current French redistribution system. We now need to enlarge the vision to the whole set of public intervention.

BOURGUIGNON & BUREAU (1999:17) highlight that the tax system provides schematically three major functions: (a) financing general government expenditure, (b) ensuring a more equitable income distribution (redistribute), (c) promoting inter-temporal transfers of consumption and enabling the sharing of social risks (insurance). These authors manage to present an outstanding synthesis of the public interventions by linking these functions to a type of tax. The table below is an adaptation of their work where we mainly add a specific category for the management of public debt.

Domain	Public spending	Taxes / contributions
Social insurance	Illness / maternity leaves, work accidents, unemployment benefits, pensions...	Social contributions on wages
Healthcare	Ambulatory care and hospital	Health system financing
Redistribution	Monetary benefits	Direct taxes
General public spending	Police, justice, education, defense, etc.	Consumption taxes
Collective capital of the nation	Management and reimbursement of public debt, investments	Public debt financing
Local services	Local infrastructures and services, social assistance (in kind or in cash)	Local taxes and fiscal transfers

Table 1 – Adapted from BOURGUIGNON & BUREAU (1999:17)

The mere simplicity of this table could suggest that the French system is clear and efficient, which is obviously not the case. Actually a number of mechanisms do not stick within these categories but spill out over several boxes. For example several social insurance mechanisms include actuarial components as well as transfers from the richest to the poorest.

As we intend to design a new system where a basic income will assume the redistribution function, we need to clarify how the whole thing stands. We thus need to redesign some mechanisms to better stick to the categories where they belong.

The following sub-sections describe the existing mechanisms that are incorporated in the French redistribution system in the 2010's.

Social security benefits

The “social minima” (*minima sociaux*) include a set of 8 mechanisms that are designed to complement the existing resources of the beneficiary to reach a given level of disposable income. We sort them into three categories.

- For people in age and capacity to work, the main allocation is the RSA (*revenu de solidarité active*), received by 2 million people. It allocates about €400 monthly for the first adult in the family and more or less €200 per additional person in the household. This allocation is reduced by 38% of the salaries and 100% of other incomes. Two other allocations apply in specific cases, the ASS (*allocation spécifique de solidarité*) for people above 50 who contributed some time to the unemployment insurance and the ATA (*allocation temporaire d'attente*) in some specific cases.
- For handicapped, disabled and widows: AAH (*allocation aux adultes handicapés*), ASI (*allocation supplémentaire d'invalidité*), AV (*allocation veuvage*).
- For the elderly: AER (*allocation équivalent retraite*) if they did not reach the number of years required to claim for a pension, ASPA (*allocation de solidarité aux personnes âgées*) for people above 65 who did not contribute enough to get a pension. The ASPA for a single person is about €750 per month and reaches €1,200 per month for a couple over 65 years old.

As accessing to the previous mechanisms is dependent of the resources of the applicant, some other allocations are to a great extent granted to anybody irrespective of their earnings. This is typically the case with family-related benefits. We sort them according to 2 criteria: either they are conditional or not; either they are granted to all families or entitled to specific situations.

	General case	Specific situations
No conditionality	<ul style="list-style-type: none"> • AF (<i>allocations familiales</i>): the most general benefit for families with two children or more under 18. • PAJE (<i>prestations d'accueil du jeune enfant</i>): various forms of assistance for children under 3. • Others: AGED (<i>allocation de garde d'enfant à domicile</i>), AFEAMA (<i>aide à l'emploi d'une assistance maternelle agréée</i>), APE (<i>allocation parentale d'éducation</i>) 	<ul style="list-style-type: none"> • AEEH (<i>allocation d'éducation de l'enfant handicapé</i>) to help parents of handicapped children. • AJPP (<i>allocation journalière de présence parentale</i>) to help parents assist a children sick at home. • ASF (<i>allocation de soutien familial</i>) to replace an unpaid alimony.
Conditional to resources	<ul style="list-style-type: none"> • CF (<i>complement familial</i>) €165 /month for families with 3 children or more and annual resources below €30k to €50k depending of various parameters. • ARS (<i>allocation de rentrée scolaire</i>) served early September to families with children at school and low income (below €23k to €40k approx.) • Others: PAJE base allocation, AFEAMA complement. 	<ul style="list-style-type: none"> • AJPP complement for reimbursement of expenses. • Moving allowance.

Table 2 – The current family benefits, a developed part of the French social system

This table illustrates how the current system is a mixture of vertical and horizontal redistribution.

To conclude this section we need to focus on the social protection provided to the unemployed. As the RSA mentioned above works according to Lord Beveridge principles, the main mechanism is built according to the Bismark model: the ARE (*aide au retour à l'emploi*) is a benefit that can be served up to 24 months (or 36 months if the beneficiary is older than 50) to individuals who contributed – when working – during the same period at least. Calculated according to quite complex rules, the ARE benefit is capped at €6,000 per month which makes it a bonanza for executives who want to enjoy a break in their career.

Five specific services

In welfare states, some services are generally managed by the community as individuals are not spontaneously prepared to allot enough resources to finance them. Five such services play an important part in redistribution: healthcare, childcare, education, elderly support, housing assistance.

