

Σ SIGMA

THE BULLETIN OF EUROPEAN STATISTICS

Modern tools for business cycle analysis

Colloquium in
Luxembourg



Editorial



At the end of 2008, following a now established tradition of bringing together academics, statisticians and users of official statistics, Eurostat organised an international colloquium in Luxembourg on modern tools for business cycle analysis.

The impressive attendance of over 200 participants, including many eminent guests from Europe, the USA, Canada, Korea and Australia, was clear proof of an increased interest in the topic at a time of global economic turmoil.

Macroeconomic statistics, and especially euro-indicators, give an overall picture of the economic situation and are key for analysing business cycles and thus for policymaking based on sound economic models and short-term forecasts.

In the past couple of years, Eurostat has made progress in improving the quality and timeliness of the indicators. We have achieved remarkable results thanks to the flash estimation of GDP, inflation and retail trade. Moreover, we are cooperating with Member States to develop a methodology to increase substantially the timeliness of GDP and the labour cost index.

We are complementing traditional data-gathering techniques with advanced statistical and econometric methods. We are attempting to further fill gaps in timeliness, length of the series and availability of high-frequency indicators to better serve our main partners: the Directorate-General for Economic and Financial Affairs and the European Central Bank.

This is why we need the regular feedback from all those who work with our data but also those who develop their own methods of data production and analysis. The colloquia organised by Eurostat are one such possibility.

The Luxembourg meeting focused on the current statistical tools and methodologies. In parallel sessions, we tackled topics such as forecasting of macroeconomic variables, estimates of economic indicators, impact of revisions on short-term analysis, quality improvement of infra-annual statistics, univariate and multivariate business cycle modelling and effects of globalisation on the business cycle.

Needless to say, we also discussed how we can improve cooperation in the field to the benefit of all involved parties. After all, economists, statisticians, financial analysts and academics alike will agree that a well-structured and methodologically sound European framework for business cycle analysis is a goal well worth striving for!

Marie Bohatá
Deputy Director-General
Eurostat



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SIGMA

THE BULLETIN OF EUROPEAN STATISTICS

produced by Eurostat

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Published by: Office for Official Publications of the European Communities, Luxembourg, 2009
ISSN 1018-5739

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Graphic design by Fitolito 38, Italy

© Cover photos: Jean-Jacques Patricola, European Commission, Deutsche Börse, S. Hofschlaeger — www.pixelio.de
Printed in Belgium

Printed on white chlorine-free paper

Sigma is available free of charge from:

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All issues of *Sigma* can be consulted

online at Eurostat's website:

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We would like to thank all those who have contributed to this edition of *Sigma*:

Werner Bier, Jean-Philippe Cotis, Ünal Gündoğan, James D. Hamilton, Jürgen Kröger, Helmut Lütkepohl, Massimiliano Marcellino, Gian Luigi Mazzi, Robert Mizzi, Svante Öberg, Şennur Onur, Michael Pace Ross and Ömer Toprak.

The views expressed in *Sigma* are those of the authors, and do not necessarily reflect the official position of the European Commission or the organisations to which the authors belong.

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‘A good occasion to bring together academics and statisticians’

The Colloquium on Modern Tools for Business Cycle Analysis was jointly organised by Eurostat and the European University Institute, Florence. The two co-organisers, Professor Massimiliano Marcellino (European University Institute) and Gian Luigi Mazzi (Senior Statistician at Eurostat) explained the background of this conference to *Sigma*.

Massimiliano Marcellino is Professor in Econometrics and Head of the Department of Economics at the European University Institute in Florence.



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‘The fifth Colloquium on Modern Tools for Business Cycle Analysis continues the tradition of conferences organised by Eurostat on business cycles, benchmarking techniques and seasonal adjustment,’ said Mr Mazzi. ‘It brings together academics and producers of official statistics to discuss business cycles, notably characterised at this time by the financial and economic crisis,’ added Professor Marcellino.

‘The colloquium confirmed our expectations: a large, interested and qualified audience; speakers representing the two different souls of this conference — academics and official producers of statistics. The number of papers exceeded expectations (122 papers submitted) and all but one invited keynote speakers came to the conference,’ said Mr Mazzi.

Professor Marcellino added, ‘The outcome is more than positive: beyond the clear value added in gathering together the academic world and the official producers of statistics, the quality of the presentations, debates and interventions has been outstanding and most of the key actors worldwide in business cycle analysis brought their contributions.’

Challenges ahead

‘The challenge for us official statisticians is clear: users’ wish lists for future statistics include accuracy, timeliness, more detail, harmonised data and indicators for interpreting the effects of monetary, financial and economic policy,’ said Mr Mazzi.

‘Harmonisation, coherence over time, transparency, easily accessible metadata, an understanding of what an indicator is measuring — these are the key elements for official statistics,’ agreed Professor Marcellino. ‘All this comple-

mented by higher frequency data, like monthly data,’ echoed Mr Mazzi. ‘The challenges for official statistics are also the globalisation indicators, volatility measures and open information systems.’

