Comments on the criticism regarding
the gross domestic product

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If we wish to compile good national accounts, three major requirements must be fulfilled:

First, we need good concepts, that is definitions, delimitations, classifications, etc.

Second, we need high-quality basic data, for example, reliable and complete statistics on turnover, production, investments, prices, employees, cost structures, earnings, consumption expenditure, assets, financing, and many other things.

Third, we need staff, material and financial resources, which allow using adequate methods in performing the required calculations.

While the availability of high-quality basic data and of sufficient resources differs between countries, the concepts of national accounts are based on internationally agreed and applicable systems such as the (global) "System of National Accounts" (SNA) or – in Europe – the "European System of Accounts" (ESA), which has been derived from the SNA and is legally binding for the EU states.

The concepts should meet three major requirements.
First, the concepts must be well founded in terms of theory.
Second, they must be feasible, which means in particular that sufficient and suitable basic data are available to which the concepts can be applied in order to produce results.
Third, the results must be easy to understand and interpret. The producers of statistics must be able to explain their results not only formally but also in terms of content.

The national accounting concepts of the SNA and the ESA have been defined mainly on the basis of considerations in terms of economic theory (theory of the economic cycle) and wishes in terms of economic policy. One of the economic-policy wishes is that the values of the gross domestic product (GDP) and of capital formation should be as high as possible because, in most countries, this allows higher government debt (in many countries the upper limit of government debt is fixed as a percentage of GDP or in relation to capital formation) and because a high absolute figure and high growth rates of the GDP are considered as evidence of the performance and success of economic policy. Another example is the introduction of the so-called "hedonic price measurement", whose main purpose was to generate high growth rates and low rates of price increase.

Issues of practical feasibility of the concepts hardly played any role at all in the past when the concepts were set up. Consequently, in everyday practice, many data can actually be obtained only by applying very rough estimations or model calculations, so that their information value must be considered as more than questionable. Examples are intangible investments (software, research and development, etc.), accrual accounting, fictitious profits and losses, natural forest growth, standing crop, illegal activities, etc.
Examples of results (and concepts) that are difficult to understand are FISIM and specific price trends in non-market production or for banks and insurances. The main reason is the fact that the calculation at constant prices is based on models which are not coherent with the calculation at current prices. That incoherence has an impact on the trend of productivity and prices, so that the latter cannot be explained in terms of economics. This is more than unsatisfactory. In the cases mentioned here, the development of concepts has taken a wrong turn and should be corrected as soon as possible.

So, what is particularly questionable is the fact that a large, and growing, part of national accounting results are no longer based on empirical ex-post values – instead, they are produced by means of analytical models and, consequently, they have a hypothetical character themselves. This is true both for concept compliance, which is not supported empirically, and because of the demand that ever

more detailed results should be supplied ever more rapidly – results that are not based on data collected empirically but just on estimation models.

Both the figures produced by theoretical models and hypotheses are then used to perform model analyses. Consequently, in many cases, the results obtained can simply not be interpreted and are practically useless.

Therefore, whenever possible, official statistical institutes should do without hypotheses based on theoretical models when producing and processing their data. In particular, they should not use valuations which cannot be observed as such but have to be produced by means of model analyses. If, however, assumptions based on theoretical models are used for the production of official statistics, they must be explained in detail and in a comprehensible way. The hypotheses applied must be documented and, where possible, tested empirically. Good information on data quality is indispensable, so that users are not carelessly misled into overinterpreting the data.

Another serious shortcoming of the SNA and the ESA is that those systems are not consistently based on a one-dimensional goal (for example, either primarily representing market processes **or** showing economic prosperity); instead, they are committed to several goals. As an almost inevitable consequence, (rotten) compromises were made when defining the concepts. So, a logical structure of concepts has not been achieved.

This often leads to external criticism regarding national accounts. As national accounting concepts are just (bad) compromises without clear goals, many results cannot be more than second-best solutions. As a consequence, many users are somehow unhappy.

Therefore, results, concepts, definitions and delimitations of national accounts, especially those regarding the GDP, are often criticised.

One of the main points of criticism is the fact that the GDP is not suited to measure welfare and prosperity. Even though the contrary is often, and wrongly argued: The gross domestic product is not an indicator of welfare (or of prosperity) – and it has not been designed as such.

Instead, what the gross domestic product should be used for is
– monitoring the economic trend
– macroeconomic analysis
– supporting measures of economic policy
and
– international comparisons.