Although almost everybody is entitled to benefit from extensive healthcare services in France, it is mostly financed by social contributions on the salaries. The other sources of income (rents, pensions, dividends, capital profits...) participate to a lesser extent to the financing of healthcare. Moreover individuals with low income are exempted from the minimum participation set to moderate healthcare expenses. As a whole, the fairness and economic efficiency of the healthcare financing is questionable.

Despite its complexity, childcare achieves a remarkable result: in most cases getting a solution to look after a baby during working hours costs about 5% to 7% of a household primary income. The effort rate of going back to work after giving birth is approximately identical for low or high incomes. Even if there are many exceptions to this rule, childcare in France as a whole can be considered as both fair and efficient.

Family benefits, scholarships and local benefits (in cash or in kind) provided by city councils are the three redistribution mechanisms for children attending school. Almost all of them are dependent on the parents' income thus realizing a significant redistribution towards the working classes.

More than 20 schemes provide different solutions to the financing of pensions for the elderly. This shows a rather heterogeneous application of redistribution principles, often combining insurance and social transfer in the same mechanism. Reversionary pensions paid to widows follow an outdated scheme where the wives who raised their children while being at home benefit from contributions paid by their husbands during their working life. Last but not least, the financing of the elderly support is not assured for the years to come. As a whole this domain can neither be considered as equitable nor economically sustainable.

The housing assistance is another domain where all successive governments have added their parts of creativity for the last forty years, resulting in a highly inefficient system. The redistribution achieved by dozens of mechanisms eventually tends to favor the owners of apartments rented to low-income families whose rents are fully paid by the government. Another unfortunate result of these aids is that low-income families that are helped into acquiring their homes often face a real difficulty to move when their professional situation requires them to change jobs. Lastly, the taxation burden is much heavier on rented houses than on those inhabited by their owners, which also creates a number of negative externalities.

As a whole, the redistribution assured by the five tutelary goods we mention here show contrasted characteristics both in terms of fairness and economic efficiency.

Taxes and contributions

We identify four main categories of tax levy: income taxes, consumption taxes, social contributions, taxes on property.

The historical income tax (IRPP) contributes massively to the French redistribution system, thanks to differentiated rates applying to five income brackets. Half of French families have incomes below the lower threshold and thus do not pay any IRPP. This tax is crippled by about 500 tax deductibility rules (loopholes). Specific ones are the spouse and dependants' allowances (QF, *quotient familial*) that

strongly decrease the tax claimed from couples and families with several children. The complexity of the IRPP makes it impossible to be calculated and deducted at the source of the income. It is computed yearly through a heavy process where many high-income people look for the best way to escape the tax (with the assistance of skilled tax accountants). As a result there is a strong belief within the economic community that this complex and inefficient tax should be replaced by another one.

As mentioned above, the CSG – a quite simple tax on all forms of income – is now collecting much more subsidies than the IRPP (€90B versus €47B in 2010). The VAT is even more productive with a €135B result. Additionally a number of point consumption taxes are levered on oil and gas, tobacco, etc. All of these taxes contribute to a large extent to public finance, with a limited redistributive impact between household categories.

Some social contributions finance insurance schemes such as pensions for elderly and unemployed, or benefits for people who are kept away from their work because of illness, maternity or accident. Some others finance benefits granted to people who did not contribute beforehand, for example family benefits or healthcare. The second category is part of the redistribution system. Any reform of the redistribution will require a modification of these contribution mechanisms.

Property taxes involve mainly a tax on real estate (TF, *taxe foncière*) for everybody and the progressive wealth tax (ISF, *impôt sur la fortune*) which targets only the households with assets above €1.3M. A differentiated tax scheme also applies to income generated from property, with rates generally smaller than those applying to salaries. Lastly, specific taxing mechanisms apply on the transmission of property (inheritance or sale). As a whole, this set of taxes implies many drawbacks that invite governments to implement at least two reforms per decade, without addressing the core issue of an unfair and inefficient construction.

Other redistribution mechanisms

Other regulations intervene more or less directly in the redistribution process. The combination of minimum wages and contribution exemptions from payroll constitute an important although indirect way to redistribute income from higher to lower salaries. Subsidized work contracts are created by the government as a way to decrease unemployment by pouring public money into the employers' hands. A number of other mechanisms are directed at low-income households or at enterprises that employ them. All of this has a significant impact on the redistribution system.

The public debt also plays an indirect but important role in the redistribution process. The main capital owners can subscribe to bonds and benefit from interests paid by the State, financed by the taxes levied from the whole population, rich or poor. In this respect the public debt service is a massively unfair and inefficient reverse redistribution.

The French redistribution system: complex, inefficient and not very redistributive

This short overview illustrates the difficulty met by anybody willing to get a definite description of the French redistribution system. It is actually very complex. A number of mechanisms demonstrate economic inefficiencies, if not adverse consequences. As a whole, redistribution is rather limited.

4. Designing an improved redistribution system

In our quest to build an alternative redistribution scheme using the basic income concept as the core mechanism, we need to identify consequences of such a radical reform. It is thus mandatory for us to fully master the existing system. The previous section gives some hints. We actually need to use a powerful computerized tool to assess the whole complexity. We need a microsimulation platform.

Four main microsimulation tools are known in France:

- INES is developed and maintained by the INSEE (*Institut national de la statistique et des études économiques*), the French public statistics authority.

