

## Appendices





Direction générale

Mesurer pour comprendre

Note

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Montrouge, le 13 mars 2019  
N°2019\_10187\_DG75-G001

**Objet : Mise en place d'un groupe de travail : « Mesure des inégalités et de la redistribution : confrontation et mise en cohérence des approches »**

Un grand nombre d'approches coexistent pour la mesure des inégalités et de la redistribution, portées soit par l'Insee et le SPP, soit par des institutions internationales, soit par des équipes de chercheurs.

Il en ressort des messages pas toujours convergents, et notamment pour ce qui concerne le classement relatif de la France par rapport aux autres pays développés.

Ces écarts peuvent s'expliquer par des différences de sources, de champ, de concepts, ou par un focus variable sur les différents segments de la distribution des niveaux de vie. Mettre à plat les raisons de ces écarts est indispensable pour la qualité du débat public.

Le groupe de travail aura pour objet d'examiner ces sources d'écarts, d'identifier les points sur lesquels ils pourraient être résorbés ou de proposer des éléments de langage simples pour justifier qu'une même question puisse recevoir des réponses différentes lorsqu'elle est explorée sous des angles variables.

Il s'agira plus précisément, en complémentarité des groupes d'experts initiés en ce sens par l'OCDE et Eurostat, et dans la mesure du possible :

- d'identifier, de qualifier et de quantifier l'origine des écarts pour la France entre les différentes mesures des inégalités et des effets redistributifs des transferts publics ;
- d'identifier des pratiques partageables pour concilier les approches sur données d'enquêtes, administratives et celles de la comptabilité nationale en matière d'inégalité de revenu disponible et de redistribution ;
- d'explorer les pistes d'élargissement de la comptabilité distributionnelle au revenu disponible ajusté (RDBA) en intégrant les prestations sociales en nature (santé, éducation, logement social...);
- d'étudier l'opportunité et la faisabilité d'un élargissement supplémentaire à l'ensemble du revenu national (RNB) pré et post-transferts, intégrant les dépenses collectives non directement individualisables et les impôts sur la consommation et la production ;

## **Translation :**

### **Establishment of a working group: “Measuring inequality and redistribution: comparison and harmonisation of approaches”**

A large number of approaches to the measurement of inequality and redistribution coexist, carried out by INSEE and the SPP, by international institutions or by teams of researchers.

The messages that emerge are not always consistent, particularly when it comes to the relative ranking of France compared with other developed countries.

These discrepancies can be explained by differences in sources, scope, concepts or a differing focus on the various standard of living distribution bands. It is essential that the causes of these discrepancies are smoothed out to ensure the quality of the public debate.

The aim of the working group will be to examine the sources of these discrepancies in order to identify where they could be resolved or to propose simple language to justify why the same question may result in different responses when it is looked at from different angles.

More specifically, and working to complement the expert groups established by the OECD and Eurostat in this area and in so far as is possible, it will be a case of:

- identifying, qualifying and quantifying the reasons for the discrepancies for France from among the various measures of inequality and the redistributive effects of public transfers;
- identifying shared practices for reconciling the approaches to survey, administrative and national accounting data with regard to inequality associated with disposable income and redistribution;
- exploring means of expanding distributional accounting to include adjusted disposable income (AGDI) by integrating social security benefits in kind (health, education, social housing, etc.);
- looking into the possibility and feasibility of a further extension to total national income (GNI) before and after transfers, integrating collective expenditure that is not directly individualizable and taxes on consumption and production;
- producing a guide that collates these various findings or recommendations;
- identifying study and research priorities in order to improve the measurement of inequality and the impact of public transfers.

The establishment and presidency of this group are entrusted to Jean-Marc Germain, INSEE administrator. The aim of the group is to bring together the main organisations or teams that are currently studying or have recently conducted studies on this subject: INSEE, DREES, OFCE, Directorate-General of the French Treasury, OECD, World Inequality Lab (WIL), Institute of Public Policies (IPP), Laboratory for Interdisciplinary Evaluation of Public Policy (LIEPP), etc. At INSEE, Jean-Marc Germain will be able to call upon the production or study departments of the Demographic and Social Statistics Directorate and the Economic Studies and Reports Directorate for support where required.

The group will return its findings in autumn 2019.

