Annex I: Classical GDP Issues

R1: When evaluating material well-being, look at income and consumption rather than production

The Sarkozy Commission (SC) underlines the limits of GDP as a measure of economic well-being. The starting point resides in realising that GDP is exclusively a measure of a country's market production, and that market production cannot be conflated as economic well -being in itself.

An immediate adjustment needed to improve GDP as a measure of economic performance is to account for depreciation, degradation and depletion (DDD).

The **Depreciation** of capital goods results from their wearing out or obsolescence and the shortening of their future lifespan. While GDP overestimates the level of output produced, *net measures* should be *emphasised over gross measures*. The issue lies in the fact that depreciation is hard to estimate. Therefore improvements have to be made to better encapsulate the true economic depreciation (e.g. tracking changes in the structure of production).

But NDP is only one part of the story. Their standard measures have not taken into account either the **Degradation** in quality of the natural environment or the **Depletion** of natural resources. A remedy could be adjusting Net Domestic Product (NDP) for these capital losses. Another option is the elaboration of Environmental satellite Accounts,[1] that foresee entries for the appearance and disappearance of natural economic assets as well as quality change in these assets due to economic uses. These questions will be further developed when tackling the two last recommendations.

UK Illustration

The UK Government's Blue Book[2] explores and explains other well established indicators in the National Accounts alongside the GDP (Net National Product, Gross National Product, Net Domestic Product).

These adjustments are made to improve GDP as a measure of economic performance. It deals therefore with the supply side of the economy. However, the aim of the Sarkozy Commission's first recommendation is to get a better track of people's material living standards.

Material living standards are more closely associated with measures of real income and consumption – production can expand while income decreases or vice versa when account is taken of depreciation, income flows into and out of a country, and differences between the prices of output and the prices of consumer products (SC, p. 39).

The **Net National Disposable Income** (NNDP) is therefore recommended as a more appropriate measure of a nation's material living standard. Indeed, this latter deduces from the production some of the generated income sent abroad and adds the income residents receive abroad (SC, p.95).

R2: Emphasise the household perspective

In order to go a step further in tracking standards of living, assessing individual's economic situation is more relevant than focusing on indicators for the entire economy. To illustrate this point, the OECD Annual National Accounts show that for many countries, real household disposable income and GDP do not necessary follow the same tracks, and are therefore not good substitutes for the other (SC, p.109). Therefore, the **household disposable income (HDI)** provides more reliable information.

The track of a relevant indicator of material living standard has not ended yet. One more adjustment needs to be considered. Properly defined, household income and consumption should also reflect the value of in-kind services provided by government, such as subsidized health care and educational services. As shown in Box 1, **adjusted household disposable income** (AHDI) and actual final consumption are measures that accommodate with this requirement, as far as they add to household income and to household consumption expenditure the equivalent of the goods and services provided in kind by the government.

When accounting for government services in kind, the Sarkozy Commission aims at providing an accurate measure of material living standard. At this stage, a normative issue arise.

Firstly, by definition, individual public services (namely education and health) have no price because they are not traded on a market. In many countries, and in the United Kingdom from the early 1960s to 1998, the output of the government sector has been measured by convention as of value equal to the total value of the inputs, e.g. education services are evaluated through expenditures on education, mainly compensation of the teachers[3]. Such an approach does not allow for evaluating the quality and efficiency of the educational or health system. These limits have been recognised by the UK Government. The Atkinson Review analyses how a method based on output (e.g. the amount of care received by a patient) should be prioritized, as it better reflects changes in productivity than an input method[4].

Focusing on inputs/outputs rather than outcomes (e.g. indicators of the level of education of the population, life expectancy) has an important normative scope. Indeed, no information is reflected in GDP on the nature and the impacts of these systems on the members of the society and the way they live together. This is why in its work on the measurement of government output, ONS has made quite clear that there is a difference between National Accounts estimates of output, on the one hand, and performance measures for the management of public services on the other hand. *National income is an indicator of the contribution to welfare of specified economic activities; it is not a measure of total economic welfare; aggregate welfare is not the only objective of government policy*[5].