- Myriad is the tool belonging to the CNAF (*Caisse nationale des allocations familiales*) which manages the “family” branch of the French social security.
- The French Finance Ministry maintains its own tool for various analyses, mainly for the purpose of tax modeling.
- Taxipp was developed by an independent team of three well-known French economists (Camille LANDAIS, Thomas PIKETTY, Emmanuel SAEZ) and is now further developed by the IPP (*Institut des politiques publiques*) managed by Antoine BOZIO. The first version of this tool is freely available for download on www.revolution-fiscale.com.

This last microsimulation tool is an outstanding development. It uses a very large database (821,815 individuals above 18) with about 200 parameters normally available from many distinct sources. The microsimulation program is developed with Stata, a powerful data analysis and statistical software.

Using this tool, we have been able to model the replacement of the complex set of tax and benefits that constitute the current French redistribution by an alternative solution.

Before we move on to the microsimulation section, we need to choose the principles of the redistribution scheme that we are going to test. Obviously we take benefit of proposals by the main proponents of a basic income.

The simplest scheme is the ATKINSON (1995) “basic income – flat tax proposal”. It is fully compatible with our finding that the current French redistribution system is very close to a straight line (see Figure 2). As an asymptotic continuity of the existing tax and social systems, we adopt the BI-FT scheme.

Nevertheless we need to check that our solution avoids the drawbacks identified in section 2. First, the BI-FT scheme assures that the marginal tax rate is identical to the total tax rate, thus avoiding the poverty trap. Second, there is no extra marginal tax rate applying to the higher brackets so the BI-FT scheme does not induce discouragement against high incomes. Last, we need to lower as much as possible the level of social contributions if we want to promote the demand for work and subsequently decrease unemployment. This requires additional reforms to be implemented.

First healthcare is meant to be funded by the most extensive tax as anybody benefits from this service one day or another, independently from ones’ willingness to stay fit... In our simulation we dedicate the existing CSG to financing healthcare thanks to a 12% tax levied on all forms of income.

Second the elderly and unemployment pensions are financed by those who plan their future while being at work. As a whole the elderly pensions can be financed by a 20% contribution levied on all salaries. The unemployment pensions can be financed with a 5% contribution. This last contribution would be claimed from all salaries without any limitation, following VAN PARIJS (1995:121) assessment that “*because jobs do not stick to people the way talents do, there is no problem involved in making job holders, unlike talent holders, pay the full price of the assets they appropriate*”.

Our last reform addresses the taxes on property that currently fail to achieve a very important mission: allowing a smooth and continuous repartition of assets between all people who are entitled to enjoy them. VAN PARIJS (1995:100) states that the first legitimate source of financing a basic income is the equalization of assets: “*What is relevant, from a real-libertarian standpoint, (...) is of course the whole set of external means that affect people’s capacity to pursue their conceptions of the good life, irrespective of whether they are natural or produced.*”

Sharing this philosophical acceptability for a mechanism that would allow sharing of external endowments within a given community, we nevertheless suggest a different solution than VAN PARIJS (1995:101): “*An equal distribution of (the external endowments value) amounts to taxing the value of all gifts and bequests at 100 per cent*”. Our simulation integrates a 1% yearly tax on the property.

5. Building the microsimulation

The Taxipp 0.0 tool that we use needed a number of adaptations to make it fit for our simulation. We completed some missing parts and adjusted a series of parameters and programs to work on a database including 458,584 households. The resulting tool constitutes an excellent representation of the French population in 2010. The table in Appendix 1 displays a percentile analysis of the various natures and incomes and several main redistribution mechanisms.

We developed a program to simulate the alternative redistribution system described in the previous section. This allows the comparison of the disposable income of each household in the current system to the alternative one. The size and quality of the sample allows an aggregated view of the weighted household characteristics to form a faithful description of nation-wide indicators. The tool (MAUF-MS, *modélisation de l'allocation universelle en France – microsimulation*) thus allows accurate micro- and macro-economic analysis.

Simulating changes to the current system

The table below is a summary of the redistribution mechanisms we introduced above. We first assess the economic efficiency, fairness and simplicity of each individual mechanism and indicate shortly which modifications are brought by our simulations.

Redistributive mechanism	Efficient	Fair	Simple	Alternative simulated
Minimum welfare (RSA, ASS...)	//	+	0	<i>Eliminated</i>
Unemployed support	//	//	0	<i>Restricted to social insurance</i>
Family support (AF, CF, PAJE...)	//	+	//	<i>Eliminated</i>
Handicapped and disabled support	//	+	//	<i>Decreased by the basic income amount</i>
Healthcare	//	+	+	<i>Simplified financing</i>
Childcare	+	+	//	<i>Remove conditional benefits</i>
Education	+	+	//	<i>Remove conditional benefits</i>
Elderly support (pensions, ASPA...)	//	//	0	<i>Restricted to social insurance + assistance to autonomy</i>
Housing assistance	0	0	0	<i>No modification</i>
Income tax (IRPP) progressivity	//	+	//	<i>Eliminated</i>
Dependants' allowance (QF...)	//	0	0	<i>Eliminated</i>
Tax loopholes (deductibility)	0	0	0	<i>Eliminated</i>
Social contributions	0	+	//	<i>Simplified and reduced</i>
Proportional income tax (CSG)	+	+	+	<i>Reinforced and dedicated to healthcare</i>
Consumption taxes (VAT...)	+	//	+	<i>No modification</i>
Local taxes	//	0	0	<i>No modification</i>
Taxes on property (TF) / wealth (ISF)	0	0	0	<i>Eliminated</i>
Corporate taxes (IS...)	0	0	0	<i>Eliminated</i>
Optional / local assistance	0	//	0	<i>Partially eliminated</i>
Minimum wages	0	+	//	<i>Decreased by the BI amount</i>
Contribution exemption from payroll	//	//	0	<i>Eliminated</i>
Subsidized work contracts	//	//	0	<i>Eliminated</i>

Table 3 - Modifications simulated to the current redistribution mechanisms

The marks are more (+) or less (0) appreciative, the “//” symbol showing an average position.

