

Report by the Commission on the Measurement of Economic Performance and Social Progress

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What are the main messages and recommendations?

- 17) The report distinguishes between an assessment of *current well-being* and an assessment of *sustainability*, whether this can last over time. Current well-being has to do with both economic resources, such as income, and with non-economic aspects of peoples' life (what they do and what they can do, how they feel, and the natural environment they live in). Whether these levels of well-being can be sustained over time depends on whether stocks of capital that matter for our lives (natural, physical, human, social) are passed on to future generations.

To organise its work, the Commission organized itself into three working groups, focusing respectively on: Classical GDP issues, Quality of life and Sustainability. The following main messages and recommendations arise from the report

Towards better measures of economic performance in a complex economy

- 18) Before going beyond GDP and tackling the more difficult task of measuring well-being, it is worth asking where existing measures of economic performance need improving. Measuring production – a variable which among other things determines the level of employment – is essential for the monitoring of economic activity. The first main message of our report is that time has come to adapt our system of measurement of economic activity to better reflect the structural changes which have characterized the evolution of modern economies. In effect, the growing share of services and the production of increasingly complex products make the measurement of output and economic performance more difficult than in the past. There are now many products whose quality is complex, multi-dimensional and subject to rapid change. This is obvious for goods, like cars, computers, washing machines and the like, but is even truer for services, such as medical services, educational services, information and communication technologies, research activities and financial services. In some countries and some sectors, increasing “output” is more a matter of an increase in the quality of goods produced and consumed than in the quantity. Capturing quality change is a tremendous challenge, yet this is vital to measuring real income and real consumption, some of the key determinants of people's material well-being. Under-estimating quality improvements is equivalent to over-estimating the rate of inflation, and therefore to under-estimating real income. The opposite is true when quality improvements are over-stated.
- 19) Governments play an important part in today's economies. They provide services of a “collective” nature, such as security, and of a more “individual” nature, such as medical services and education. The mix between private and public provision of individual services varies significantly across countries and over time. Beyond the contribution of collective services to citizens' living standards, individual services, particularly education, medical services, public housing or public sports facilities, are almost certainly valued positively by citizens. These services tend to be large in scale, and have increased considerably since World War II, but, in many cases, they remain badly measured. Traditionally, measures have been based on the inputs used to produce these services (such as the number of doctors) rather than on the actual outputs produced (such as the number of particular medical treatments). Making adjustments for quality changes is even more difficult. Because outputs are taken to move in tandem with inputs

productivity change in the provision of these services is ignored. It follows that if there is positive (negative) productivity change in the public sector, our measures under (over)-estimate economic growth and real income. For a satisfactory measure of economic performance and living standards it is thus important to come to grips with measuring government output. (In our present, admittedly flawed, system of measurement based on expenditures, government output represents around 20% of GDP in many OECD countries and total government expenditure more than 40% for the OECD countries.)

- 20) While there are methodological disagreements about how to make the adjustments to quality or how to go about measuring government output, there is a broad consensus that adjustments should be made, and even about the principles which should guide such adjustments. The disagreements arise in the practical implementation of these principles. The Commission has addressed both the principles and the difficulties in implementations, in its Report.

From production to well-being

- 21) Another key message, and unifying theme of the report, is that the time is ripe for our measurement system to *shift emphasis from measuring economic production to measuring people's well-being*. And measures of well-being should be put in a context of sustainability. Despite deficiencies in our measures of production, we know much more about them than about well-being. Changing emphasis does not mean dismissing GDP and production measures. They emerged from concerns about market production and employment; they continue to provide answers to many important questions such as monitoring economic activity. But emphasising well-being is important because there appears to be an increasing gap between the information contained in aggregate GDP data and what counts for common people's well-being. This means working towards the development of a statistical system that complements measures of market activity by measures centred on people's well-being and by measures that capture sustainability. Such a system must, of necessity, be plural – because no single measure can summarize something as complex as the well-being of the members of society, our system of measurement must encompass a range of different measures. The issue of aggregation across dimensions (that is to say, how we add up, for example, a measure of health with a measure of consumption of conventional goods), while important, is subordinate to the establishment of a broad statistical system that captures as many of the relevant dimensions as possible. Such a system should not just measure *average* levels of well-being within a given community, and how they change over time, but also document the diversity of peoples' experiences and the linkages across various dimensions of people's life. There are several dimensions to well-being but a good place to start is the measurement of material well-being or living standards.