This latter consideration is recognised by the SC as well when it states that *the time is ripe for our measurement system to shift emphasis from measuring economic production to measuring people's well-being* and *the starting point resides in realizing that GDP is exclusively* ***a measure of a country's market production*****.**

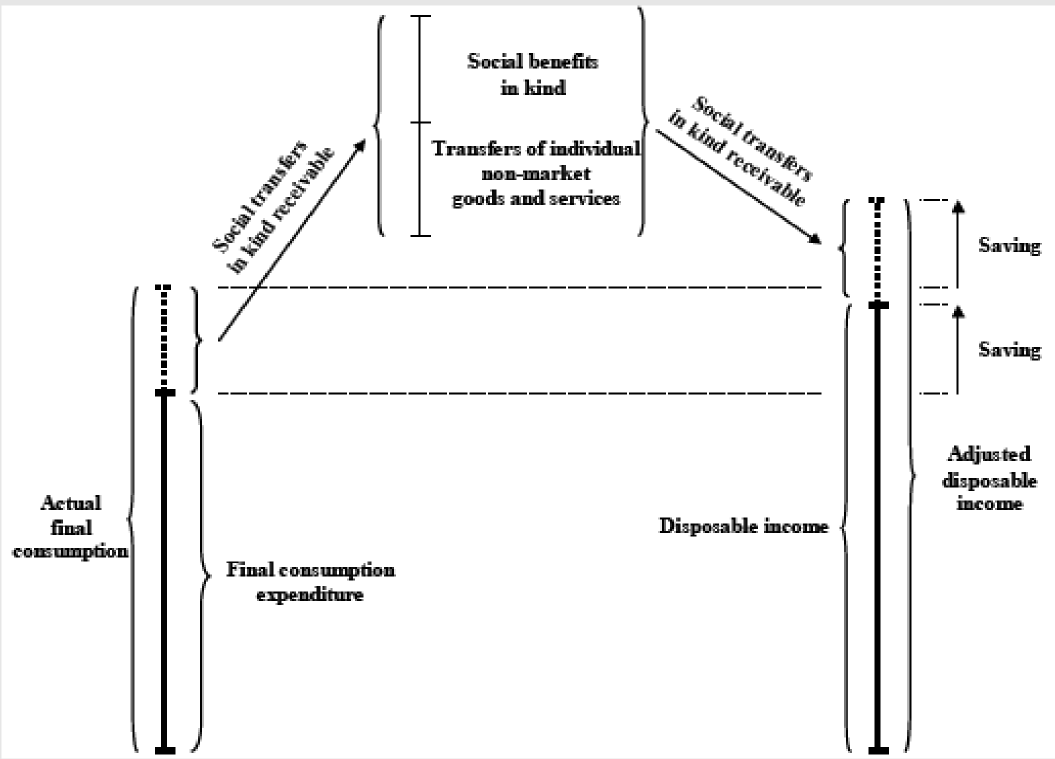
As government services are non-market by definition, is trying to include them in measures of National Income the best way to emphasise the importance of the government in fostering capabilities and sources of human flourishing? Isn't there a risk to focusing on income generated through market activities and diminishing the importance of state as a provider of social bond and collective solidarity?

Box 1. Two concepts of household consumption

The System of National Accounts draws a distinction between two concepts of household consumption:

- *Final consumption expenditure* is simply the expenditure incurred by households on consumption products, plus some imputed expenditure items such as the imputed rents that house owners pay to themselves (see above for a discussion).
- *Actual final consumption adds* to final consumption expenditure the value of social transfers in kind that households receive from governments. The value of these transfers is essentially measured by the costs that the government incurs to provide them to citizens. National accountants draw a further distinction between 'social benefits in kind' and 'transfers of individual non-market goods and services'. Social benefits in kind correspond, for instance, to pharmaceutical products that are reimbursed by the government. This consumption is recorded in government final consumption expenditure but in household actual final consumption. Transfers of individual non-market goods and services correspond, for instance, to the running costs of schools and hospitals.

These two concepts of consumption have a direct correspondence in two concepts of household income (*disposable income* and *adjusted disposable income)* discussed in the main text. The latter is derived from the former by adding the value of social transfers in kind. Savings can be computed as the difference between disposable income and final consumption expenditure or as the difference between adjusted disposable income and actual final consumption.



Source: Sarkozy Commission, p. 113.

Other indicators adopt a far different approach to assess services provided by the government. The Esping-Andersen decommodification index, for instance, is a combined measure of major social-insurance programs which reports how a country's welfare system allows its individuals to maintain a standard of living outside the labour market structure[6].