Defining the basic income amount for France

To build this simulation, the most important variable is the level of the basic income granted. Considering the number of reforms required in order to implement such a revolutionary concept, we took the option to design an alternative redistribution that would be more or less equivalent to the average of the current system.

Of course such a choice may be disappointing for many promoters of a basic income who expect a higher transfer than what is currently achieved. But the imperative requirement of building a sustainable system can more easily be met by using the experience of what has already being implemented, rather than assuming the capability of the nation to accept a much higher transfer.

In order to set the parameters, we start with the easiest part: analyzing the current redistribution towards children under 18. The figure below is symptomatic of the current situation where several mechanisms address various segments of the population and therefore make it quite impossible to understand who receives more or less benefits from the system as a whole.

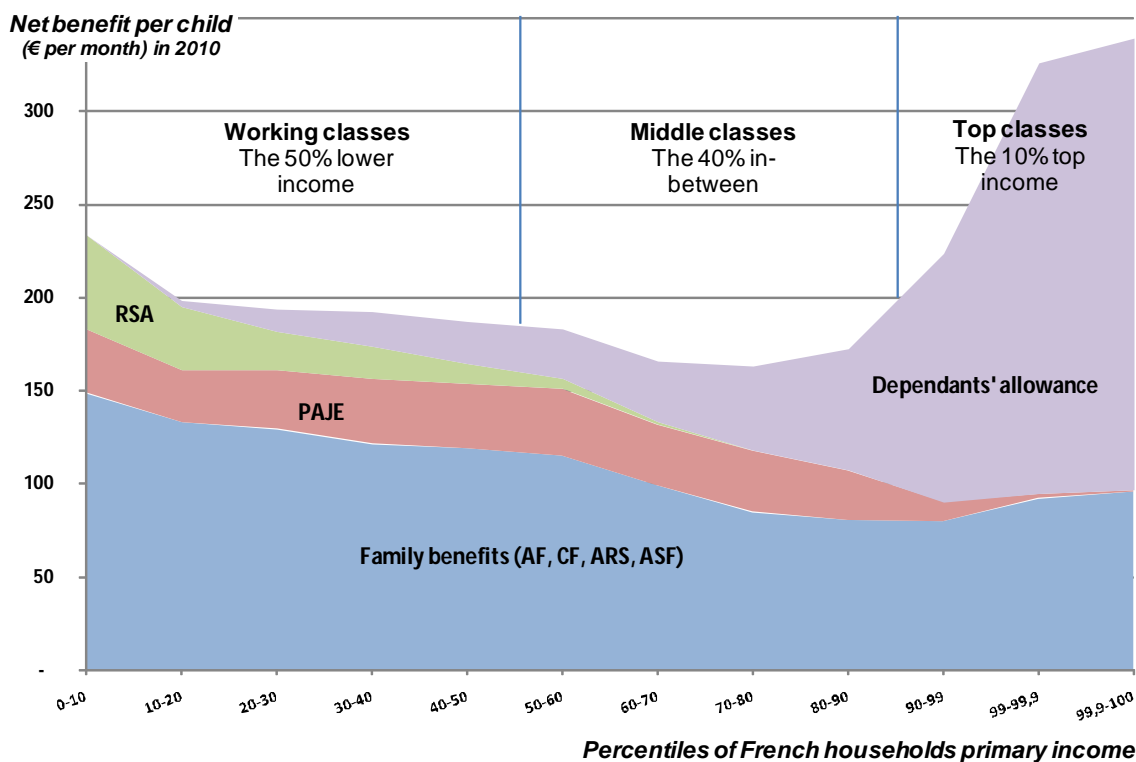


Figure 3 - Child benefits and allowances by percentile (source MAUF-MS)

To read this chart one must notice that the abscissa scale is not linear. As most marks represent a tenth of the French households in terms of primary income, the three marks on the right are focused on the highest hundredth and thousandth income brackets. As one can see, the dependant's allowance (QF) which reduces the income tax (IRPP) constitutes a benefit that targets mostly the richest part of the population.

We have chosen to display only four sets of mechanisms on this chart. Actually, each of them is made up of many rules. Hardly anybody understands all of them.

The alternative solution is obvious: granting the same amount for each child. This amount is calculated as the average of the current system: €192 per month in 2010, about €200 in 2012. This is the idea promoted by LANDAIS, PIKETTY, SAEZ (2011:106). They point out that this system would be

incredibly simple and legible, its administration less expensive, its payment much easier in case of single parents or recombined families.

This solution would also end an absurd political fight lasting for decades. The right-wing politicians protect the dependants' allowance while the left-wing party increases the benefits for the working classes. As a result, the middle class is the perpetual loser of the political game.

We then need to identify the basic income amount for adults.