Chief Executive Officer  
Jean-Luc Tavernier

- de produire un guide rassemblant ces divers constats ou recommandations
- d'identifier des priorités d'étude et de recherche pour améliorer la mesure des inégalités et de l'impact des transferts publics

La mise en place et la présidence de ce groupe sont confiées à Jean-Marc Germain, administrateur de l'Insee. Le groupe a vocation à rassembler les principaux organismes ou équipes travaillant ou ayant récemment travaillé sur ce thème : INSEE, DREES, OFCE, DG Trésor, OCDE, World Inequality Lab (WIL), Institut des Politiques Publiques (IPP), Laboratoire interdisciplinaire d'évaluation des politiques publiques (LIEPP)... A l'Insee, Jean-Marc Germain pourra solliciter en tant que de besoin l'appui des services de production ou d'études de la Direction des statistiques démographiques et sociales et de la Direction des études et synthèses économiques.

Le groupe rendra ses conclusions à l'automne 2019.

Le Directeur général



Jean-Luc TAVERNIER

Pour information :

- Les membres du comité de direction de l'Insee
- A la Direction des statistiques démographiques et sociales :  
Jerôme Accardo, Valérie Albouy, Sylvie Le Minez, Laurence Rioux
- A la Direction des études et synthèses économiques :  
Laurence Bloch, Guillaume Houriez, Julien Pouget, Sebastien Roux, Lionel Wilner





## List of Recommendations

**Recommendation 1:** Establish distributed national accounts that meet the standards of coherent international accounting standards based on those governing national accounts (*System of National Accounts*).

**Recommendation 2:** Integrate the distribution of wealth into distributional national accounting in order to guarantee its overall consistency.

**Recommendation 3:** Present the choices regarding the equivalence scales used to compare the different types of household composition in an explicit manner and, in so far as is possible, detail the consequences of the choices made, taking account of limitations associated with the availability of data (household composition, age of children, etc.). Several complementary approaches exist, one more oriented towards the study of the standard of living of households and its distribution (number of consumption units), another geared more towards the distribution of primary income (number of adults or number of individuals); they are used and interpreted in different ways.

**Recommendation 4:** Consistently adopt the convention of equivalence scales, i.e. do not change them to compare the redistributive effects of transfers.

**Recommendation 5:** For the purposes of producing distributed national accounts, and within the scope of international accounting standards, prioritise disposable income per consumption unit as the primary classification variable.

**Recommendation 6:** For research purposes, other classification options may be considered; in this case, the classification variable and the method for calculating the amount received or paid must be clearly shown for each transfer (aggregation at household level, for example).

**Recommendation 7:** Once classification has been carried out according to one of the income concepts, the standard of living bands must remain fixed (in order to prevent reclassifications and the resulting bias); focus on an identical number of individuals for each band (rather than an identical number of households) and, failing that, indicate the number of individuals in each band.

**Recommendation 8:** Make a linguistic distinction between quantile (lower threshold) and fraction (group) by using the terms deciles/tenths or centiles/hundredths, for example.

**Recommendation 9:** Always indicate the number of entities within the band (households, individuals, children, number of equivalence scales, etc.) in order to facilitate comparisons between the different approaches.

**Recommendation 10:** Wherever possible, describe the top end of the distribution to the hundredth and thousandth by making use of comprehensive data; failing that, it should be described by the tenth or twentieth for the usual household survey data. Results should only be presented to the extent that they are statistically robust, or accompanied by their margins of error.

**Recommendation 11:** Ensure consistency of use when calculating the amounts of transfers within the groups, either by calculating the total transfers or by calculating the transfers per unit, but retaining the same scale as was used to establish the groups.

**Recommendation 12:** When interpreting the impact of redistribution on welfare via the national income scale, the commentary should preferably discuss the inequality indicators before and after transfers in terms of a difference in level rather than a ratio.

**Recommendation 13:** The assessment of the redistributive impact of a transfer system should, in so far as is possible, focus on zero-sum transfer packages (i.e. those where there is a balance between income and expenditure), particularly where comparisons are being made internationally or over time and within the context of distributional accounting.

**Recommendation 14:** In order to reach robust conclusions, describe the entirety of the distribution (by tenths, hundredths, etc.) of income and wealth; make use of at least one dispersion indicator and one ratio indicator, rather than concentrating on a single indicator.



**Recommendation 15:** The comparison of the redistributive effect of two socio-fiscal systems with “all else being equal” ideally requires the application of transfer rules to the same primary income distribution. In practice, several complementary approaches can be taken on the basis of the same distributional accounting in order to address this theoretical case. *A fortiori*, it is necessary to explain the approach followed and to discuss its implications.