‘And now that the lights of the conference are off, where do you go from here?’ asked *Sigma*. ‘First of all, we will publish a special issue of the *Journal of Forecasting* on the colloquium. Then, we are already collecting ideas on the next conference, in 2010. We have launched a small survey on possible subjects of interest during the colloquium and, taking into account suggestions made by the participants, we will choose the topic theme for the next conference,’ said the two organisers.

At the conference Professor Marcellino presented a paper on ‘Real-time estimates of the euro-area output gap’ and was co-author of the papers ‘Forecasting macroeconomic time series using unobserved components models’, ‘Advanced quality measures for time series data and their application to the Euroind database’ and ‘Survey data as coincident indicators’.

Mr Mazzi was co-author of the papers ‘Real-time estimation of potential output and output gap for the euro area: comparing production function, unobserved components and SVAR approaches’, ‘Advanced revision analysis for economic



Gian Luigi Mazzi is a Senior Statistician at Eurostat and Head of the Euro Indicators Section in the Key Indicators for European Policy Unit.

time series and their role for improving forecast accuracy; 'A system of coincident turning point indicators for the euro area'; 'Survey data as coincident indicators' and 'Construction of coincident indicators for the euro area'.

By Roberto Barcellan,
Eurostat National Accounts — Production Unit

Professor Massimiliano Marcellino is Head of the Economics Department of the European University Institute, where he is also a Professor of Econometrics, on leave from Bocconi University. His research interests focus on econometrics, time series analysis and applied macroeconomics. He has published over 40 articles in leading international journals including *Journal of Econometrics*, *Journal of Business and Economic Statistics*, *Journal of Time Series Analysis*, *Journal of Applied Econometrics*, *Econometrics Journal*, *Oxford Bulletin of Economics and Statistics*, *Journal of Forecasting*, *International Journal of Forecasting*, *European Economic Review*, *Macroeconomic Dynamics* and *Economic Policy*. He has also served as a consultant for the main international organisations, including the European Central Bank, the IMF and the European Commission.

Gian Luigi Mazzi is Senior Statistician at Eurostat, European Commission. His research interests focus on business cycle analysis, forecasting, seasonal adjustment, temporal disaggregation and time series analysis. He is co-author of several articles published in international journals, as well as co-editor of the book *Growth and cycle in the Eurozone* (Palgrave Macmillan, 2007).



'The Colloquium on Modern Tools for Business Cycle Analysis was very successful. There was a large, interested and qualified audience. More than 120 papers were submitted and the speakers represented the two sides of the conference: academics and official producers of statistics,' said Mr Mazzi.

INSEE, both producer and analyst of key economic indicators

Jean-Philippe Cotis is the General Director of INSEE, Institut National de la Statistique et des Etudes Economiques. As such, he heads one of the rare national statistical institutes of the European statistical system that performs economic studies from the statistics it produces. He is therefore particularly well placed to assess the quality of economic statistics for business cycle analysis.



Jean-Philippe Cotis, General Director of INSEE, the French statistical office.

But as a producer of these statistics, he is inclined to greatly temper this criticism. Regarding revisions, they cannot be avoided, as some of the information needed to provide the figures can only be collected with a time lag. 'Whatever the estimation technique, you can only hope to limit the magnitude of revisions. It is mainly a question of a trade-off between timeliness and size of revisions. The earlier the series are released, the greater the revisions can be.'

'It is not only a technical matter. In a risk-prone country like the United States, people may be ready to accept substantial revision as the price for an earlier release. In more risk-averse countries, say in Europe, people may not so easily accept those kinds of revisions. This social background must be taken into consideration,' he adds.

Referring to the lack of a forward-looking dimension in the PEEIs, which is a problem for economists with responsibilities in the policymaking process, Mr Cotis explains that 'this is where business tendency surveys can usefully complement hard data for analysing the business cycle. Although they are almost uniquely based on qualitative assessment by firms, their process of production is much lighter, which allows them to be available before the hard data can be collected. Business surveys provide the first indications of the near future.'

Challenges for macroeconomic statistics

Asked about the main challenges official macroeconomic statistics have to cope with, Mr Cotis first mentions the services sector: even if measurement is more difficult here than for industry, a better knowledge of services is crucial for economic analysis.

The second challenge relates to the problem of the perception of inflation. 'In recent years, there has been a loss of credibility for the inflation rate, and also for purchasing power data, in France but also in other EU countries. We have to better communicate on this issue. For example, we have

INSEE's status, as producer and analyst of statistical information, has great advantages for Mr Cotis: 'understanding statistics helps to produce more informed economic studies. In addition, being prodded by economists helps neighbouring statisticians to improve their statistics.'

A mixed feeling

As an economist, Mr Cotis has two reactions when he looks at the principal European economic indicators (PEEI) as a tool for business cycle analysis. 'On the one hand, PEEIs are the most important data for analysing the cyclical behaviour of an economy. To give just one example, when evaluating output gaps, PEEIs are key ingredients for any estimation of the non-accelerating inflation rate of unemployment,' he says. His second reflection emphasises the limits of these indicators: 'they are often revised, are not available as soon as wished and are not forward-looking'.