The following chart shows the redistribution per adult computed using MAUF-MS after putting aside a few mechanisms: all those regarding children under 18, housing assistance, property and local taxes. The resulting average redistribution is extremely similar to a straight line.

This very interesting result may hide a variety of situations. Thus we add also graphs for elderly (single or living in couples) as well as single people aged between 18 and 25.

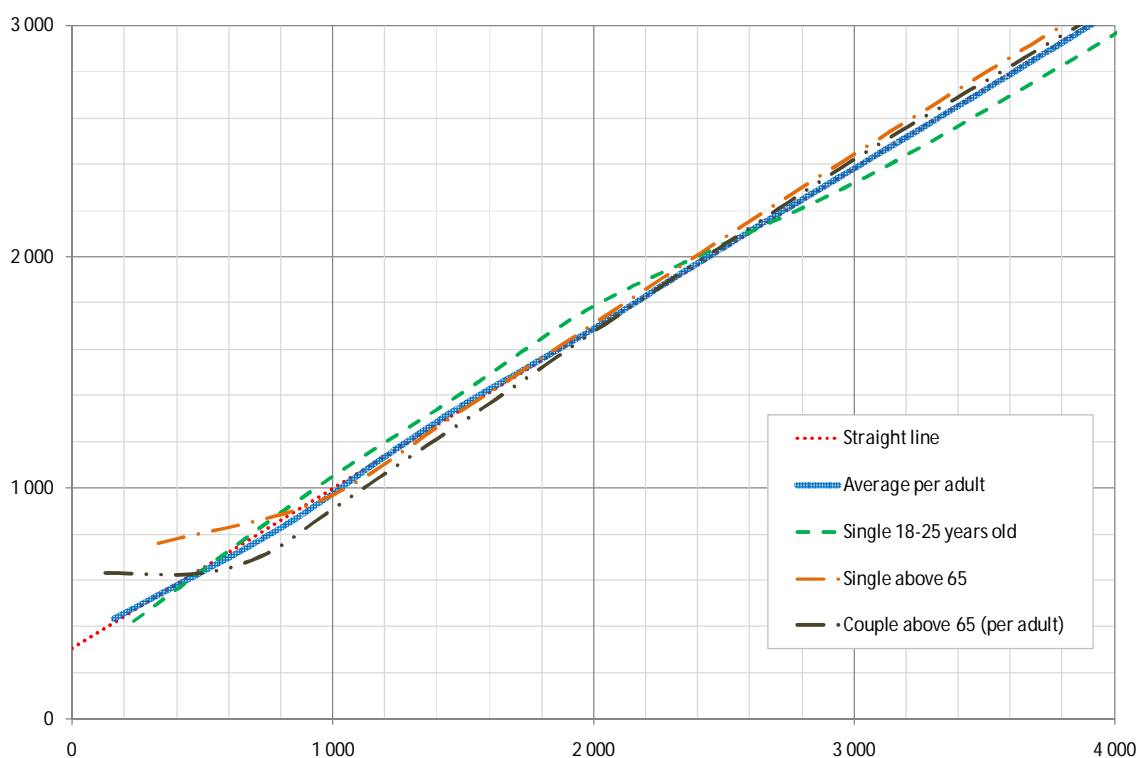


Figure 4 - Redistribution per adult (source MAUF-MS)

Except for the adults with very low income, we see here that the redistribution ends up with more or less the same disposal income in all cases. The discrepancies are rather difficult to explain: why should young adults benefit more when their income is in the €1k to €2k bracket and less above €3k?

Taking the average line as the target for defining the basic income would induce an amount of €305 per adult in 2010. As we can easily guess from the chart, there are many cases where such an amount would decrease the disposal income of the current system. We cannot accept this value as a fair proposal.

An alternative method is to look more precisely into the minimum social payment granted to the worst-off. The RSA is a rather complex mechanism. One important aspect is that it uses an equivalence scale to calculate the payment according to the household configuration. A basic income being an individual benefit, it would never be able to match this pattern. We try to minimize the difference while ensuring that hardly anybody sees a drop in their disposable income after the reform.

The table below shows how the RSA granted in 2010 would compare to a situation where a €192 basic income would be granted to children and the double (€384) to each adult. The data are presented as for year 2010.

# Adults	# Children	RSA (€/m)	BI (€/m)	Difference (€/m)	Difference (%)
1	0	405	384	-21	-5%
1	1	580	576	-4	-1%
1	2	692	768	76	11%
1	3	876	960	84	10%
2	0	580	768	188	32%
2	1	692	960	268	39%
2	2	830	1152	322	39%
2	3	1014	1344	330	33%

Table 4 - RSA to basic income comparison (2010 amounts)

Considering that the main losers would only see a drop of €21 per month in their disposable income, we validate the €384 amount as the basic income for adults in 2010.

Taking into account inflation and the evolution of social benefits granted this amount would reach €400 per month in 2012.

How to finance the basic income

Following the approach drafted in table 1, we assign one specific tax to financing the basic income. As for ATKINSON (1995) we consider the flat income tax is the most legitimate solution, as it allows dividing up among a part of the income that the market dynamics tend to allocate selectively to some. Let's calculate the flat tax rate required.

In 2010, there were 50.4 million adults and 15.9 children in France. With basic income amounts defined above, the overall yearly budget required would be €269B. For 2012, that is €280B.