**Recommendation 16:** For the purposes of comparability and replicability, clearly specify the simulation and imputation methods used, drawing a distinction in particular between income observed within the central source (including by means of matching) and those simulated on the scale, or even imputed and adjusted.

**Recommendation 17:** In the interests of readability, indicate the methodological breaks in the series. In the event of a change to the calculation method (simulations, imputations, new sources, etc.), present long back series of data wherever possible.

**Recommendation 18:** Start from a central source with a broad coverage of income when studying redistribution through a set of transfers. In general, you should prioritise sources that include a large number of income components simultaneously.

**Recommendation 19:** Guarantee the consistency of statistics on redistribution and inequality over time by developing and disseminating statistical registers, bringing together data that are additional to those provided by the management databases alone, in particular for the study of wealth.

**Recommendation 20:** Wherever possible, make use of early estimation methods for the present (*nowcasting*) in order to match the dissemination of distributional accounts with that of the national accounts.

**Recommendation 21:** Directly link household data (survey or microsimulation model) to comprehensive tax sources in order to produce a breakdown of high incomes within the distributed national accounts.

Recommendation 22: Distributional accounting is ill-suited to measuring the redistributive impact of social insurance schemes that guarantee replacement income, particularly pensions. The general study of redistribution needs to distinguish between the effects of social insurance systems (which may be highly redistributive when looked at in cross-section, but not over time) and other transfers.

**Recommendation 23:** Pension-related transactions can be taken into account, only on the condition that the sequencing of individuals remains unchanged throughout the transfer imputation process and subject to the interpretation precautions set out in **Recommendation 22**.

## Composition of the Working Group

DEPP: Nathalie CARON, Mélanie DREGOIR, Aline LANDREAU, Fabienne ROSENWALD, Sylvie ROUSSEAU

DGT: Isabelle BENOITEAU, Cyril de WILLIENCOURT

DREES: Pierre-Yves CABANNES, Mathieu FOUQUET, Mathilde GAINI, Lucie GONZALEZ, Romain LOISEAU, Laure OMALEK, Catherine POLLAK, Lucile RICHET-MASTAIN

INSEE: Valérie ALBOUY, Mathias ANDRE, Jérôme ACCARDO, Sylvain BILLOT, Didier BLANCHET, Laurence BLOCH, Jorick GUILLANEUF, Sylvie LE MINEZ, Émilie RAYNAUD, Laurence RIOUX, Michaël SICSIC

IPP: Antoine BOZIO, BRICE FABRE, JULIEN GRENET, Claire LEROY

LIEPP: Elvire GUILLAUD, Michaël ZEMMOUR

OFCE: Pierre MADEC, Raul SAMPOGNARO

OECD: Marco MIRA

WIL-PSE: Thomas BLANCHET, Lucas CHANCEL, Bertrand GARBINTI, Jonathan GOUPILLE-LEBRET

SIES: Lionel BONNEVIALLE, Isabelle KABLA-LANGLOIS, Clotilde Lixi, Hery PAPAGIORGIU



## Schedule and Content of the Meetings

### *Meeting 1 – 15 May 2019: Objectives, Organisation, Existing work*

- Presentation by Jean-Marc GERMAIN and Mathias ANDRÉ (INSEE): establishment and operation of the working group
- Presentation by Marco MIRA (OECD): “*OECD Measures of income redistribution*”
- Presentation by Thomas BLANCHET and Lucas CHANCEL (WIL): “Le projet DINA: Présentation, applications et perspectives” [the DINA project: presentation, applications and outlook]
- Presentation by Jérôme ACCARDO (INSEE): “Une comparaison entre les comptes nationaux et l’ERFS” [a comparison between the national accounts and the ERFS]

### *Meeting 2 – 12 June 2019: Concepts, Analysis of Discrepancies and Disposable Income*

#### Measurement of redistribution:

- Presentation by Michaël ZEMMOUR and Elvire GUILLAUD (Liepp): “Mesurer les inégalités et la redistribution en comparaison internationale” [measuring inequality and redistribution in international comparisons]
- Presentation by Michaël SICSIC (INSEE): “La redistribution monétaire: concepts et mesure” [monetary redistribution: concepts and measurement]
- Presentation by Jean-Marc GERMAIN (INSEE): elements of international comparisons

