SEMINAR ON TIMELINESS, METHODOLOGY AND COMPARABILITY OF RAPID ESTIMATES OF ECONOMIC TRENDS

Session 4: Extrapolation, modelling, econometric and sampling techniques used in preparation of rapid estimates
Discussant: Geert Bruinooge

SHEET 1 and 2

Thank you, Pieter,

Dear Colleagues,

I consider it an honor to act as a discussant at this session of the Seminar on Timeliness, Methodology and Comparability of Rapid Estimates of Economic Trends. But I must say that it is not an easy task to comment on the wide ranging papers of this session on Extrapolation, modelling, econometric and sampling techniques used in preparation of rapid estimates. I like to thank my colleague Kees Zeelenberg, chief statistical officer of Statistics Netherlands, for his assistance in preparing these comments. Our comments are from the perspective of a National Statistical Institute and that may have colored our views a bit.

SHEET 3
Most of us are professional statisticians and we know that we are expected to deliver statistics on time and with a high level of quality. This is gracefully formulated in “Understanding National Account”, a book from the OECD, which I really like to recommend to all statisticians in NSI’s others who have to work with National Accounts.
But what is a high degree of reliability with satisfactory rapidity? In Statistics Netherlands this is translated in the 1 on 1 norm. This means results of monthly statistics have to be published in the month following the reference month. For example the flash CPI is published in the first full week of the next month. The definite CPI is published the next month, but in almost cases it is equal to the flash.
The flash estimate of quarterly economic growth must be published at t+45 and reliability is translated in a difference between flash and final estimate of less than 0.75 percentage points.
Our clients were quite satisfied with this approach.

SHEET 4

But life has changed since the abrupt start of the financial crisis. And I understand that. When you are buying banks, pumping billions in the insurance sector and the automotive branch and trying to stimulate the economy in various other ways, you want to know that you are doing the right things and you want to know it quickly.
So the demands of our important clients like governments, central banks have changed overnight and those demands are not completely clear yet. How are we going to cope? We don't know yet.
And not only the demands of our major clients have changed; also our relation with the government has come under a different pressure. The acquisition of commercial banks by the Dutch government has been carried out in a rapid and secret action. Parliament understands this, but it wants a validation of the prices paid. Statistics Netherlands has to carry such a validation in its regular program. You will understand that this gives some additional tension.

SHEET 5

The papers in the session vary widely in scope and topics. I like to compliment the authors with their products, which they must have completed in a short time.
In the papers of this session very different approaches are described to cope with the demand for rapid estimates.
We have distinguished 5 groups of approaches:

1. Rapid indicators of monthly GDP
2. Economic models for predicting main economic variables
3. Surveys
4. Composite indicators for measuring the business cycle
5. Separate indicators for parts of the economy

I will pay attention to each of them.

SHEET 6

Rapid estimates of monthly GDP. I like to stress **rapid estimates** or **rapid indicatoirs** of monthly GDP.

Several papers describe the practice of compiling rapid estimates of monthly economic growth.

- In my opinion this is definitely what NSI's should pursue in the first place, since it uses *well established statistical methods and frameworks*. In quite a lot of countries the methods have been used for a very long time in compiling quarterly and annual NA data, and in the case of Canada, for over 40 years in compiling monthly GDP. The frameworks are those of the NA, which are devised to measuring the economy in a consistent way. These methods and frameworks are also adapted to each other, which allows for example to increase the timeliness of statistics.
- The papers by Statistics Canada and Peru as well as the background document of Statistics Canada show the thoroughness with which these monthly GDP estimates can be and are produced. I think this very impressive and this certainly deserves a follow up!
- In this case of monthly rapid estimates of GDP new rapid estimates should in particular focus on parts of the economy that are as yet not very well represented in the sources of monthly GDP.
- International cooperation should provide a common methodology and framework for monthly GDP, starting with a catalogue of present methods and culminating in an international Handbook of Monthly NA. By this it will be possible to achieve international comparability.
- From the discussion earlier today it became clear that a policy for revisions should be formulated, not only for estimates of monthly GDP but also for quarterly and annual estimates.

SHEET 7
Econometric models for predicting main economic variables

In several papers economic models are described for forecasting the values of main economic variables.

In my opinion this approach is one with serious risks for NSI's. One should be very careful in mixing producing statistics and in making forecasts.

- Forecasts will necessarily prove wrong at some point in the future for three reasons:
    - The exogenous data used as predictors may contain errors:
        i. when they are preliminary estimates themselves,
        ii. when they are obtained by sampling
        iii. when they contain non-sampling errors (coverage errors, response errors, etc)

This may also true for traditional statistics, but their effects in modelling may be very serious.

- The model itself is subject to error: we can never be certain that we have found the true model and even if we have found the true model, the estimates of its parameters may still contain estimation errors (standard errors)
- The first reason is also valid for producing traditional statistics.
- The following, third reason is the most important. Any model will break down in the future because of a structural break in the economic time series that underlie it.
    i. The present economic crisis is one example of such a structural break.
    ii. Another reason for structural breaks is that the model parameters are not policy invariant: when economic agents learn that policy makers follow a certain model in making policy decisions, they will adapt their behavior and the model of the economy in which they act will change.