‘Any major development of short-term key economic indicators is best coordinated among statisticians, analysts and policymakers’



Werner Bier, Deputy Director-General of Statistics at the European Central Bank (ECB), assesses the adequacy of the principal European economic indicators (PEEIs) with regard to the needs of one of their main users, the ECB. ‘Globalisation is the challenge that will require putting PEEIs into a worldwide perspective,’ he said to *Sigma* at the Eurostat Colloquium on Modern Tools for Business Cycle Analysis.

Werner Bier, Deputy Director-General of Statistics at the European Central Bank.

‘The PEEI initiative has been a major success,’ underlined Mr Bier. ‘It is a well-functioning information base of European macroeconomic statistics supported by political awareness and monitoring through the Economic and Financial Committee status reports jointly drafted by Eurostat and the Directorate-General for Statistics of the ECB.’

‘Some objectives have still to be met,’ added Mr Bier, ‘and for some indicators more ambitious targets need to be formulated in a medium-term strategy.’

Timeliness and reliability of data releases are crucial

In terms of the timeliness of the data releases, Mr Bier stressed that, where possible and meaningful, the target should be to release clusters of European aggregates shortly before 30, 60 and 90 days after the reference period. This would ensure the provision of information in time for the meetings of the ECB’s Governing Council at the beginning of each month. ‘The 30/60/90 rule may call for an enhanced use of flash estimates — based mainly on hard data — while we will have to observe a good balance between timeliness and reliability.’

‘Services, labour market and housing statistics are the current weaknesses among the European short-term key indicators,’ continued Mr Bier. ‘The ECB welcomes the progress achieved and the initiatives set up in these fields, but the information available is still insufficient.’

Mr Bier highlighted the role of the European System of Central Banks (ESCB), including the ECB, as a producer and user of statistics. The ECB produces euro-area statistics for economic and monetary analyses and for the ECB’s monetary policy decisions, as well as for other functions of the ESCB such as payments and payment systems statistics. ‘We are also, possibly, the main user of the monthly and quarterly economic statistics produced by the European statistical system. These statistics support the ECB in its main objective — to maintain price stability in the euro area.’



According to Mr Bier, the ECB is probably the main user of the monthly and quarterly economic statistics produced by the European statistical system. 'They support the ECB in its main objective — to maintain price stability in the euro area.'

'The PEEIs need to be understood by European and non-European policymakers,' concluded Mr Bier, adding that 'a globalised world needs world aggregates, such as quarterly GDP growth' so that the impact of globalisation on each individual economy can be monitored. 'The PEEIs are certainly a model for the principal global economic indicators (PGEIs), which are to be developed and set up with the support of the European statistical system and the ESCB, and in close cooperation with our international partners.'

Werner Bier is Deputy Director-General Statistics at the European Central Bank. He has contributed significantly to the design and implementation of the euro-area economic and financial accounts and is an expert in statistics for the government sector, including the statistics for the excessive deficit procedure (see Bier, W., Mink, R. and Rodríguez Vives, M. (2004), *Extended statistics for the support of the Stability and Growth Pact*, Hacienda Pública Española, Monografía, pp. 35–63).

At the latest Eurostat Colloquium on Modern Tools for Business Cycle Analysis, he participated in the round table on 'Future targets for PEEIs as a key input for short-term economic and monetary analyses and policies'.

‘The principal European economic indicators — vital for following business cycle developments’

Jürgen Kröger is Director for Economies of the Member States in the Directorate-General for Economic and Financial Affairs of the European Commission. In the opening session on ‘The role of the principal European economic indicators (PEEIs) in business cycle analysis’, he highlighted the importance of PEEIs as a basis for taking economic policy decisions at EU and national levels. Mr Kröger shared his views on the needs and challenges for official macroeconomic statistics in light of increased globalisation with *Sigma*.



Jürgen Kröger, Director for Economies of the Member States in the Directorate-General for Economic and Financial Affairs of the European Commission.

availability of reliable data ‘as soon as possible, without compromising the accuracy aspect of the data. For us, both factors are equally important and we would be adamant on trading one against the other,’ he said.

Improvements of fiscal figures needed

Asked about the main needs of official statistics for business cycle analysis, Mr

Kröger would welcome an improvement in the area of fiscal data, as he had the feeling that data were not always as comprehensive or comparable as they should be.

‘It would be useful to have some guiding rules for EU Member States, particularly for new or smaller countries, as it is sometimes not easy for them to adopt the statistical framework,’ he explained.

In his opinion, two of the main challenges faced by official macroeconomic statistics are the revision of the European system of accounts, currently underway, and having data available ‘sooner rather than later’.

A third challenge he mentioned is the further extension of the data to include indicators on price competitiveness, such

‘**The** Economic and Financial Affairs DG provides information about economic developments in the economies of the Member States, the euro area and the EU as a whole. Our daily work involves doing some important empirical analysis and forecasting. In this respect, the availability of timely and reliable economic indicators is crucial for us. The PEEIs in particular are vital for following business cycle developments,’ said Mr Kröger.

Mr Kröger went on to explain how the PEEIs are a basic input for the preparation of Economic and Financial Affairs DG’s key indicators for the euro area and the reports to the Eurogroup and the Economic and Financial Affairs Council. In his dual role as user and producer of economic indicators, such as the business climate indicator, he emphasised the need for the

as unit labour cost, export price deflator and structural indicators relative to the Lisbon agenda, especially those related to information and communication technologies.