#### Analysis of discrepancies:

- Presentation by Mathias ANDRÉ (INSEE): “À la recherche des sources d’écarts” [seeking out the sources of discrepancies]
- Presentation by Jérôme ACCARDO and Jorick GUILLANEUF (INSEE): “Travaux sur ERFS - Choix des UC - Foyers/ménages” [studies on ERFS – selection of CU – households]
- Presentation by Antoine BOZIO and Brice FABRE (IPP): “Comparaison TAXIPP 1.0 - ERFS” [comparison between TAXIPP 1.0 and ERFS]
- Presentation by Thomas BLANCHET (WIL): “Les revenus du patrimoine dans DINA - Méthodes et résultats” [wealth income in DINA - methods and results]

### *Meeting 3 – 18 September 2019: Health, Education and Outside of the Scope of the ERFS*

#### Health:

- Presentation by Mathieu FOUQUET, Romain LOISEAU AND Catherine POLLAK

(DREES): “La redistribution des dépenses de santé: le modèle Ines-Omar” [the redistribution of health expenditure: the INES-OMAR model]

Education and higher education:

- Presentation by Sylvie ROUSSEAU (DEPP): “le compte de l’éducation” [the education account]
- Presentation by Valéry ALBOUY (INSEE): “Redistribution des dépenses publiques d’éducation” [redistribution of public education expenditure]

Distributed national accounts:

- Presentation by Mathias ANDRÉ (INSEE) and Thomas BLANCHET (WIL): presentation of the provisional detailed plan and first version of a DNA table

Outside of the Scope of the ERFS:

- Presentation by Jérôme ACCARDO (INSEE): “Complétion du champ de diffusion de ERFS” [completion of the scope of dissemination of the ERFS]

*Meeting 4 – 6 November 2019: Indirect Taxes, Collective Expenditure and International Comparisons*

- Presentation by Mathias ANDRÉ (INSEE): “Distribution des taxes indirectes avec le modèle Ines” [distribution of indirect taxes with the INES model]
- Presentation by Thomas BLANCHET (WIL): “Distribution des revenus atypiques” [distribution of atypical income]
- Presentation by Thomas BLANCHET (WIL): “Comparaisons internationales” [international comparisons]
- Presentation by Mathias ANDRÉ and Michaël SICSIC (INSEE): New version of the table of distributed accounts based on the INES model

*Meeting 5 – 22 January 2010: Prototype DNA Table and Proofreading of the Report*

- Presentation by Mathias ANDRÉ (INSEE), Thomas BLANCHET (WIL) and Jean-Marc GERMAIN (INSEE): results of the DNA, details of the table, report



Figure 41: Income concepts used in international databases  
Sources: UNDP 2019 (Table produced by Nora Lustig)