If it is time to measure well-being rather than production, outcomes rather than outputs, performance rather than national income, then such approaches have to be further explored.

R3: Consider income and consumption jointly with wealth

A wealth measure is central for both the assessment of material living standard and the measurement of sustainability.

With regard to the material living standard, consumption possibilities over time are what matters in the end. From this perspective, income flows alone are not a sufficient gauge, as shown by the following illustration: a low-income household with above-average wealth is better off than a low income household without wealth (SC, p. 29). As income doesn't necessary equal consumption, a measure of wealth is therefore crucial, for both the household level and the economy as a whole.

Wealth measures for the economy as a whole are fundamental for sustainability. What is carried over into the future necessarily has to be expressed as stocks – of physical, natural, human or social capital.

The joint UNECE/OECD/Eurostat Working Group identifies five components of the Total National Wealth which have to be managed in a way that secures their maintenance over time: **financial capital** like stocks, bonds and currency deposits; **produced capital** like machinery, buildings, telecommunications and other types of infrastructure; **natural capital** in the form of natural resources, land and ecosystems providing services like waste absorption; **human capital** in the form of an educated and healthy workforce; and, finally, **social capital** in the form of functioning social networks and institutions[7].

UK Illustration

The current measures of capital tend to focus on financial and produced capital while natural, human, and social capital are subjected to national experiments. Indeed, the Assets & Wealth Survey (December 2009)[8] at the household level, as well as the UK Economic Accounts[9] at the national level are the tools which allow an assessment of financial and produced wealth. But they should be completed by indicators relating to natural capital, human capital and social capital. As this recommendation is strongly linked with the sustainability issue, relevant UK Government initiatives contributing to give a fuller picture of the total National wealth will be examined below**.**

R4: Give more prominence to the distribution of income, consumption and wealth

At the level of society as a whole, even if the population gets richer, some people are better off than others, and evidence suggests that distributional advantages are often for the top of the deciles at the expense of the bottom. A rise in average income could be unequally shared across groups, leaving some households relatively worse-off than others (SC, p.40). Confirmation of such a trend for UK could be found in Jackson (2008).[10]

Thus, average measures of income, consumption and wealth should be accompanied by indicators that reflect their distribution. Conventional methods of measuring income inequalities refer to UK Studies dealing with the percentage of the population below 60% of the median income or with the Gini Coefficient. The Gini coefficient is a measure of income inequality taking values between 0 and 100, with higher values denoting higher levels of inequality. A value of 0 indicates complete equality in the distribution of household income (all households have the same equivalised income). A value of 100 indicates complete inequality (one household has all the income, and the others have none).[11]

UK Illustration

Redistribution of Income survey (ROI), Households below average Income survey (HBAI).[12]

Table 1. Percentage of people in households below 60 per cent median income by family type.

