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## **Paper UNECE seminar on the Role of NSO in the Production of Leading, Composite and Sentiment Indicators**

*Session no 3: "The role of NSO in compilation of Leading, Composite and Sentiment indicators"*

### **User's need of indicators for evidence based decision making.**

*Abstract: As the economic development changes a need for new indicators arises among users. Although the data may exist within the present statistics it is difficult to extract and use data from other perspectives. Therefore, users have developed new sets of indicators to form a broader spectrum of the economy. Such indicators set are Macroeconomic Imbalance Scorecard (MIP), Special Data Dissemination Standard (SDDS) and Indicators for Sustainable Development Goals( SDG). Demand for explanations and documentations for these indicators sets are now put forward to NSO:s. But, are these really the best indicators for follow?*

*NSO:s have a responsibility to look into new needs from users, and be more proactive regarding future user needs. Are there indicators within the present statistics that not yet in full use? The sector accounts in national accounts might be useful to follow household sector more closely? Can new indicators be found in available datasets? Employment might be a more stable indicator than the quota of unemployment. New population indicators, that give a better view of migration, might be found within the present data sets? Inflation might be put in new perspectives looking into the underlying data.*

*NSO have an important role in developing and presenting new indicators from the present statistics that better fulfill user's future needs. Variables from different surveys/registers might have to be coordinated to give a better perspective of a changing world. The new indicators should also be easy to understand, as timely as possible, transparent and stable over time. Revisions make noise in time series and should be avoided, if possible. By using primary data from accounting, surveys or registers the indicators can be made more stable. NSO:s should aim for stable data from start to be able to build a better base*



*for evidence based decision making for all users. The paper discussed how NSO can make more use of existent data from a user perspective.*

### **Background**

Statistics of today has evolved over time to meet various needs. Development between different statistical areas has not been coordinated. Statistics are often produced "bottom-up" and "stove-piped". Every separate survey is aimed to present an accurate measurement as possible, for the dataset that is contained. In the development of basic statistics, the focus has too often been set on the individual estimate and separate surveys, rather than consistent datasets and time-series.

From a user perspective, it is important to be able to coordinate different datasets through the use of long time series, also between different areas of statistics. This has been the aim of statistical frameworks such as National Accounts(NA) and Balance of Payments(BOP), although primary data have often needed to be adapted to be consistent within these frameworks.

At the same time as NA and BOP frameworks have many advantages they will also have drawbacks such as timeliness and a high complexity that make it difficult for less advanced users to get access to data. Even for advanced users analysis can be very time consuming.

In recent years, users, primarily the European Commission and the IMF have demanded that a number of indicators, based on National accounts and balance of Payments should be reported separately, as Scoreboard Indicators. This will make the most important indicators more visible and accessible for all kind of users, even less advanced users such as policy-makers and media.

The new Scoreboards demanded by the European Commission and the IMF include the so-called MIP indicators (Macroeconomic Balance Scoreboard), the SDDS indicators (Special Data Dissemination Standard). A new dataset will also be set up for the indicators for SDG (Sustainable Development Goals) set up by UN.

User's has been very clear that performance of existing statistical indicators can be improved. By pointing out certain "key indicators" and highlight these in a context, interpretation for user may be facilitated. Inventories including metadata and easily accessible time series should also be available for all data. This demand requires that any change in methods or calculations must also include a time series

revision, and methods must be developed to make this in an easy manner.

*Macroeconomic Imbalance Scoreboard (MIP); web-page link;*  
[http://ec.europa.eu/economy\\_finance/economic\\_governance/macroeconomic\\_imbalance\\_procedure/index\\_en.htm](http://ec.europa.eu/economy_finance/economic_governance/macroeconomic_imbalance_procedure/index_en.htm)

*Special Data Dissemination Standard (SDDS); web-page link;*  
<http://dsbb.imf.org/Pages/SDDS/InterInvPos.aspx>

### *Understanding user needs*

In a globalized world complexity increases also for statistics. Comparability between different statistical areas and across countries is of growing importance. Analysts that previously followed the developments on a national arena now also have to take international developments into account. The GDP as a measure is blurred by production that is moved abroad and new data for “merchanting” and “goods for processing”. An increasing interest in employment data has shown to be a result of a weaker national profile in production, as employment is bound to be within the national borders.