This is laid down in the "System of National Accounts" (SNA) 1993, which is the manual issued by the United Nations (UN) and developed jointly with the European Commission (EC), the Organisation for Economic Co-operation and Development (OECD), the International Monetary Fund (IMF) and the World Bank. In that manual, the definitions and conventions of national accounts are fixed; those concepts are legally binding for the countries of the European Communities. This is laid down in the Regulation on the European System of Accounts (ESA) and is complied with in practice. Apart from that rather general description of goals, national accounting textbooks often mention the following goals:

– measuring overall economic output
– measuring the income generated in production as well as its distribution and redistribution
– measuring the overall monetary demand
– measuring the formation of capital and its financing
– measuring the economic success of the sectors.

Today, it is undisputed that national accounting is not, and does not want to be a suitable tool for measuring prosperity. Nevertheless, in the general public, the GDP is often misused – knowingly or unknowingly – as an indicator of prosperity.

The maximum that can be covered and described by the GDP is not more than economic sub-aspects of a comprehensive prosperity concept (which would have to be defined in detail).

Many years ago, Robert Kennedy said that anything that makes life worthwhile cannot be measured by the gross domestic product; there is nothing to add to that statement. (Personal) happiness and progress depend on many factors; economic prosperity is just one of them – and probably not the most important one, but not the least important one either.

However, there will never be a generally accepted standard indicator of prosperity. The reason is simple: First, it would be necessary to develop and define – internationally and in consensus – what indicators should be included in that marvellous indicator of happiness, what weight they should have and whether they should have a plus or a minus sign; it is more than unlikely that agreement can be reached here.

The second, and much more serious reason is that – in contrast to measuring economic performance – there is no standard benchmark under which the various sub-indicators of prosperity could be combined (such as negative effects of environmental damage or positive assessment of more leisure time, etc.). So far, no-one has succeeded in creating such a benchmark and doing so will probably be even more difficult than inventing the "perpetual motion machine" or "squaring the circle", simply because personal benefit might possibly be measured in ordinal terms, but never in ratio terms.

Any prosperity indicator whatsoever will fail because there is no way of objective valuation. This is why national accounts should definitely abandon that goal. Measuring economic performance, however, is relatively easy in technical terms when using market prices because output is valued in currency units and can thus be added up.

The question of whether valuation at market prices is "correct", that is whether it correctly indicates the "true value", is certainly a matter of controversial discussion. However, (market) prices do allow aggregating the values observed – which is an immense advantage!

Because of that great advantage of consistent measurability, the GDP and its components – in particular final consumption of households – will continue to be indispensable and central aggregates in the economic, social and political discussion.
It is equally true that this indicator can be further improved, both in terms of concept and practical calculation.

A major improvement could directly be implemented by using the **net** domestic product, rather than the gross domestic product, as an indicator of economic performance.

The reason is simple:
As the gross domestic product includes consumption of fixed capital, the economic performance shown is always too high; in Germany by about 15%. Consumption of fixed capital (depreciation) is the value equivalent to the wear and tear and economic obsolescence of the capital stock (machinery, vehicles, buildings, etc.), which means that this value has been consumed and is not part of the new output created.

It is just tradition that the public interest focuses on the gross domestic product. This is because, in the past, consumption of fixed capital was not calculated by all countries, so that only the GDP was available. This has no longer been the case for a long time already, so that it is easily possible to change over to the NDP (net domestic product), which is the better indicator of economic performance. At the same time, when showing the overall economic income, the gross national income (GNI) – which in the past was called gross national product – would have to be replaced by the net national income (NNI) as a central aggregate, with stronger emphasis placed on the disposable income of households.

For international comparisons, it would also be helpful to consistently improve the comparability of the nominal domestic product figures (per capita) by using purchasing power parities. In addition, it is questionable that the entire final consumption of general government increases the domestic product, although a considerable part of government consumption in the macro-economic production process is consumed as intermediate consumption. So, in those cases, too, the domestic product involves double counting.

As there can be no "big solution" to the problem of creating an all-encompassing prosperity indicator, it would be more than desirable to achieve at least small improvements in the context of measuring the national economic performance. A consistent changeover from the gross domestic product to the net domestic product would be a first important and practical step towards achieving such improvements.

Summary:
This paper contains three major messages:
1. The concepts of national accounts should focus more strongly on practical feasibility; concepts whose implementation entirely or largely requires models should be abolished. National accounting data should mainly be based on statistics produced empirically.

2. National accounts will never be able to fulfil the function of a prosperity indicator, especially because the problem of valuation and selection of prosperity indicators cannot be solved.

3. It is nevertheless possible to improve national accounts. A first important step would be the consistent changeover from showing the gross domestic product to presenting the net domestic product.