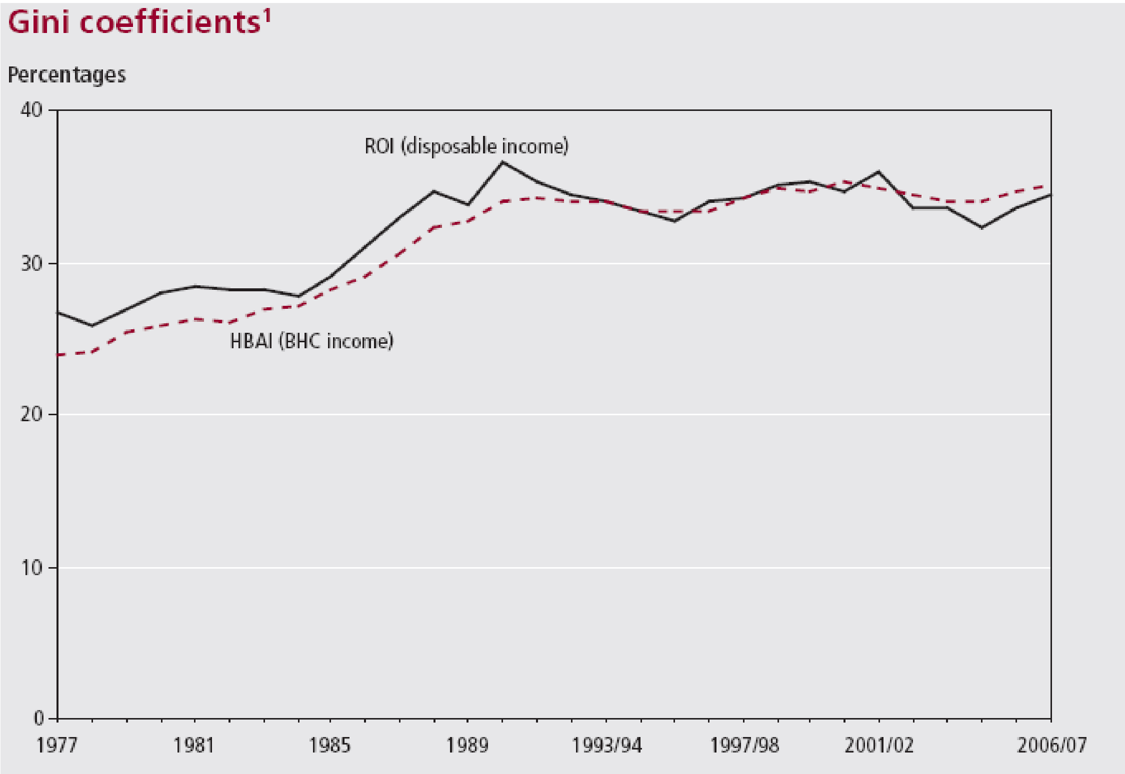
	1981	1991-1992	1996-97	1998-99	1999-00
Single people without children	8	18	16	15	16
Single pensioners	15	29	23	23	23
Lone parents	22	46	38	36	35
Couples without children	5	10	10	10	10
Pensioner couples	17	29	20	23	21
Couples with children	15	20	19	18	17
All individuals	13	21	18	18	18

Note 1: Income refers to equivalised disposable income before housing costs. See appendix, Part 5: Households below average income survey.

Note 2: Data for 1981 and 1991-1992 are based on the Family Expenditure Survey which covers the United Kingdom. Data for 1996-97 to 1999-00 are based on the Family Resources Survey which covers Great Britain only.

Source: Households Below Average Income series, Department for Work and Pensions

Figure 1. Gini Coefficients.



Source: ONS, The distribution of household income 1977 to 2006/2007, *Economic & Labour Market Review.*

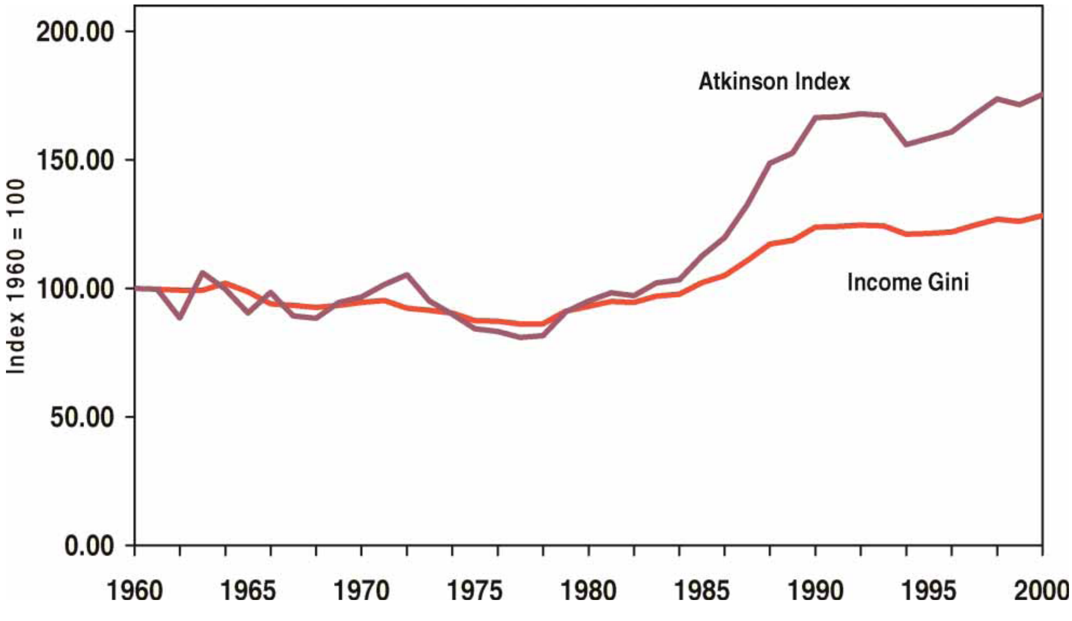
Nevertheless, these objective surveys fail to take into account the loss of welfare associated with more unequal societies. And as our main concern is to have a full picture of the factors affecting well-being, more consideration should be given to this crucial aspect. This involved a further exploration measures which includes both objective and subjective aspects.