INCOME CONCEPTS	Income Concepts in Databases with Fiscal Redistribution Indicators								
	Canberra Group Handbook (2011)	CEQ Data Center on Fiscal Redistribution <sup>1</sup>		Expert Group on Disparities in a National Accounts Framework	EUROMOD	LIS-DART <sup>2</sup>	OECD Income Distribution Database	World Inequality Database	
	Operational Definition	Contributory pensions as deferred income	Contributory pensions as government transfers		Baseline Scenario <sup>3</sup>			Fiscal Income <sup>4</sup>	National Income
<b>INCOME CONCEPT 1: INCOME BEFORE TAXES AND GOVERNMENT SPENDING</b>		Market income plus pensions	Market income	Equalized Primary Income	Equalized Market Income	Equalized Market Income	Equalized Market Income	Pre-Tax Income	Pre-Tax Income
<b>The sum of:</b>									
Personal Factor Income									
Goods earnings (net of employers' social insurance contributions) <sup>5</sup>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Income from self-employment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Goods produced for own consumption net of input costs	Yes	Yes (if available) <sup>6</sup>	Yes (if available) <sup>6</sup>	Yes	No <sup>7</sup>	Yes	Yes <sup>2</sup>	No	Yes
Goods & services produced for barter net of input costs	Yes	Yes (if available) <sup>6</sup>	Yes (if available) <sup>6</sup>	Yes	No <sup>7</sup>	Yes	No	No	Yes (if available)
Capital income (excluding undistributed profits)	Yes	Yes	Yes	Yes*	Yes	Yes	Yes	Yes	Yes
Undistributed profits <sup>2</sup>	No	No	No	No	No	No	No	No	Yes
Imputed Capital Income <sup>2</sup>	No	No	No	No	No	No	No	No	Yes
Capital gains	No	No	No	No	No	No	No	No <sup>8</sup>	No
Net value of owner-occupied housing services	Yes	Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>	No <sup>2</sup>	No <sup>2</sup>	No	No <sup>2</sup>	Yes
Employers' social security contributions	No	Yes	Yes	Yes	No	No	No	Yes	Yes
Imputed Employer's contributions	not specified	No	No	Yes <sup>2</sup>	No	No	No	No	No
<b>Plus:</b>									
Old-age pensions from social security schemes	No	Yes	No (included in 2)	No (included in 2)	No (included in 2)	No (included in 2)	No (included in 2)	Yes	Yes
Unemployment compensation from social insurance schemes	No	No (included in 2)	No (included in 2)	No (included in 2)	No (included in 2)	No (included in 2)	No (included in 2)	Yes	Yes
Employment-related social insurance transfers received by households <sup>2</sup>	Yes	Yes	Yes	No (included in 2)	Yes	Yes	Yes	Yes	Yes
Transfers from other households (e.g., remittances)	No (included in 2)	Yes	Yes	No (included in 2)	Yes	Yes	Yes	Yes	Yes
Transfers from nonprofit institutions	No (included in 2)	Yes	Yes	No (included in 2)	Yes	Yes	Yes	Yes	Yes
<b>Minus:</b>									
Employees' social insurance contributions to old-age pensions	No (included in 2)	Yes	No (included in 2)	No (included in 2)	No (included in 2)	No (included in 2)	No (included in 2)	Yes <sup>2</sup>	Yes <sup>2</sup>
Employees' social insurance contributions to unemployment	No (included in 2)	No (included in 2)	No (included in 2)	No (included in 2)	No (included in 2)	No (included in 2)	No (included in 2)	Yes <sup>2</sup>	Yes <sup>2</sup>
Employers' social security contributions	No	Yes	No (included in 2)	No (included in 2)	No	No	No	Yes <sup>2</sup>	Yes
Contributions to employment-related social insurance transfers <sup>2</sup>	No	No (included in 2)	No (included in 2)	No (included in 2)	No	No <sup>2</sup> (included in 2)	No <sup>2</sup> (included in 2)	Yes	Yes
Transfers to other households (e.g., remittances)	No (included in 2)	Yes (if available)	Yes (if available)	No (included in 2)	Yes	No <sup>2</sup>	Yes	Yes (if available)	Yes
Transfers to nonprofit institutions	No (included in 2)	Yes (if available)	Yes (if available)	No (included in 2)	Yes	No <sup>2</sup>	Yes	Yes (if available)	Yes
<b>INCOME CONCEPT 2: INCOME AFTER DIRECT TAXES AND DIRECT TRANSFERS</b>			Disposable Income	Equalized Disposable Income	Equalized Disposable	Equalized Disposable Income	Equalized Disposable Income		Post-tax disposable
<b>Start from: Income Concept 1</b>									
<b>Plus:</b>									
Old-age pensions from social security schemes	Yes	No (included in 1)	Yes	Yes	Yes	Yes	Yes		No (included in 1)
Unemployment compensation from social insurance schemes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		No (included in 1)
Other cash benefits from social security	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes
Social assistance benefits (noncontributory transfers)	Yes	Yes	Yes	Yes	Yes	Yes	Yes <sup>2</sup>		Yes
Employment-related social insurance transfers received by households <sup>2</sup>	Yes	No (included in 1)	No (included in 1)	Yes	No	No (included in 1)			No (included in 1)
Transfers from other households (e.g., remittances)	Yes	No (included in 1)	No (included in 1)	Yes	No (included in 1)	No (included in 1)	No (included in 1)		No (included in 1)
Transfers from nonprofit institutions	Yes	No (included in 1)	No (included in 1)	Yes	No (included in 1)	No (included in 1)	No (included in 1)		No (included in 1)
<b>Minus:</b>									
Direct personal income taxes, net of refunds	Yes	Yes	Yes	Yes	Yes+G56+G57	Yes	Yes		Yes
Compulsory fees and fines	Yes	No	No	Yes	Yes	No	not specified <sup>8</sup>		Yes
Employees' social insurance contributions to old-age pensions	Yes	No (included in 1)	No	Yes	Yes	Yes	Yes		No (included in 1)
Employees' social insurance contributions to unemployment	Yes	No	No	Yes	Yes	Yes	Yes		No (included in 1)
Employers' contributions to other social insurance benefits	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes
Employers' social security contributions	No	No (included in 1)	Yes	Yes	No	No	No		No (included in 1)
Contributions to employment-related social insurance transfers <sup>2</sup>	No	Yes	Yes	Yes	No	Yes <sup>2</sup>	Yes <sup>2</sup>		No (included in 1)
Transfers to other households (e.g., remittances)	Yes	No (included in 1)	No (included in 1)	Yes	No (included in 1)	No <sup>2</sup>	No (included in 1)		No (included in 1)
Transfers to nonprofit institutions	Yes	No (included in 1)	No (included in 1)	Yes	No (included in 1)	No <sup>2</sup>	No (included in 1)		No (included in 1)
<b>INCOME CONCEPT 3: INCOME AFTER DIRECT AND INDIRECT TAXES AND DIRECT TRANSFERS AND SUBSIDIES</b>			Consumable Income	Equalized Adjusted Disposable Income					Post-tax national income
<b>Start from: Income Concept 2</b>									
<b>Plus:</b>									
Indirect subsidies		Yes	Yes						Yes
<b>Minus:</b>									
Indirect taxes (VAT, Excise, Other)		Yes	Yes						Yes
<b>INCOME CONCEPT 4: INCOME AFTER DIRECT AND INDIRECT TAXES, DIRECT TRANSFERS, SUBSIDIES AND PUBLIC SPENDING ON EDUCATION, HEALTH AND OTHER PUBLIC SPENDING</b>			Final Income	Equalized Adjusted Disposable Income					
<b>Start from: Income Concept 3</b>			Income Concept 3	Income Concept 2					
<b>Plus:</b>									
Public spending on education		Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>					Yes
Public spending on health		Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>					Yes
Public spending on housing		Yes (if available)	Yes (if available)	Yes					Yes
Public spending on infrastructure		No	No	No					Yes
Public spending on defense and security		No	No	No					Yes
Other public spending		No	No	No					Yes
<b>Redistributive effect is estimated by households ranked by</b>		Market income plus pensions	Market income	Equalized Disposable Income	Equalized Market Income	Not applicable	Equalized Disposable Income	Pre-Tax Income	Pre-Tax Income
<b>Memo Items</b>									
All values as implied by microdata and not matched to administrative totals		Yes	Yes	No	Yes	Yes	Yes	No	No
All items match administrative totals from tax records and National Income		No	No	Yes	No	No	No	Yes	Yes
Consumption		Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>	No <sup>2</sup>	Yes, when available	No	No	No
Per capita		Yes	Yes	Yes	No	No <sup>2</sup>	No	No <sup>2</sup>	No <sup>2</sup>
Equalized <sup>2</sup>		Available upon request		Yes	Yes	Yes	Yes	No <sup>2</sup>	No <sup>2</sup>
Per adult individual		No <sup>2</sup>	No <sup>2</sup>	No (included in 1)	No	No <sup>2</sup>	No	Yes <sup>2</sup>	Yes <sup>2</sup>
Total population		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Working age population only		No <sup>2</sup>	No <sup>2</sup>	No	No	No <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>	Yes <sup>2</sup>