'Finally, it is also important to improve the data on productivity, such as the whole set of data for the EU Klems project, which contains information on economic growth, productivity and employment creation for the EU countries, various EU aggregates, Canada, Japan and the United States,' he added.

A word on globalisation

Concerning globalisation, Mr Kröger explained that given the integration of our industrial, financial and services sectors in

the world economy, it was only to be expected that the current economic developments will spill over to the EU.

'Certain EU countries, such as Germany, have opened up to the world economy more than others. I think we should monitor the response of these countries to the challenge of globalisation. As for the statistical indicators needed to measure globalisation, it would certainly be useful to have some specific indicators on the financial markets. I can think of data on asset prices and on capital movements, although these data are difficult to get,' Mr Kröger concluded.

By Beatriz Fernández Nebreda, Eurostat Communication Unit



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Mr Kröger said that the Economic and Financial Affairs DG relied in particular on timely and reliable data for its analyses and forecasting. 'The principle European economic indicators (PEEIs) in particular are vital for following the business cycle developments,' said Mr Kröger.

A central bank governor's wish list for economic statistical indicators



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Svante Öberg, Deputy Governor of the Swedish central bank and former Director-General of Statistics Sweden.

Svante Öberg is Deputy Governor of the Swedish central bank Riksbank and former Director-General of Statistics Sweden. At the round-table discussions on the future targets of the principal European economic indicators (PEEIs), he presented his wish list for economic indicators in the future. He emphasised a greater need for timeliness and also proposed new economic indicators. *Sigma* met Mr Öberg to discuss his expectations as well as the challenges and impact of globalisation on official statistics.

Mr Öberg explained that in his work carrying out monetary policies, a broad basis of macroeconomic indicators is needed. These indicators are not only tools when analysing the present economic situation, but also serve as a basis for forecasts, indispensable when carrying out monetary policies with inflation targets. The two main indicators most needed are inflation and GDP.

Before looking at the challenges for official statistics in the future, Mr Öberg started by going back in time. A few years ago, when Mr Öberg was Head of Statistics Sweden, there were two large shortcomings in EU official statistics. Firstly, not enough data were available on an EU level for many important indicators, because data for many Member States were missing. Secondly, timeliness was also a problem. Statistics in the EU were much delayed, especially when compared to the USA.

The situation has improved with PEEIs

The situation has improved with PEEIs

'With PEEIs and euro indicators, the situation has improved a lot,' said Mr Öberg. 'Today, we are able to get data on an EU level more quickly than before. The first estimation of the GDP is published 45 days after the reference period and the flash inflation is published at the end of each reference month.'

'However, there are some challenges to cope with when looking into the future for official statistics,' continued Mr Öberg. 'Official statistics have to reflect changes in society.

An example is the growing service sector, for which many statistical indicators are missing. At the moment there are more statistics available for the declining industry sector as well as for the agricultural sector.'

During the round-table discussions on the future targets for PEEIs, Mr Öberg presented concrete proposals for economic statistics in the future.

'First of all, one target is that the publication of GDP data follows the same release pattern as in the USA, meaning 30 days after the reference period instead of the current 45 days for the GDP flash estimate. This is very important for monetary policies,' said Mr Öberg. 'Secondly, today's flash inflation would be even more useful if core inflation, removing energy and food prices, was also published. Thirdly, it would be useful to have expectations by households and businesses on how inflation is expected to develop — an indicator we have in Sweden — on an EU level as well. Finally, the evolution of asset prices, mostly housing, is something very important that should be developed.'

More comparable data between economic areas

Mr Öberg concluded that, due to globalisation, it has become increasingly important to compare countries and geographical areas in a harmonised way, especially the EU and the USA. In this field, some ambitious work remains to be done. Also, with new market economies arising during the last decade, such as in eastern Europe or China, competition between countries increases and, through that, statistical indicators which can monitor this evolution become even more crucial.

By Louise Corselli-Nordblad, Eurostat Communication Unit

‘Transparency in official statistics is essential’



James D. Hamilton, Professor of Economics in the Department of Economy at the University of California in San Diego.

Professor James D. Hamilton at the University of California, San Diego, stresses the importance of transparency and meta-information in relation to official statistics. ‘An accurate reporting of the information that governments can collect combined with the information on business planning and decisions is what users expect from official statistics,’ he said to *Sigma* at the Colloquium on Modern Tools for Business Cycle Analysis. ‘Understanding how statistical indicators are constructed and what their limits are is extremely important for users.’

Professor Hamilton identified GDP, employment, unemployment and price indices as the statistical toolkit for business cycle analysis. The nature of the data, the economic actors, the perspective that they represent (i.e. results from surveys among producers or workers), the knowledge of the techniques applied for the statistical treatment or for reconciliation of data, have to be clearly communicated to the users to make them aware of the data they are using.

‘The main challenges for (US) statistics are timing and accuracy of revisions,’ said Professor Hamilton.