National Statisticians often show an aversion against aggregate variables as it both involves arbitrary choices to weight the various components of the indicator and it implies several difficulties in gathering information from different sources. However, combined indexes which overcome these difficulties have already been set out and presented as valuable alternatives by the SC (SC, p.115). These indexes both measures objective and subjective aspects of inequality and synthesize relevant information into one single number, circumventing the problem of a too exhaustive dashboard. They could serve as a basis for an appropriate measure of welfare losses from having an unequal distribution of income. Two of these indexes are explored in Box 2.

Box 2. Unequal distribution of income: welfare losses

Atkinson index (1970): this measure is interpreted as the loss in wellbeing associated with having a distribution of incomes that is more unequal than preferred. As shown in Figure 1, evidence suggests that society in the UK is increasingly unequal in spite of an apparent preference for greater equality.

Figure 2. Income inequality in the UK 1960–2000.



Source: Updated from Stymne and Jackson (2000) using data from Goodman and Oldfield (2004)[13]

Yitzhaki index(1979); this measure shows that the product of the Gini coefficient and average income reflects a concept of relative deprivation where people's living standards not only depend on the absolute income or consumption possibilities but also on where their consumption possibility are with regard to a reference group.

R5: Broaden income measures to non-market activities.

The 5th Recommendation of the SC report underlines the importance of including unpaid services that household produce for themselves in expanded measures of household income. The consideration of the former is indeed likely to change the level, distribution and growth of the latter. The main justification of this recommendation resides in the invariance principle exposed below.

Many services that have been produced by the households for themselves are now purchased on a market. This results into a rise of income, as measured in the national account, and this may give a false impression of a change in living standards. On the strength of the invariance principle, which holds for government activities, a shift from private to public provision of a particular product should not affect measured output. Similarly, measured output should not be affected by a shift of production from market to household production or vice versa. And therefore, a more complete picture of household production could be drawn by constructing a full set of accounts for households, including the services that households produce for themselves.

UK Illustration

Households Satellite Accounts (HHSA)

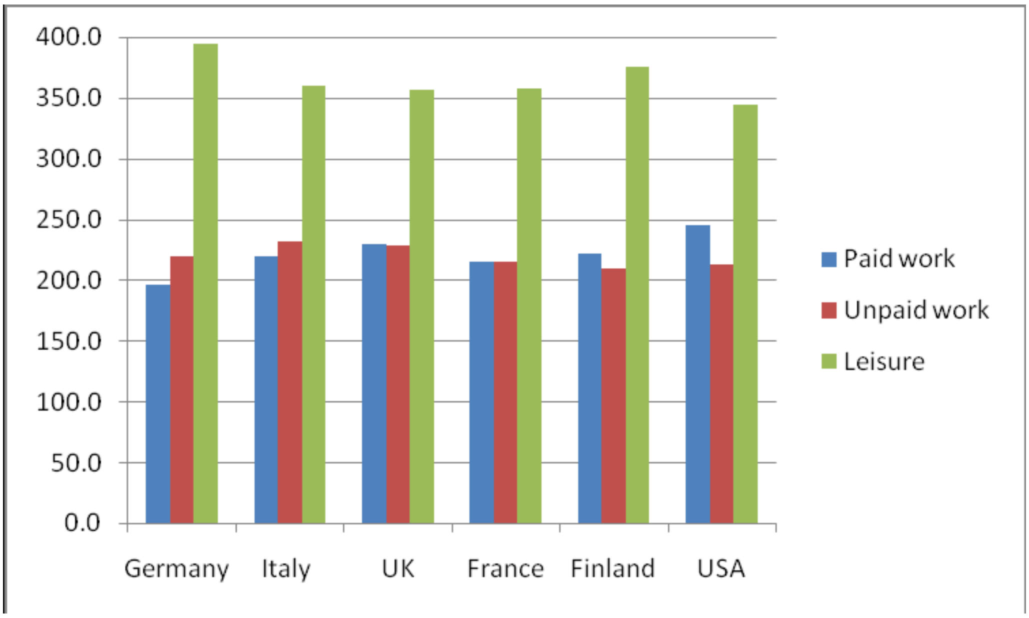
The ONS has considered this task and elaborated some experimental household satellite accounts (HHSA).[14] These accounts look at non-market production by households using the 'thirdparty' criterion first developed by Margaret Reid in the 1930s – if someone else could be paid to provide this service for you, then it should be measured. One possible method of valuation is the elaboration of satellite accounts. The satellite accounts have been elaborated to expand the analytical capacity of national accounting for selected areas of social concern. They are linked to the central framework of National Accounts but are also linked to the information system relevant to the field or topic to be analysed.[15]