Recommendation 1: When evaluating material well-being, look at income and consumption rather than production

- 22) GDP is the most widely-used measure of economic activity. There are international standards for its calculation, and much thought has gone into its statistical and conceptual bases. Earlier paragraphs have emphasized some of the important areas where more progress is needed in its computation. As statisticians and economists know very well, GDP mainly measures market production – expressed in money units – and as such it is

useful. However, it has often been treated as if it were a measure of economic well-being. Conflating the two can lead to misleading indications about how well-off people are and entail the wrong policy decisions. Material living standards are more closely associated with measures of net national income, real household 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.

Recommendation 2: Emphasise the household perspective

- 23) While it is informative to track the performance of economies as a whole, trends in citizens' material living standards are better followed through measures of household income and consumption. Indeed, the available national accounts data shows that in a number of OECD countries real household income has grown quite differently from real GDP per capita, and typically at a lower rate. The household perspective entails taking account of payments between sectors, such as taxes going to government, social benefits coming from government, and interest payments on household loans going to financial corporations. Properly defined, household income and consumption should also reflect in-kind services provided by government, such as subsidized health care and educational services. A major effort of statistical reconciliation will also be required to understand why certain measures such as household income can move differently depending on the underlying statistical source.

Recommendation 3: Consider income and consumption jointly with wealth

- 24) Income and consumption are crucial for assessing living standards, but in the end they can only be gauged in conjunction with information on wealth. A household that spends its wealth on consumption goods increases its current well-being but at the expense of its future well-being. The consequences of such behavior would be captured in a household's balance sheet, and the same holds for other sectors of the economy, and for the economy as a whole. To construct balance sheets, we need comprehensive accounts of assets and liabilities. Balance sheets for countries are not novel in concept, but their availability is still limited and their construction should be promoted. Measures of wealth are central to measuring sustainability. What is carried over into the future necessarily has to be expressed as stocks – of physical, natural, human and social capital. The right valuation of these stocks plays a crucial role, and is often problematic. There is also a need to “stress test” balance sheets with alternative valuations when market prices for assets are not available or are subject to bubbles and bursts. Some more direct non-monetary indicators may be preferable when the monetary valuation is very uncertain or difficult to derive.

Recommendation 4: Give more prominence to the distribution of income, consumption and wealth

- 25) Average income, consumption and wealth are meaningful statistics, but they do not tell the whole story about living standards. For example, a rise in average income could be unequally shared across groups, leaving some households relatively worse-off than others. Thus, average measures of income, consumption and wealth should be accompanied by indicators that reflect their distribution. Median consumption (income,

wealth) provides a better measure of what is happening to the “typical” individual or household than average consumption (income or wealth). But for many purposes, it is also important to know what is happening at the bottom of the income/wealth distribution (captured in poverty statistics), or at the top. Ideally, such information should not come in isolation but be linked, i.e. one would like information about how well-off households are with regard to different dimensions of material living standards: income, consumption and wealth. After all, a low-income household with above-average wealth is not necessarily worse-off than a medium-income household with no wealth. (The desirability of providing information on the “joint distribution” of the dimensions of people’s well-being will be raised once again in the recommendations below on how to measure quality of life.)

Recommendation 5: Broaden income measures to non-market activities

- 26) There have been major changes in how households and society function. For example, many of the services people received from other family members in the past are now purchased on the market. This shift translates into a rise in income as measured in the national accounts and may give a false impression of a change in living standards, while it merely reflects a shift from non-market to market provision of services. Many services that households produce for themselves are not recognized in official income and production measures, yet they constitute an important aspect of economic activity. While their exclusion from official measures reflects uncertainty about data more than conceptual difficulties, there has been progress in this arena; still, more and more systematic work in this area should be undertaken. This should start with information on how people spend their time that is comparable both over the years and across countries. Comprehensive and periodic accounts of household activity as satellites to the core national accounts should complement the picture. In developing countries, the production of goods (for instance food or shelter) by households plays an important role. Tracking the production of such home-produced goods is important to assess consumption levels of households in these countries.
- 27) Once one starts focusing on non-market activities, the question of leisure arises. Consuming the same bundle of goods and services but working for 1500 hours a year instead of 2000 hours a year implies an increase in one’s standard of living. Although valuation of leisure is fraught with difficulties, comparisons of living standards over time or across countries needs to take into account the amount of leisure that people enjoy.