‘Users increasingly have the possibility of handling and directly working with the data, through access to databases and IT facilities. The role of the official statistical agency is therefore evolving: it should provide easy-to-access platforms and limit its adjustments to the figures to the necessary ones.’ Professor Hamilton sees a more active role of users of statistics and a different role for statistical agencies, limited to disseminating the raw information, with limited intervention aimed at preserving confidentiality, ensuring quality but without entering into too heavy detailed use.

‘In the current context, economic relations are changing continuously. Official statistics should provide the necessary



Professor Hamilton identified GDP, employment, unemployment and price indices as the statistical toolkit for business cycle analysis.

James D. Hamilton is Professor of Economics at the Department of Economy, University of California, San Diego. His research activities include measuring the business cycle and the economic consequences of oil price shocks. He is the author of various monographs, articles and books, including *Time series analysis* and *Advances in Markov-switching models*. At the Colloquium on Modern Tools for Business Cycle Analysis he gave an opening lecture on ‘The propagation of regional recessions’.

information to derive key implications. In addition, historical data are fundamental to understanding the nature of economic changes, through breaks in the time series,’ underlined Professor Hamilton. ‘Economic changes matter greatly for the accuracy of forecasts.’

Global financial situation affecting forecasts

‘The current financial crisis is affecting statistics and forecasting: the financial turmoil effects have no similar or comparable precedents and translate into concrete problems in producing good forecasts.’

At the conference, Professor Hamilton presented a paper on ‘The propagation of regional recessions’. The paper develops a framework for inferring common Markov-switching components in a panel data set with large cross-section and time-series dimensions. Professor Hamilton and Michael T. Owyang applied the framework to studying similarities and differences across US states in the timing of business cycles. They hypothesised that a small number of cluster designations exists, with individual states in a given cluster sharing certain business cycle characteristics. They found that although oil-producing and agricultural states can sometimes experience a separate recession from the rest of the United States, for the most part differences across states appear to be a matter of timing, with some states beginning a national recession or recovery before others.

By Roberto Barcellan,
Eurostat National Accounts — Production Unit

‘Official statistics should aim at good and detailed data’



Professor Helmut Lütkepohl at the European University Institute in Florence underlines the importance of detailed data, country and regional, for specific key indicators. ‘Official statistics need clarity in the way they are constructed, transparency and harmonisation,’ he said to *Sigma* at the Colloquium on Modern Tools for Business Cycle Analysis. ‘Historical harmonised time series are particularly important.’

Helmut Lütkepohl is Professor of Econometrics at the European University Institute, Florence.

At the conference, Professor Lütkepohl presented a paper on ‘A statistical comparison of alternative identification schemes for monetary policy shocks’. The paper stated that different identification schemes for monetary policy shocks have been proposed in the literature. They typically specify just-identifying restrictions in a standard structural vector autoregressive (SVAR) framework. Thus, in this framework, the different schemes cannot be checked against the data with statistical tests. Professor Lütkepohl and Markku Lanne considered different approaches on how to use the data properties to augment the standard SVAR setup in identifying the shocks. Thereby it becomes possible to test models which are just identified in a standard setting. For monthly US data, they found that a model where monetary shocks are induced via the federal funds rate is the only one which cannot be rejected when the data properties are used for identification.

By Roberto Barcellan,
Eurostat National Accounts — Production Unit

Professor Lütkepohl stressed that improvements in official statistics should go in the direction of precise data, available quickly, so as to provide more detailed information close to the generating economic phenomena. ‘Key indicators are sufficient for a first analysis, the details may come later,’ he said. ‘Interest is moving more and more towards panel data; accessibility and standard formats for statistical figures are paramount.’

Professor Lütkepohl emphasised that the use of statistics does not pose problems from an econometric point of view, if the underlying contents (sources and estimation techniques) are clear.

‘In the coming years, the challenge of globalisation will mean analysing ever more worldwide data in order to detect worldwide links. Statistical institutes will have to provide comparable data to feed global models. Therefore, in their development plans, the institutes should take these requirements into consideration.’

Users and producers working together

‘Events like this conference,’ said Professor Lütkepohl, ‘put in contact users and producers and help to clarify what is possible and what is needed, highlighting which indicators will have to be developed to meet the requirements generated by new specific events, such as the financial turmoil.’

Helmut Lütkepohl is Professor of Econometrics at the European University Institute, Florence. His professional and research interests cover non-parametric time series analysis, multivariate time series analysis and money demand analysis. Professor Lütkepohl is the author of several articles as well as the author and editor of books on the theory and practice of econometrics and multivariate time series analysis, including *The theory and practice of econometrics* and *Introduction to multiple time series analysis*. At the Colloquium on Modern Tools for Business Cycle Analysis, he presented a paper entitled ‘A statistical comparison of alternative identification schemes for monetary policy shocks’.

Statistics in Malta — developing new perspectives

When appointed Director-General of the National Statistics Office (NSO) of Malta in November 2008, Michael Pace Ross, aged 35, was the youngest head of a European statistical institute. He took over an institute that had passed through a fraught period and was in need of a definitive direction. *Sigma* met him to find out more about the situation of Maltese statistics in 2009.

Michael Pace Ross is Director-General of the National Statistics Office of Malta.