## Taxes on Products and National Accounts

### *What the SNA Says about the Accounting Treatment of VAT*

#### Basic Price, Producer Price, Acquisition Price

The **producer price** corresponds to the **buyer price**, less VAT. The latter is a hybrid concept, which excludes some, but not all taxes on products and production. This is why the SNA considers the **basic price**, which is reduced by any taxes that are to be paid on products, as a clearer concept, and recommends that it be prioritised in the evaluation of production.

#### VAT is Recorded as Being Payable by the Buyers

The SNA asks that the net system<sup>37</sup> be used to record VAT (Section 6.61). In this system, VAT is recorded as being payable by the buyers; the goods and services **produced** are evaluated **excluding the VAT** invoiced; the goods and services **purchased** are evaluated **including the VAT** that is non-deductible.

#### The Different Concepts of Value Added

**Gross value added at basic prices** (or **value added at producer prices**) is defined as production valued at basic prices (or at producer prices) less intermediate consumption evaluated at acquisition prices<sup>38</sup>.

### *A Stylised Example of the Handling of VAT in Distributional Accounting*

#### The Table of Integrated Economic Accounts

Let us consider here the production of goods and services amounting to 300 at basic prices without intermediate consumption; the primary income is limited to the remuneration of employees; transfers are made up of a tax on products amounting to 70 and social security benefits of the same amount; consumption is 350 and the savings are 20. These transactions are mapped in the table of integrated economic accounts as shown in Figure 1. The institutional sectors of companies and households have been aggregated.