In the case of the HSSA, the last step is indeed to compare its results with GDP in the National Accounts. It could be done by subtracting from GDP the amounts which are implicitly or explicitly included in the HHSA – imputed rent of owner occupiers, tenant rents which are inputs to household production, and any other Household Final Consumption Expenditure which we have reclassified as intermediate consumption or final consumption. This adjusted GDP becomes Gross Market Product, and can be added to Gross Household Product – the value added by households as calculated in the HHSA – to give Gross Economic Product.[16]

As noted by Duncan Ironmonger,[17] measuring and valuing unpaid work is part of a process of "making visible about one half of all valuable economic activity" which until here had no "value" and was hence unworthy of consideration. Surveys of the uses of time provide a relevant illustration of the size of the household unpaid work, as shown in Figure 3.

Figure 3. Housework, paid work and leisure

Minutes per day and person, latest year available*



Note: Using normalised series for personal care; Unites States: 2005, Finland 1998, France 1999, Germany 2002, Italy 2003, United Kingdom 2001.

Source: OECD (2009), *Growing Unequal? Income Distribution and Poverty in OECD Countries*; Paris.

As recognised by Jackson (*Prosperity without Growth*, 2010, p.155), a key point in measuring unpaid work is the better recognition for those engaged in child-care, care for the elderly or the disabled and volunteer work. It would shift the balance of incentives away from competition and materialistic outcomes achieved through the market, and towards a more cooperative society that has its seeds in non-market activities. These non-market activities include the household unpaid work but are not restricted to them. Indeed, a similar lack of recognition is valid for what is commonly called the third sector.

Generally speaking, the concept of third sector is able to encapsulate this "sphere of economic activities that occupied the space between the point where the private sector ends and the point where the state sector begins".[18] The United Nations (UN) describes this sector as made up of organisations that are neither market firms nor state agencies nor part of the household sector. *Such social institutions are variously referred to as "non-profit", "voluntary", "civil society" or "non-governmental" organizations and collectively as the "third", "voluntary", "non-profit" or "independent" sector.*[19]

Such non-profit institutions are currently covered by the System of National Account (SNA). However, SNA does not group them into a single economic sector, underestimates their non-market production and does not cover the voluntary work.[20] These limits have been remedied through the *Handbook on Non-Profit Institutions in the System of National Accounts* developed by the UN in order to gain a clearer overview of the broader Non-Profit Institutions (NPIs) sector.

Finally, the common purpose in measuring the household and the non-profit institutions sector is a better valuation of a significant and growing economic force. However, these forces have distinct features from the market economy. These include notably their non-profit character, the employment of people on a voluntary basis, the provision of public-goods that are labour intensive. These features justify treating them as a separate sector.

As highlighted by Jackson, this formal recognition is the first step of a move from a time-poor, materialistic, supermarket economy to an economy that employs people in ways that contribute meaningfully to community and human flourishing.[21] Therefore, the method of valuation of this specific sector is crucial.

As mentioned above, the satellite accounts, both recommended by the SC and the UN Handbook, provide a solution to a better recognition. However, their methodology implies the conversion of the measured output of the specific sector in monetary terms in order to allow a comparison with the National Accounts, namely the GDP. If conversion of time in monetary terms is emphasised, then the focus tends to be on materialistic outcomes and income. It therefore overshadows the direct contribution to well-being that procures such kind of activity. And as mentioned by the UN Handbook, '*Ideally, we want to know what non-profit organizations contribute to the health, education, welfare, sense of satisfaction and general wellbeing of the population.*' It underlines that attention should be paid to the method of valuation of such specific sectors as it involves normative choices.

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