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‘I knew that accepting the appointment from the Malta Statistics Authority would be a challenge,’ Mr Pace Ross admitted in our interview. ‘After all, not long before, our office went through a rather turbulent period marked by the sudden resignation of former Director-General Gordon Cordina in January 2007 and a long search for a new head since then. I humbly accepted the nomination because I was convinced that with the European statistical system rapidly evolving, Maltese statistics needed a major transformation in order to remain a reliable partner and a respected player on the European scene.’

Mr Pace Ross knows what he is talking about. After all, he spent the past 11 years working at the Maltese NSO, being promoted to manager of the National Accounts Unit in 2005 and appointed Acting Director of the Economic Statistics Division in 2007. ‘I do not agree with the critics who point to only negative developments of recent years,’ said Mr Pace Ross. ‘The quality of our statistics has improved significantly, especially since Malta joined the European Union in 2004. New graduate employees were recruited and trained in recent years to help out overworked colleagues and the range of statistics published by the institute has expanded significantly.’

Today, the Maltese NSO publishes over 230 news releases per year. They are placed on the website and, if requested, can be received in PDF format by e-mail in real time. ‘The NSO uses a range of formats to deliver data to our users. Apart from the most obvious, i.e. our website, the results of our surveys and compilations of data can be obtained in print or on CD-ROM. In cases where products are only published in electronic format, we offer a print-on-demand service, which enables our users to order printed copies of the electronic product,’ said Mr Pace Ross. The NSO also holds press conferences from time to time to launch statistical publications, and also plans to offer ‘born-digital’ publications, in line with its policy to safeguard the environment.

Restructuring started

Well before Mr Pace Ross’s appointment, the Maltese NSO centralised its operations, closing a second office in Błata I-Bajda and moving all staff to the capital city, Valletta. This move allowed for a better use of existing resources and saved a significant amount of money, which could be used later for further restructuring.

The main structural changes were initiated by Mr Pace Ross at the end of 2008. ‘The situation is simple: our main European contact partner is Eurostat,’ he told *Sigma*. ‘This is why one of the first things I did when I took the new job, was to model the organisation structure of our Office to resemble that of Eurostat’s. My thinking was that it would facilitate our reporting obligations, which it did.’

Currently, the Maltese statistics office employs 140 people, half of them aged under 30. However, Mr Pace Ross foresees the need to raise this number in the near future. ‘We are witnessing a growing number of demands from our users, the European statistical system and Eurostat. This is why we will be looking to employ at least six more statisticians and clerks.’

Problems with data production in a small country

Asked whether the fact that Malta was a relatively small country played a role in the daily operations of his office, Mr Pace Ross said that, in his opinion, the size of the country was both an advantage and a disadvantage for its statisticians. 'When it comes to the issue of administrative burden, for instance, the rules are the same for all EU countries irrespective of their size. Therefore, while Germany or France can select different companies within a particular economic activity each time they carry out a survey, because of the fact that the number of businesses in Malta is limited, we always end up fishing in the same pond! So the response burden on the companies in a small country will always be greater than in a large one, no matter how hard the NSO tries to reduce it. But having a few large companies is also an advantage, and by capturing their data the NSO has a very good idea of emerging trends.'

Mr Pace Ross added: 'What is more, in a country like Malta there is a strong element of overlap: when producing statistics in different areas, we often have to contact the same company for information, be it a labour force survey or a poll on statistics of income and living conditions (so-called SILC).'

According to Mr Pace Ross, alternative ways of obtaining the data in Malta, such as making use of administrative sources, have their limitations and may require changes in legislation.

Malta's size is also an advantage in that data sources are accessible and statistics may be more accurate and complete, relying less on estimations and modelling, which may not always work in smaller countries.

Statistical quality of paramount importance

According to Mr Pace Ross, the work of the Maltese NSO is generally very reliable. 'Our timeliness is also impeccable,' Mr Pace Ross added. 'For instance, since our country joined the European Union in 2004, we have never once missed the deadline for the GDP figures.'

Mr Pace Ross explained that with the adoption of the European Statistics Code of Practice, his office has signed up to the common definition of quality in statistics in all relevant areas as defined by the European Statistical System.

However, Mr Pace Ross conceded that improvement was possible in certain areas of statistical production and dissemination. 'Some of our clients proposed that we should explain the revisions of our GDP estimates and the extent of the changes more clearly,' he said. 'We are going to take care of that shortly. Also, the quality of our data relating to energy, the environment and resources could be improved and, for instance, the structural business statistics ought to be issued more regularly.'

Interest in statistics growing

Mr Pace Ross said that interest in statistical issues was steadily on the increase. 'Since Malta joined the EU, the interest in statistics has grown significantly,' said Mr Pace Ross, 'both on the part of the media and of citizens. To deal with this, we have been increasing the number of news releases and are trying to be active and present in the media.'

Mr Pace Ross reflected that the changes are wide-ranging. 'Maltese statistics have come a long way over the past decade, thanks to my predecessors,' he said. 'New concepts,

new areas and new deadlines have progressively been introduced in what amounts to a rather profound mentality change for both producers and users of our data. I feel that today, as part of the EU and as an active member of the Euro-



Paul Mifsud, Director of Resources and Support Services, and Mr Joseph Bonello, Director of Economic Statistics, at the Maltese Statistical Office.