- This shows up in the empirical evidence of professional forecast models. Almost never do they any better than naïve forecasts
- Public trust in official statistics is an essential element in a democratic society. This should not be jeopardized by using forecasts as this may damage the reputation of NSI's by diminishing confidence in their regular statistical estimates.
- NSI's should refrain from making model forecasts in preparing statistical data. They may use models for improving sampling estimates ('now casts') but should not go further and use models for making true forecasts, i.e. estimates which rely solely or mainly on data from previous periods.
- So, *this is in our opinion not the way to go*, not in general and particularly not for rapid estimates. NSI's should stick to their core business: compiling reliable and timely statistics.
- Furthermore there are a lot of professional forecasters. In the Netherlands forecasts are made by the Central Planning Office of the Ministry Of Economic Affairs, by the Dutch Central Bank and by several commercial banks. In our opinion NSI's should not join this competition. In the case of the Netherlands economic forecasting is explicitly excluded from our official program.
- From the discussions yesterday and today it became clear that there is a lot of confusion about the definitions of flash indicators,

forecasts, now casts, modelling and so. To avoid this confusion in future, I would like to suggest that in the very near future clear definitions of each of these concepts should be produced. Then we know what we are talking about.

SHEET 8
Surveys

- Surveys can be very useful as they reflect the present situation of the economy and with special care also the very near future.
- However, representative surveys with low enough sampling variability may have too high a cost and take too much time to produce. Furthermore in many countries the response burden has become a serious issue and large sample surveys by NSI's in the business world are discouraged.
- In fact, in many countries NSI's are legally or otherwise compelled to use data from administrations and registers. In particular tax data, e.g. VAT and wage tax, are levied on a monthly basis and are thus probably the best source for timely, economy-wide estimates of turnover and wages. In quite a few countries with extensive use of tax data reliable and rapid indicators were produced.
  To help the business world the VAT regime has recently been changed and a large umber of business changed over from monthly reporting to quarterly reporting. In these cases the VAT-administration dries up as a source for rapid indicators and a return to surveys was necessary. Some countries were compelled to return to surveys.
- In the discussions today some special problems linked to surveys were mentioned. Problems like selective sampling, selective non-response, EU-sampling. As long as the design of the survey is based on sound methodology than there are proven statistical techniques to deal with these problems.
- In the discussion the advantages of internet surveys, quick and cheap, were mentioned. A word of warning: internet surveys must have a sound base. A internet survey on the sentiments of the business world or consumers on a voluntary basis with a sound sample design may lead to completely wrong result. The 21 minutes survey is an example of such an irresponsible approach.

SHEET 9
Composite indicators
In several papers existing composite indicators are described or proposals for new ones are voiced.

- In our opinion composite indicators are the second area on which NSI's should focus. They allow presenting all ready available statistical data in a consistent and coherent way.
- Note that composite indicators are already well established in other areas of statistics such as the UN Human Development Indicator (HDI) and the measurement of subjective well-being.
- Composite indicators for measuring the business cycle should consist of coincident, leading and lagging indicators and thereby provide a systematic and coherent view of the business cycle.
- By presenting both the composite and the separate indicators one gets a glance of the business cycle of the whole economy as well as the various areas within the economy.

SHEET 10
Separate indicators for parts of economy

In a lot of papers rapid separate indicators were presented. These indicators are suggested to get a quick impression of key areas of the economy.

- There is room for several separate indicators, which should focus on parts of the economy that are relevant and useful for the economic situation in a particular country.
- It is hardly possible to give a general list of indicators, since this depends on the particular economic structure of a country.
- Dissemination should be possible within one month after the end of the month to which the data apply ("one-on-one norm")
- For the Netherlands we are researching the following indicators:
    - Volume of business measured by electronic payment transactions and ATM-cash withdrawals:
        - there is one national clearance center, so rapid measurement should be possible
    - Volume of trade in the port of Rotterdam:
        - There is one major intermediary

    - Imports of specific consumer goods for which there is only one importing agent
    - Number of workers employed by employment agencies
- The selection of the variables should be made carefully, and should be based on sharp criteria
- Some points should be explicitly discussed. What are the conditions to use data from commercial agents? Do we pay for these data?

SHEET 11
Concluding remarks

- Different approaches.
  In the papers we found very different approaches. Some of them very promising, others are very specific for a particular country or for a particular problem. We consider two approaches as very promising and which deserve a serious international follow-up.
    - The development of rapid indicators of monthly GDP. When this development is internationally coordinated it may lead to comparable results. An international handbook in line with the NSA framework is recommended.
    - The development of composite indicators. The composite indicators should be linked to the specific characteristics of the economy of a country. This may hamper the international comparability. But if the indicator gives a true picture of the economic cycle in the specific country it may not be a serious problem.

  We don't consider the development of economic models for forecasting main economic variables a suitable approach for NSI's. In our opinion NSI's should stick to their core business: the production of reliable and timely statistics and they should leave forecasting to the professional forecasters.

- It is clear that a lot of work is to be done. First there should be wide support for a common approach, and than the way forward should be such that in the end comparable results are obtained. We should keep in mind that we don't have much time.

- The proof eating is in the eating. All new developed rapid indicators should be tested on their performance in the (recent) past and monitored on their performance in the future. The set of rapid indicators should be flexible. New one may be added to the set due to changing conditions and non-performing ones should be dropped.

Thank you