Well-being is multi-dimensional

- 28) To define what well-being means a multidimensional definition has to be used. Based on academic research and a number of concrete initiatives developed around the world, the Commission has identified the following key dimension that should be taken into account. At least in principle, these dimensions should be considered simultaneously:
- i. Material living standards (income, consumption and wealth);
 - ii. Health;
 - iii. Education;
 - iv. Personal activities including work
 - v. Political voice and governance;

- vi. Social connections and relationships;
- vii. Environment (present and future conditions);
- viii. Insecurity, of an economic as well as a physical nature.

All these dimensions shape people's well-being, and yet many of them are missed by conventional income measures.

Objective and subjective dimensions of well-being are both important

Recommendation 6: Quality of life depends on people's objective conditions and capabilities. Steps should be taken to improve measures of people's health, education, personal activities and environmental conditions. In particular, substantial effort should be devoted to developing and implementing robust, reliable measures of social connections, political voice, and insecurity that can be shown to predict life satisfaction.

- 29) The information relevant to valuing quality of life goes beyond people's self-reports and perceptions to include measures of their "functionings" and freedoms. In effect, what really matters are the capabilities of people, that is, the extent of their opportunity set and of their freedom to choose among this set, the life they value. The choice of relevant functionings and capabilities for any quality of life measure is a value judgment, rather than a technical exercise. But while the precise list of the features affecting quality of life inevitably rests on value judgments, there is a consensus that quality of life depends on people's health and education, their everyday activities (which include the right to a decent job and housing), their participation in the political process, the social and natural environment in which they live, and the factors shaping their personal and economic security. Measuring all these features requires both objective and subjective data. The challenge in all these fields is to improve upon what has already been achieved, to identify gaps in available information, and to invest in statistical capacity in areas (such as time-use) where available indicators remain deficient.

Recommendation 7: Quality-of-life indicators in all the dimensions covered should assess inequalities in a comprehensive way

- 30) Inequalities in human conditions are integral to any assessment of quality of life across countries and the way that it is developing over time. Most dimensions of quality-of-life require appropriate separate measures of inequality, but, as noted in par. 25, taking into account linkages and correlations. Inequalities in quality of life should be assessed across people, socio-economic groups, gender and generations, with special attention to inequalities that have arisen more recently, such as those linked to immigration.

Recommendation 8: Surveys should be designed to assess the links between various quality-of-life domains for each person, and this information should be used when designing policies in various fields

- 31) It is critical to address questions about how developments in one domain of quality of life affect other domains, and how developments in all the various fields are related to income. This is important because the consequences for quality of life of having multiple disadvantages far exceed the sum of their individual effects. Developing measures of

these cumulative effects requires information on the “joint distribution” of the most salient features of quality of life across everyone in a country through dedicated surveys. Steps in this direction could also be taken by including in all surveys some standard questions that allow classifying respondents based on a limited set of characteristics. When designing policies in specific fields, impacts on indicators pertaining to different quality-of-life dimensions should be considered jointly, to address the interactions between dimensions and the needs of people who are disadvantaged in several domains

Recommendation 9: Statistical offices should provide the information needed to aggregate across quality-of-life dimensions, allowing the construction of different indexes.

- 32) While assessing quality-of-life requires a plurality of indicators, there are strong demands to develop a single summary measure. Several summary measures of quality of life are possible, depending on the question addressed and the approach taken. Some of these measures are already being used, such as average levels of life-satisfaction for a country as a whole, or composite indices that aggregate averages across objective domains, such as the Human Development Index. Others could be implemented if national statistical systems made the necessary investment to provide the data required for their computation. These include measures of the proportion of one’s time in which the strongest reported feeling is a negative one, measures based on counting the occurrence and severity of various objective features of people’s lives, and (equivalent-income) measures based on people’s states and preferences.
- 33) The Commission believes that in addition to objective indicators of well-being, subjective measures of the quality-of-life should be considered.

Recommendation 10: Measures of both objective and subjective well-being provide key information about people’s quality of life. Statistical offices should incorporate questions to capture people’s life evaluations, hedonic experiences and priorities in their own survey.