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<sup>37</sup> In the other system, known as the gross system, the buyer and the seller record the same price, regardless of whether or not the buyer can deduct this VAT later

<sup>38</sup> Value added at factor cost can be deducted from value added at basic prices by deducting the taxes on production that are still to be paid on the value added at basic prices, such as other taxes on production (e.g. payroll tax). However, this is not a concept used explicitly by the SNA, since there is no observable price system that allows gross value added at factor cost to be directly obtained by multiplying quantities and prices. Strictly speaking, this is therefore not a value added, but an income.

In national accounting, taxes are considered a value added in the production account. In other words, **the act of consumption is implicitly considered to generate its own value added, independently of production, the amount of which is equal to the tax collected.** However, this value is not allocated to any institutional sector: it is shown as such in a column entitled “taxes on products” (D21N). The net value added is 370, 300 of which is from production and 70 from this specific transaction.

Figure 1 - Table of integrated economic accounts

	National economy	S11 to S15, except S13	S13	Taxes on products
Production account				
Production (P1)	300	300		
Taxes on products (D21N)	70			70
<b>Net value added (B1N/PIN)</b>	<b>370</b>	<b>300</b>		<b>70</b>
Operating and allocation of primary income account				
Taxes on products (D21)	70		70	
Remuneration (D1)	300	300		
<b>Balance of primary incomes (B5N/NNI)</b>	<b>370</b>	<b>300</b>	<b>70</b>	
Secondary distribution of national income account				
Social security benefits (D62)	70	70	-	
<b>Net disposable income (B6n)</b>	<b>370</b>	<b>370</b>	-	
Use of income account				
Individual consumption expenditure account (P3)	350	350		
Net savings	20	20		

This value added is allocated as a public administration resource in the allocation of primary income account (D21, S13). Net national income is made up of household income (in this case remuneration D1) and a primary income of 60 belonging to the public administrations.

Social security benefits appear as a household resource in the secondary distribution account. Net disposable income (B6n) is 370 and, in this case, is allocated in full to households. The net disposable income in S13 is actually zero, the 70 in taxes on products having been used to pay for social security benefits at this stage.

#### The Table of Integrated Distributional Accounts at Market Prices

The distributional table differs from the TIEA in that it distributes the primary income, transfers and disposable income of the national economy, not on the basis of institutional sectors, but by categories of households – ranked by increasing standard of living – which are the final beneficiaries. Here we consider two categories of household, M1 and M2, which obtain primary incomes of 100 and 200 respectively from their contributions to production, which are supplemented by social security benefits of 35 each, resulting in incomes after transfers of 135 and 235, respectively. The consumption expenditure of households in category 1 is assumed to be 280 before tax and 350 including tax, i.e. a VAT rate of 25%. This consumption is broken down into 108 excl. tax (132 incl. tax) for households in category 1 and 172 excl. tax (215 incl. tax) for households in category 2, and VAT is therefore paid at a rate of 27 for the former and 43 for the latter. The transfers are balanced, since the 70 paid in VAT finances the two social security benefits of 35 each. On that basis, two distributional tables can be established, depending on whether market or basic prices are to be used.

The first aligns with the logic applied by the SNA, where VAT in particular, and

taxes on products in general, are considered to be deducted from the value added associated with the act of consumption. The “national economy” column in the table in Figure 2 is exactly the same as that in the table of integrated economic accounts. However, in order to make it clear that VAT and other taxes on products are considered to be paid by households, row D21N in the TIEA is renamed value added on consumption in the TIDA at market prices. This value added is distributed among households in proportion to the amount that they actually pay – with companies in this case simply being entities for the collection of income tax, as is now the case with withholding tax – and therefore in proportion to consumption. In other words, in order to measure what the standard of living of households would be in the absence of transfers, in addition to their primary income, we “repay” them the amount that has been deducted from them to finance the benefits that they receive. To signify this, in the allocation account, this value added on consumption activities, which is allocated to S13 in the TIEA, is allocated to households in the TIDA in a row that can be renamed “primary purchasing power of taxes on products (D21N)”.