National Accounts for 2010 help us assess the taxable income to consider:

1. Salaries and other forms of remunerations from privately held companies (€10B in 2010). We remove the social contributions paid for retirement pensions, unemployment insurance, accident or occupational disease insurance (€220B).
2. Salaries from public administrations (\$151B)
3. Elderly and unemployed insurance benefits (\$300B)
4. Rents perceived by individuals (\$35.6B)
5. Financial incomes, prior to corporate tax (\$185B)

All of these categories require a series of rather complex adjustments that we cannot detail here. As a result we calculate a taxable income of €1,347B for 2010. Divided by the basic income budget, we come up with a flat tax income rate of 20.0%.

Other parameters to fix

As indicated above while calculating the basic income for adults, we put aside housing assistance, property and local taxes. The reason is that these mechanisms are not directly related to income redistribution issues.

The first regards the access of real estate by each household. As mentioned the set of mechanisms available in France are very expensive to the State, fail to provide proper accommodations to

everybody and create a number of negative externalities. Therefore a different approach is required, but we will not detail it here.

Property and wealth taxes are an area of political conflict between right- and left-wing politicians. Existing mechanisms fail to provide a fair and efficient redistribution of wealth. Following the BI-FT proposal, we suggest replacing all of them by a single flat wealth tax to be paid annually. The tax rate is calculated such that the State will break even. The MAUF-MS microsimulation indicates that a 1% annual tax on wealth would levy approximately €100B which allows all existing taxes on property to be eliminated. In the Netherlands a 1.2% rate applies.

Financing the healthcare is the last item to fix. The overall budget of healthcare in France was €67B in 2010. A 12.5% flat tax on income would finance it.

Microsimulation results

The table in Appendix 2 displays the result of our microsimulation. It applies to MAUF-MS large sample of 458,584 households the simulation of an alternative redistribution system for the year 2010 including mainly the replacement of the current complexity by a fairly simple set:

- A basic income of €192 per month for each child under 18
- A basic income of €384 per month for each adult above 18
- A 20% flat income tax
- An annual 1% flat wealth tax
- A 12.5% flat income tax dedicated to financing the healthcare
- A 20% social contribution on salaries to finance pensions for the elderly
- A 5% social contribution on salaries to finance unemployment insurance

The dispersion of the simulation result is rather limited, as shown on the plot-chart below that includes approximately 10,000 households, representative of the French population in the year 2010:

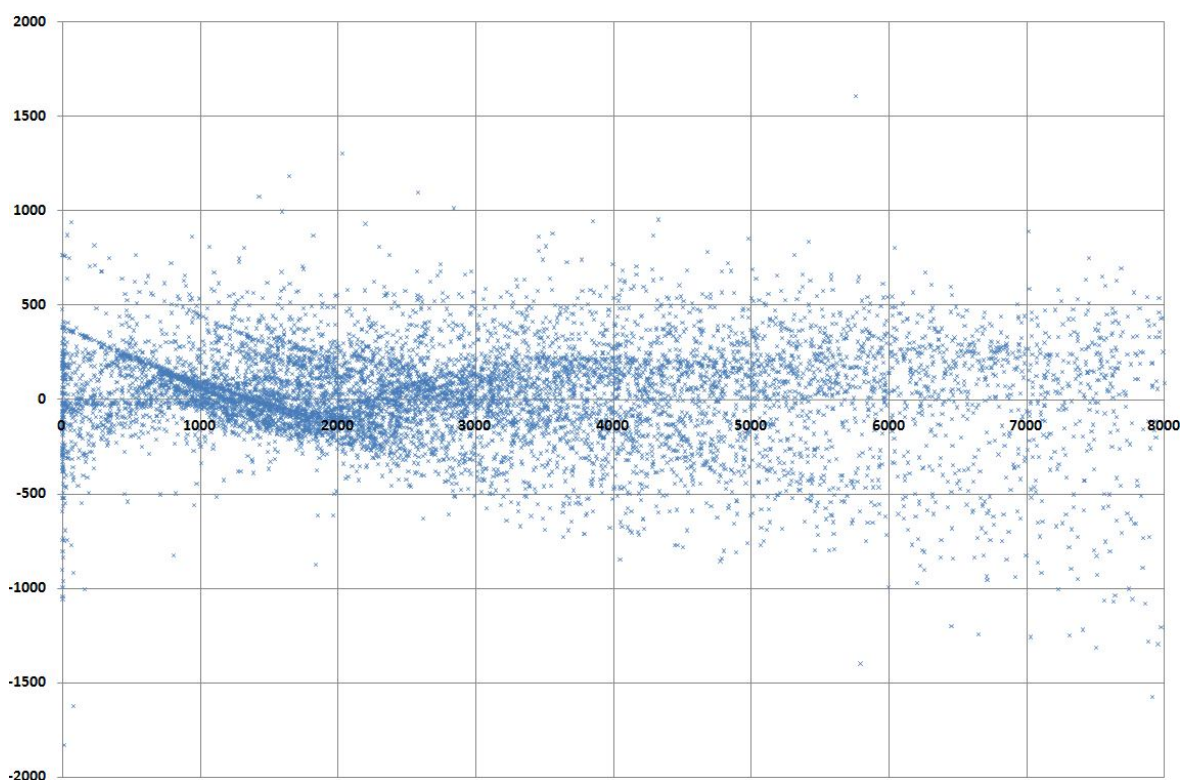


Figure 5 - Variation of disposable income, alternative versus actual in 2010 in €/month (MAUF-MS)

6. What did we learn?

As the welfare state developed, a number of redistribution mechanisms have been added to form an extraordinary complicated system. It is all the more surprising that the resulting average redistribution can be described by a very simple function: a straight line. Variations around this average are limited so that we could replace this whole complex redistribution system by a scheme as simple as ATKINSON (1995) “basic income – flat tax” proposal.