- 34) Research has shown that it is possible to collect meaningful and reliable data on subjective as well as objective well-being. Subjective well-being encompasses different aspects (cognitive evaluations of one’s life, happiness, satisfaction, positive emotions such as joy and pride, and negative emotions such as pain and worry): each of them should be measured separately to derive a more comprehensive appreciation of people’s lives. Quantitative measures of these subjective aspects hold the promise of delivering not just a good measure of quality of life per se, but also a better understanding of its determinants, reaching beyond people’s income and material conditions. Despite the persistence of many unresolved issues, these subjective measures provide important information about quality of life. Because of this, the types of question that have proved their value within small-scale and unofficial surveys should be included in larger-scale surveys undertaken by official statistical offices.

Use a pragmatic approach towards measuring sustainability

- 35) Measuring and assessing sustainability has been a central concern of the Commission. Sustainability poses the challenge of determining if at least the current level of well-being can be maintained for future generations. By its very nature, sustainability involves the future and its assessment involves many assumptions and normative choices. This is

further complicated by the fact that at least some aspects of environmental sustainability (notably climate change) is affected by interactions between the socio-economic and environmental models followed by different countries. The issue is indeed complex, more complex than the already complicated issue of measuring current well-being or performance.

Recommendation 11: Sustainability assessment requires a well-identified dashboard of indicators. The distinctive feature of the components of this dashboard should be that they are interpretable as variations of some underlying “stocks”. A monetary index of sustainability has its place in such a dashboard but, under the current state of the art, it should remain essentially focused on economic aspects of sustainability.

- 36) The assessment of sustainability is complementary to the question of current well-being or economic performance, and must be examined separately. This may sound trivial and yet it deserves emphasis, because some existing approaches fail to adopt this principle, leading to potentially confusing messages. For instance, confusion may arise when one tries to combine current well-being and sustainability into a single indicator. To take an analogy, when driving a car, a meter that added up in one single number the current speed of the vehicle and the remaining level of gasoline would not be of any help to the driver. Both pieces of information are critical and need to be displayed in distinct, clearly visible areas of the dashboard.
- 37) At a minimum, in order to measure sustainability, what we need are indicators that inform us about the change in the quantities of the different factors that matter for future well-being. Put differently, sustainability requires the simultaneous preservation or increase in several “stocks”: quantities and qualities of natural resources, and of human, social and physical capital.
- 38) There are two versions to the stock approach to sustainability. One version just looks at variations in each stock separately, assessing whether the stock is increase or decreasing, with a view particularly to doing whatever is necessary to keep each above some critical threshold. The second version converts all these assets into a monetary equivalent, thereby implicitly assuming substitutability between different types of capital, so that a decrease in, say, natural capital might be offset by a sufficient increase in physical capital (appropriately weighted). Such an approach has significant potential, but also several limitations, the most important being the absence of many markets on which valuation of assets could be based. Even when there are market values, there is no guarantee that they adequately reflect how the different assets matter for future well-being. The monetary approach requires imputations and modelling which raise informational difficulties. All this suggests starting with a more modest approach, i.e. focusing the monetary aggregation on items for which reasonable valuation techniques exist, such as physical capital, human capital and certain natural resources. In so doing, it should be possible to assess the “economic” component of sustainability, that is, whether or not countries are over-consuming their economic wealth.

Physical indicators for environmental pressures

Recommendation 12: The environmental aspects of sustainability deserve a separate follow-up based on a well-chosen set of physical indicators. In particular there is a need for a clear

indicator of our proximity to dangerous levels of environmental damage (such as associated with climate change or the depletion of fishing stocks.)

39) For the reasons mentioned above, placing a monetary value on the natural environment is often difficult and separate sets of physical indicators will be needed to monitor the state of the environment. This is in particular the case when it comes to irreversible and/or discontinuous alterations to the environment. For that reason members of the Commission believe in particular that there is a need for a clear indicator of increases in atmospheric concentrations of greenhouse gases associated with proximity to dangerous levels of climate change (or levels of emissions that might reasonably be expected to lead to such concentrations in the future. Climate change (due to increases in atmospheric concentrations of greenhouse gases) is also special in that it constitutes a truly global issue that cannot be measured with regard to national boundaries. Physical indicators of this kind can only be identified with the help of the scientific community. Fortunately, a good deal of work has already been undertaken in this field.