Figure 2 - Table of integrated distributional accounts at market prices

	Nat. economy	Households cat. 1	Households cat. 2
Value added on production (P1-P2 at basic prices)	300		
Taxes on products (D21N)	70		
<b>Net value added (B1N, PIN)</b>	<b>370</b>		
Remuneration (D1)	300	100	200
Primary purchasing power of taxes on products (D21N)(*)	+70	+27 (*)	+43 (*)
<b>Primary income = net income before transfers at market prices (I)</b>	<b>370</b>	<b>127</b>	<b>243</b>
Taxes on products (D21)	-70	-27	-43
Social security benefits (D62)	+70	+35	+35
<b>Disposable income = net income after transfers at market prices (II)</b>	<b>370</b>	<b>135</b>	<b>235</b>
Individual consumption expenditure at market prices (P3)	350	135	215
Net savings (B8n)	20	0	20
<b>Net redistribution (II – I)</b>		<b>+8</b>	<b>-8</b>

(\*)= 0.25\*P3/1.25

The income before transfers of households in category 1 is therefore 127 at market prices, 100 of which is from production at basic prices and 27 from “primary purchasing power of taxes on products”, whereas the net income before transfers of households in category 2 at market prices is 243 (200 at basic prices plus 43 from “primary purchasing power of taxes on products”). Therefore, disposable income, which here coincides with income after transfers given the assumption of no other public expenditure, is obtained by subtracting taxes on products and adding social security benefits.

Redistribution is then established in two ways, as the difference in net income before transfers and net income after transfers (II-I), or as the difference, for each category, between benefits (D62) and taxes on products (D21), in this case +8 for households in category 1 and –8 for households in category 2. The disposable income for each category corresponds to that established on the basis of social data (expanded where appropriate), and therefore the resulting inequality indices. In this example, the high/low index is 1.74 after transfers, compared with 1.91 before transfers.

### The Table of Integrated Distributional Accounts at Basic Prices

The table of integrated distributional accounts at basic prices differs from national accounting in the way that it handles taxes on products. While they are still considered as being paid by consumers, they are no longer counted at the same time as the counterpart of a value added. Value added is limited to the value added at the basic prices of the institutional sectors, so 300 in our example (compared with 370 in option 1). The net income after transfers (135 at the bottom end, of which 100 is primary income and 35 benefits; 235 at the top end, of which 200 is primary income and 35 benefits) is reduced by the amount of the taxes paid, and no longer corresponds to the disposable income per income stratum usually calculated using microdata. The measurement of level redistribution is identical (+8 at the bottom end, -8 at the top end); however, the same is not true of the measurement of inequality before and after: in this case, the ratio of the top end to the bottom end increases to 2 to 1.78, compared with 1.91 to 1.74 under the alternative approach, but the difference does not have a decisive impact when it comes to evaluating the extent of inequality and the redistribution brought about by redistribution.

Figure 3 - Table of integrated distributional accounts at basic prices

	Nat. economy	Household cat. 1	Household cat. 2
Value added on production (P1-P2 at basic prices)	300		
<b>Net value added at basic prices</b>	<b>300</b>		
Remuneration (D1)	300	100	200
<b>Primary income = net income before transfers at basic prices (Ib)</b>	<b>300</b>	<b>100</b>	<b>200</b>
Social security benefits (D62)	+70	+35	+35
<b>Disposable income</b>	<b>370</b>	<b>135</b>	<b>235</b>
Taxes on products (D21)	-70	-27	-43
<b>Net income after transfers at basic prices (IIb)</b>	<b>300</b>	<b>108</b>	<b>192</b>
Individual consumption expenditure at basic prices (P3)	280	108	172
Net savings (B8n)	20	0	20
<b>Net redistribution (Iib - Ib)</b>		<b>+8</b>	<b>-8</b>

### Advantages and disadvantages

The two approaches are neither contradictory, nor do they oppose one another since it is clearly specified whether the values being compared are at market prices or basic prices. In practice, the results are convergent and the orders of magnitude comparable.

	Market prices	Basic prices
Advantages	Consistency with national accounting, more usual handling of VAT	More intuitive method in the sequence of economic accounts
Disadvantages	As is the case in national accounting, the method is conceptually difficult to grasp, since taxes on products are apparently imputed at the top of the table as taxes on production (paid by companies), but distributed as a consumption tax, since they are assumed to be borne by households; a paradox reconciled by the basic price/market price clarification	<ul style="list-style-type: none"> <li>- Less legible; in the daily life of French people, prices are inclusive of tax</li> <li>- Contradiction with choices made in national accounting; the sum of income is no longer equal to NNI</li> <li>- Requires the introduction of new concepts, such as disposable income at basic prices, adjusted disposable income at basic prices, consumption at basic prices</li> <li>- Requires the calculation of purchasing power with a consumer price deflator at basic prices</li> </ul>
Equivalences	Level redistribution is the same in either method, and the redistribution rates are similar, as are the differences in the before/after inequality index	