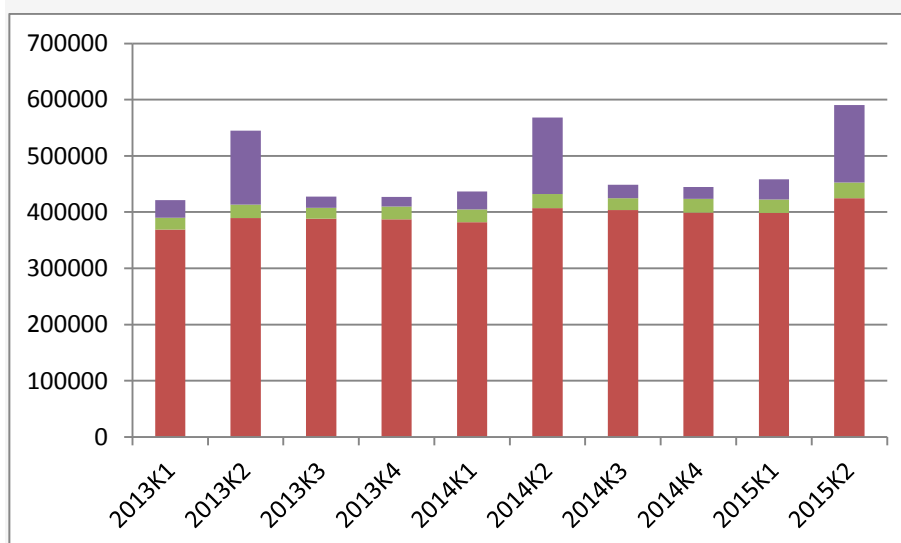
The connection between production and employment is growing in importance as productivity data is even more demanded. One problem in this context is that the data of social statistics and macroeconomic data are mixed, as the employment/LFS –data has a base in social statistics and production/IPI-data is measured from an enterprise level. Different base populations for the data underlying productivity will create an inconsistency that has to be handled. From a user point of view further harmonization of statistical data are needed to create comparability and consistency between areas, both from social and macroeconomic statistics.

The production side of national accounts is being blurred, as many companies operate globally and are difficult to measure. This is a growing issue, mainly for smaller countries with many multinationals.

From a user perspective, the focus is set on household consumption, which is the most important part of growth in national accounts. Demand for better quality of household data has increased, as the primary source; the Household Budget Survey (HBS) has a low response rate in many countries. Big data and registers may be able to present better primary data for this sector.

The household sector may be analyzed using the sector accounts, now published for over 10 years. Until now users has been reluctant to use these data, as it is complex to understand. Apart from disposable income and household savings no further analysis is made by most analysts. This may be one part of national accounts that should be further elaborated to find new indicators. The graph below shows a matter that has been a user request.

*Household sector; Disposable income from different sources, mn SEK, current prices, 2013-2015*



*Explanations to graph above; Red= Wages, Green= Enterprise income  
Violet=Capital income*

Users have little time to analyze data as fewer resources are put into research and analysis today, due to efficiency constraints within many sectors, e.g. media and banking.

As a consequence, demand for well-prepared data and analysis has risen – What to the data tell? – What can it be used for? Ready-made analysis and data-sets are demanded – as well as easy-interpreted indicators that can be followed on a current basis.

### ***Demand for new indicators***

Overall, the complexity of society makes it more difficult to understand statistical indicators while resources for analysis of data have declined among users.