The table below shows how simple the whole tax system could be:

Domain	Public spending	Taxes / contributions
Social insurance	Illness / maternity leaves, work accidents, unemployment benefits, pensions...	25% social contributions on wages
Healthcare	Ambulatory care and hospital	12.5% of all income
Redistribution	Basic income: €200 per child and €400 per adult monthly in 2012	20.0% of all income
General public spending	Police, justice, education, defense, etc.	Consumption taxes (VAT, Pigovian taxes...)
Collective capital of the nation	Management and reimbursement of public debt, investments	Annual 1% flat tax on wealth
Local services	Local infrastructures and services, social assistance (in kind or in cash)	Local taxes and fiscal transfers

Figure 6 - A simple and legible alternative tax and social system

As an example, a family of two children with parents working for €3,000 (pre-tax wages) per month who owns a €300,000 house would see their disposable income calculated as follows:

- The employer(s) would pay: $€3,000 \times (1 + 25\%) = €3,750$ per month.
- Withholding taxes would be: $€3,000 \times (12.5\% + 20.0\%) = €975$ per month.
- Net wages: $€3,000 - €975 = €2,025$ per month.
The marginal tax rate on wages is thus: $1 - €2,025 / €3,750 = 46\%$.
- Basic income: $€200 \times 2 + €400 \times 2 = €1,200$ per month.
- Annual flat tax on wealth: $€300,000 \times 1\% = €3,000$ per year, that is €250 per month.
- Family disposable income: $€2,025 + €1,200 - €250 = €2,975$ per month.

As a comparison, this family would have a disposable income below €2,000 today.

This proposal is consistent with the ideal of active participation of citizens in a democratic nation. As anybody can understand such a reduced set of simple mechanisms, we can expect the political discussions to be shared by more people. It would then be possible to organize open discussions about the desirable level of redistribution and the tax rate required to finance it.

For example if the cost of healthcare increases, the tax rate would have to be raised beyond 12.5%. If the proportion of retired or unemployed people changes, the 25% social contribution rate on wages would have to be adapted accordingly. If the public debt or investment inflates, the nation would have to put up the tax rate on wealth...

The appropriate level of the basic income would certainly be discussed for a while. Right-wing politicians would put forward the risks of discouraging the demand for work and fight to lower the

20% flat tax, the 25% social contributions and the 1% tax on wealth. Left-wing politicians would put forward the fairness needed towards the poor and fight to increase the basic income above the meager €400 per month. Currently nobody knows where the equilibrium would stabilize.

What this paper demonstrates is that the current French redistribution system is on average very close to a “basic income - flat tax” scheme with amounts and rates calculated through an extensive microsimulation of the whole set of mechanisms. In this way it gives a foundation to discuss the desirable level of the basic income.

When a 20% flat income tax finances a monthly €200 per child and €400 per adult, the marginal tax rate on wages is 46%.

If we want to double the basic income (€400 per child and €800 per adult) the flat income tax must double to 40%, under the assumption that there is no incidence on the offer and demand for work. The marginal tax rate on the wages can then be calculated at 62%². Taking into account some incidence on the behavior of individuals and enterprises on the labor market would increase this rate to 65% or more.

A more balanced option would be to target a 50% marginal tax rate on the wages. This is achieved by a monthly basic income of €250 per child and €500 per adult, financed by a 25% flat income tax.

In 2012, this might well be a balanced target for both right-wing and left-wing promoters of a basic income in France.

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² Marginal tax rate on wages: $1 - (1 - 12.5\% - 40\%) / (1 + 25\%) = 62\%$

Appendix 1: Contribution, by percentile of primary income of French households in 2010, of the various sources of income and main redistribution mechanisms, in €/month. (Source: MAUF-MS)