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Mr Pace Ross said that the response burden on businesses in a small country was greater than in a larger one. Due to the fact that the number of businesses in Malta is limited, statisticians often have to contact the same companies when conducting different surveys. 'But having a few large companies is also an advantage, and by capturing their data the NSO has a very good idea of emerging trends,' Mr Pace Ross said. Pictured is the 'Azure window' at Dwejra on the island of Gozo, Malta.

pean Statistical System, we are in a better-than-ever position to produce high-quality statistics efficiently and with minimum burden on respondents, that are relevant, reliable and comparable, as defined in our mission statement.'

By Lukasz Augustyniak, Eurostat Communication Unit

Michael Pace Ross joined the former Central Office of Statistics in 1998, after reading for a degree in business management and economics at the University of Malta. Mr Pace Ross was part of a team transforming Malta's national accounts system from one based on the system of national accounts (SNA) of 1954 to the European system of accounts (ESA 1995).

In 2005, Mr Pace Ross was promoted to Manager of the National Accounts Unit. He played a leading role in the public dissemination of the sources and methods used in the compilation of gross national income and in the introduction of institutional sector accounts and, in 2007, he was in charge of the supervision and coordination of the Economic Statistics Division.

Mr Pace Ross was appointed Director-General of the Maltese National Statistics Office in November 2008.

The Maltese National Statistics Office was founded in March 1947. However, official statistics have been compiled and published in the country since the 19th century. In 1872, an official publication called *The Malta Blue Book* featured a statistical view of Malta and its dependencies for the period 1863–72. It covered the relevant time series for population, education, finance, sale of public sites, imports, exports and shipping. An earlier volume of the Blue Book, from 1851, comprised among other things, a statistical abstract on population, using data gathered during the 1842 Census.

Even though the National Statistics Office is responsible for the collection, compilation, analysis and publication of a wide range of statistical information and related matters, government departments, institutions and regulatory authorities also collect their own statistical data for internal purposes.

The Maltese National Statistics Office is independent and governed by the Malta Statistics Authority Act, 2000. The Maltese NSO reports to the Malta Statistics Authority, set up in 2001.

Next October, the NSO will be hosting, for the first time, a conference for Directors-General of all EU Member States' NSIs in Malta.

In charge of information services

The Maltese National Statistics Office (NSO) is well aware of the importance of communication and dissemination policies in its daily work. *Sigma* met Robert Mizzi, Head of the Information Services Unit at the Maltese NSO, to talk about the work of his busy unit.



The Information Services Unit at the National Statistics Office of Malta is headed by Robert Mizzi (second from left).

A lot of work goes into updating the website, which has become the main dissemination tool for the Maltese NSO. 'Following the adoption of the free dissemination policy in 2004, all our news releases are uploaded in real time onto the website. All our other recent publications (from 2000 onwards) can be found there as well in full text,' said Mr Mizzi. 'Our website features a clearly marked section called "European statistics", where our users have access to Eurostat news releases through RSS feeds

and also links to other important pages such as the Eurostat homepage, the metadata server and CIRCA.'

As Mr Mizzi explained, Malta has a very active and competitive newspaper scene — four daily papers, two weekly business newspapers and seven Sunday papers keep the information services team busy. 'Last year we handled over 1 500 user requests, a number of them from journalists, and the number of queries has been growing year by year,' said Mr Mizzi.

Library — over 10 000 items

The NSO library boasts a collection of over 10 000 publications, ranging from Maltese and European statistics to documentation from international organisations, such as the United Nations, Unesco, OECD and IMF. 'Our collection includes several issues of rare "Blue Books" dating from the 19th century, which are the earliest publications of general statistics in Malta. We also have an extensive section of Eurostat publications,' added Mr Mizzi.

The users of the library include NSO staff, members of the public service, the media, researchers, students, the business

Being a small unit, we are used to multi-tasking,' Mr Mizzi explained at the beginning of our interview. 'To start with, our unit coordinates the publication of all news releases and other publications, be they in print, on a CD or in electronic format. Subsequently, we deal with customer queries, institutional and private alike. Then, we are responsible for running and updating the NSO website and therefore have to be in constant touch with all other units. We are also working towards enhancing internal communication within our institution by implementing a knowledge management system. Last but not least, we run the NSO library, open to the public on a daily basis.'

NSO website instrumental in data dissemination

Mr Mizzi manages a team of five full-time employees and one part-timer. 'Basically, we are trying to be a single entry point for all external requests for statistical data, making sure that colleagues from other units are not disturbed in their daily work of statistics production. We are obviously supported by specialists from other units when the requests get too technical or go too deeply into methodological issues.'

sector and the public in general. 'I am proud to say that all full-timers working in the library are either qualified with a diploma in library and information studies from the University of Malta or studying for it,' said Mr Mizzi.

Intranet in development

Mr Mizzi said that in parallel with all other tasks, his team had been working on a project to improve internal communication and knowledge sharing at the NSO. This entails the introduction of a knowledge management system that will be available for staff on the intranet. 'At the moment we have an intranet site devoted mostly to IT questions and tools,' said Mr Mizzi. 'Colleagues use it to ask for IT support or new software. It also features links to eDamis, the ESS website (INSItE) and a staff directory. However, by the end of this year, we hope to have a new internal website, with a modern layout, access to important documentation and regularly updated news sections.'