This put further stress on NSO:s to publish statistics in such a way that the data are easy to analyze and that interpretation cannot be misunderstood.

One way to do this is to extract a number of indicators that

- 1) are easy to understand and illustrate
- 2) are comparable with each other and over time, and
- 3) are based on the statistical frameworks that exist and are of an adequate quality under the Code of Practice.

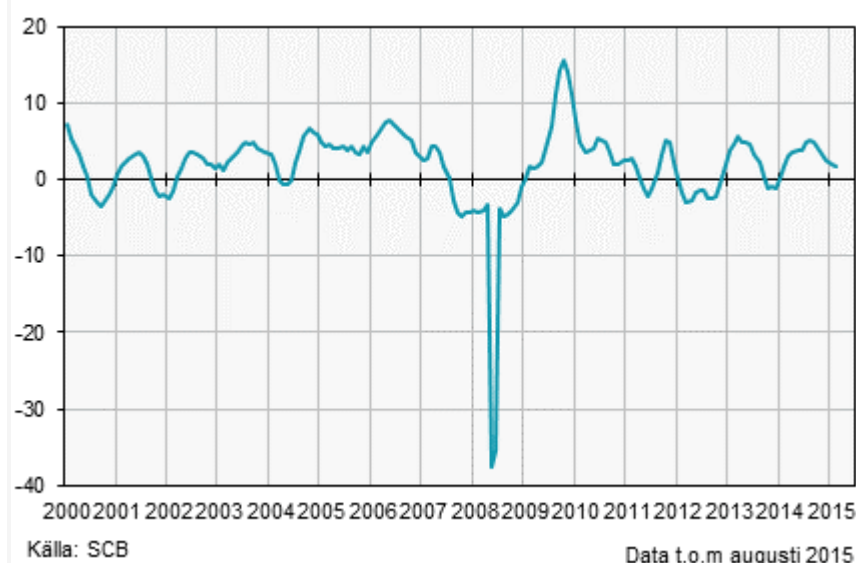
The MIP:s and SDDS:s are all indicators of a main interests internationally and nationally. They will be published and documented and will offer a new perspective of statistics – were the indicators as such are the main data. Time series and metadata will be supplied as well as part of this package.

Apart from the internationally demanded indicators there is a need for new indicators to help user interpretation of the development.

#### *Examples of new national indicators in Sweden*

One example is the production indicator (IPI) which don't cover service production. As production in Sweden now consists of as much services as goods new indicators are needed. In Sweden a new Production Indicator (PIN) was presented a few years ago. This indicator is based on data from the indices for industrial production (IPI), construction (BI) and service production (TJPI) and based on a model of the value added in national accounts. It usually has a good prediction of the national account quarterly production estimate.

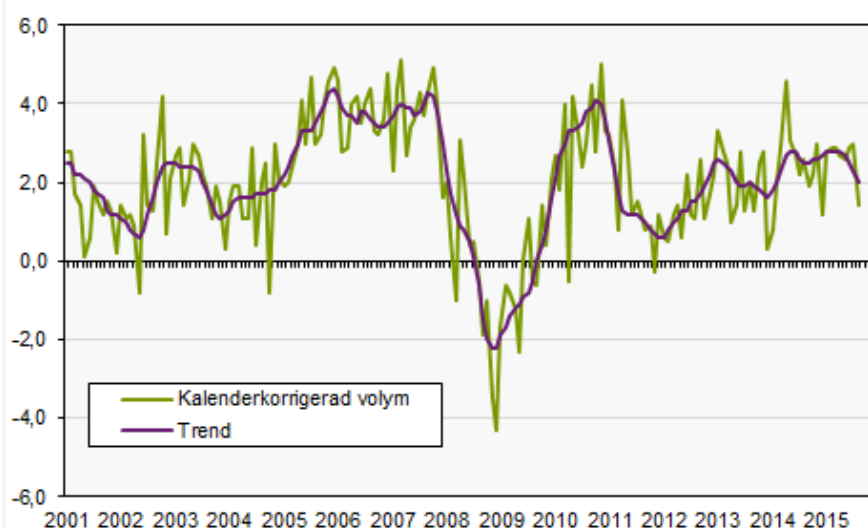
*Graph 2 : The monthly Swedish PIN-indicator, percentage change 200-2015*