Household primary income percentiles	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-99	99-99,9	99,9-100
<i>Lower limit of the percentile bracket</i>	0	602	1 219	1 717	2 222	2 798	3 550	4 483	5 760	8 102	22 058	70 851
<i>Upper limit of the percentile bracket</i>	602	1 219	1 717	2 222	2 798	3 550	4 483	5 760	8 102	22 058	70 851	∞
<i>Average number of adults in the households</i>	1,21	1,19	1,23	1,35	1,46	1,59	1,74	1,88	1,97	2,09	2,19	2,14
<i>Average number of children below</i>	0,47	0,25	0,24	0,26	0,34	0,44	0,59	0,72	0,79	0,86	0,95	0,85
Salaries from privately owned companies	51	208	346	628	1 000	1 449	2 028	2 939	4 261	7 089	14 434	31 277
Public administration salaries	26	103	237	279	312	368	540	622	704	719	814	1 167
Other forms of remuneration	5	20	31	45	61	96	151	225	389	1 240	5 329	10 723
Unemployed insurance benefits	33	112	81	73	73	81	84	81	81	85	111	207
Elderly pensions	54	432	696	819	884	927	883	836	740	795	961	1 673
<i>Rental fees income</i>	4	12	16	24	36	52	72	92	132	353	1 427	4 008
<i>Interest income (before Corporate tax)</i>	15	24	35	49	64	80	96	120	161	340	1 042	4 872
<i>Dividend income (before Corporate tax)</i>	1	3	5	8	12	19	24	36	72	415	6 420	72 183
<i>Life insurance income (before Corporate tax)</i>	7	19	24	39	54	83	106	123	214	521	1 321	4 168
<i>Capital gain income (before Corporate tax)</i>	0	1	1	2	2	4	6	8	15	73	1 214	35 086
Total capital income (before Corporate tax)	23	47	65	98	132	185	232	286	462	1 349	9 998	116 309
Average income before redistribution	196	935	1 472	1 965	2 499	3 158	3 990	5 081	6 769	11 630	33 074	165 364
Family benefits (AF, CF, ARS, ASF)	70	33	31	32	41	52	59	62	64	70	88	82
Add'l salaries for families (public admin.)		1	1	2	3	3	4	5	5	4	4	8
Child benefits basis (PAJE)	16	7	7	9	12	16	19	24	21	9	2	1
Parental leave benefit (PAJE CLCA)	30	7	5	5	6	6	5	4	3	3	5	8
Minimum social payment (RSA)	259	48	21	13	8	3	1					
Minimum for elderly (ASPA)	56	18	1	1								
Housing assistance (AL, APL)	158	77	32	19	14	10	4	1				
Housing assistance to civil servants	1	1	2	3	3	3	4	4	6	9	9	13
Scholarships	18	10	6	3	2	2	2	1				
Non-contributive social contributions	-11	-45	-74	-131	-200	-282	-392	-563	-809	-1 393	-2 960	-5 764
Social contribution exemption (exo. Fillon)	9	33	52	87	95	83	90	103	70	29	24	21
Social flat tax CSG	-7	-30	-77	-120	-156	-195	-248	-311	-402	-674	-1 880	-9 686
Income tax (IRPP raw, including PPE)	3	11	6	-5	-30	-58	-84	-122	-208	-547	-2 813	-15 526
Payment in full discharge (vs capital income)		-1	-1	-2	-4	-6	-8	-11	-16	-44	-227	-1 671
Wealth taxes (TF, ISF, DMTG)	-11	-16	-20	-25	-29	-36	-43	-51	-69	-189	-1 343	-13 132
Corporate tax (IS)	-4	-9	-12	-19	-25	-35	-44	-54	-88	-264	-2 044	-19 711
Housing tax (TH)		-4	-21	-30	-35	-42	-50	-59	-73	-106	-206	-328
Average disposable income (after redistrib.)	781	1 076	1 431	1 807	2 201	2 683	3 312	4 114	5 273	8 537	21 728	99 634
Redistribution impact (%)	+298%	+15%	-3%	-8%	-12%	-15%	-17%	-19%	-22%	-26%	-34%	-40%

Appendix 2: Comparison between the proposed alternative redistribution and the current French redistribution in 2010, by income percentiles (horizontal) and wealth percentiles (vertical), in €month and %. (Source: MAUF-MS)

		Primary income percentile	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-99	99-99,9	99,9-100	Average per wealth percentile vs. current redistrib.
		Average income (€m)	196	935	1 472	1 965	2 499	3 158	3 990	5 081	6 769	11 630	33 074	165 364	
Wealth percentile	Average wealth (k€)														
0-20	0		55	120	72	40	93	170	215						107
			7%	11%	5%	2%	4%	6%	7%						6.0%
20-30	6		60	118	61	49	94	164	194	215					123
			7%	10%	4%	3%	4%	6%	6%	5%					5.3%
30-40	23		24	108	70	39	57	120	144	189	254				119
			3%	9%	5%	2%	2%	4%	4%	5%	5%				4.3%
40-50	95		-34	54	24	-6	1	27	81	133	181	283			57
			-5%	5%	2%	0%	0%	1%	2%	3%	3%	4%			2.2%
50-60	163			23	21	-3	-1	15	71	121	177	252			54
				2%	2%	0%	0%	1%	2%	3%	3%	3%			2.0%
60-70	210			13	-34	-9	-32	-10	16	71	173	258			42
				1%	-3%	-1%	-1%	0%	0%	2%	3%	3%			1.3%
70-80	272				-47	-52	-72	-89	-64	-20	96	210			1
					-4%	-3%	-3%	-3%	-2%	0%	2%	3%			0.0%
80-90	408					-101	-120	-165	-203	-208	-113	88			-92
						-6%	-6%	-6%	-6%	-5%	-2%	1%			-2.1%
90-99	1 068						-97	-169	-270	-374	-525	-645	142		-447
							-5%	-7%	-9%	-9%	-10%	-7%	0%		-6.9%
99-99,9	4 855											-685	-1 504		-1 001
												-7%	-7%		-5.8%
99,9-100	30 054													-10 694	-7 783
														-9%	-8.7%
Average per income percentile vs. current redistribution (€/m , %)			30.8	84.0	35.2	5.6	10.3	18.7	15.4	9.2	-7.8	-162.3	-545.2	-5 814.7	0
			3.9%	7.8%	2.5%	0.3%	0.5%	0.7%	0.5%	0.2%	-0.1%	-1.9%	-2.5%	-5.8%	0%