Source: SCB, Statistics Sweden

To be able to follow the household development a new indicator has been developed- Monthly indicator of Household Consumption ( HKI), which is a mirror of household consumption in GDP . This is still an experimental indicator but publication is done on a monthly basis as a user demand. The underlying data for the HKI-indicator are from several sources, where retail trade is the largest part. The HKI-indicator has been developed in cooperation with the central bank as this kind of indicator was a high priority for many forecasters.

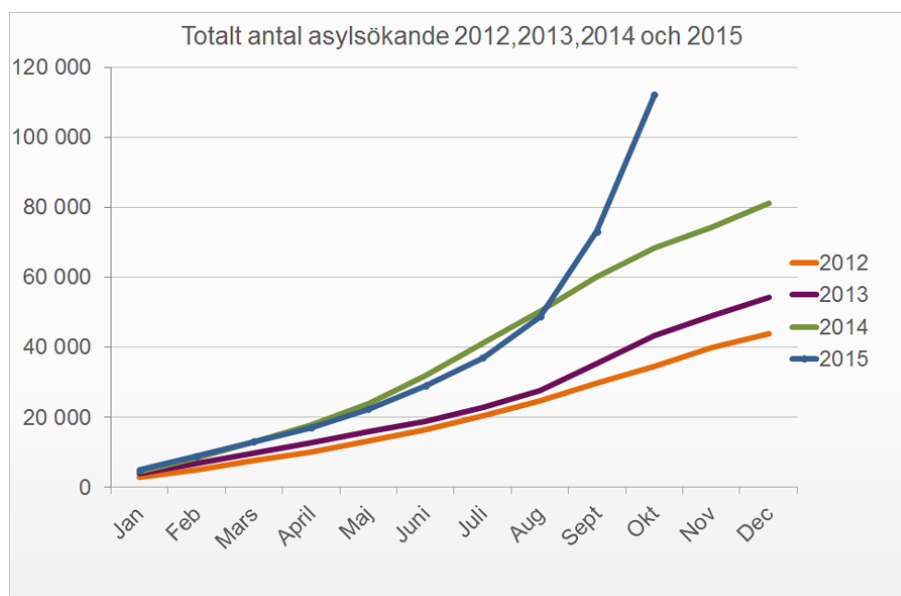
Graph 3 : The monthly Swedish Household consumption indicator, percentage change, 2001-2015



Source: SCB, Statistics Sweden

Big data and registers will provide opportunities to develop new timely indicators for such areas as prices or household consumption. This area must be of high interest for NSO:s as competition will otherwise be harsh. One example of new timely indicators are "migration in real time". The graph below show monthly figures for migration to Sweden but on the web-site [www.migrationsverket.se](http://www.migrationsverket.se), there are also daily values on immigration available.

Graph 4: Swedish immigration in real time, monthly values



Source: Immigration authority Sweden

### Conclusions;

In a constantly changing world the need for statistical information increases and availability and instant access to data are essential. Statistics must be of high quality, timely, easy to understand, comparable and consistent. Flexibility must also be high to be able to take in new user needs.

Simple timely indicators may be of high importance, such as the monthly production indicator (PIN) or the monthly household indicator (HKI), which both are modeled for GDP forecasting use.

Other indicator information can be obtained at the source immigration data on a daily basis.

It is possible to find useful indicators within the present statistical frameworks such as national accounts and balance of payments. On example may be data from sector accounts. The challenge will be to

present statistical information that is accurate, relevant, timely, comparable and consistent to form a base for evidence based policy making.