Growing importance of INSItE

Mr Mizzi's team also stays in touch with the INSItE team at Eurostat in Luxembourg. 'We have understood the importance of the INSItE project and have been committed from the start to making it a success. If we are to benefit from the exchange of information between other NSIs, we need to provide it on a regular basis ourselves and the news has to come from our staff,' said Mr Mizzi.

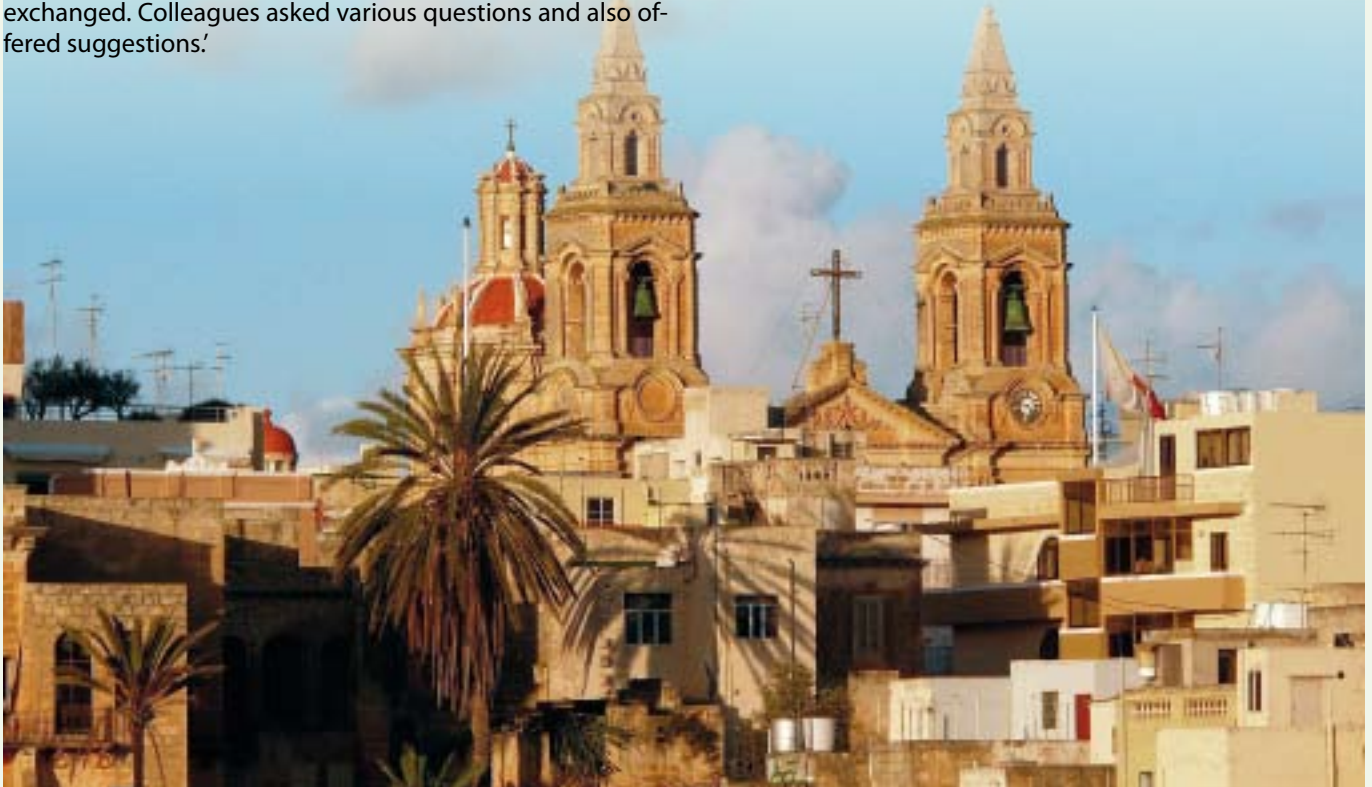
This is why, last February, Mr Mizzi held an information session on INSItE at the Maltese NSO. 'I thought that we needed to increase the level of understanding of what INSItE is among my colleagues. Participants were briefed on the origins of INSItE and the type of information the ESS members exchanged. Colleagues asked various questions and also offered suggestions.'



In the conclusion to our interview, Mr Mizzi said that despite working in a small unit, he was confident that his team was prepared to deal with the increasing amount of work in the future. 'Staff motivation at NSO is very high,' he said. 'In the past couple of years, we have shown that it is possible to manage a number of different work areas with the help of a small but efficient team. Later this year we are planning to repeat a customer satisfaction survey and I am looking forward to seeing the results. This will help us adjust and improve our services to better satisfy the demands of our users.'

By Lukasz Augustyniak, Eurostat Communication Unit

Pictured is a view of Sliema on the north-east coast of Malta.



Turkish statistical system on the road to alignment with EU standards

The tradition of collecting statistics in Turkey dates back several hundred years. Records show that an agriculture and population census was already carried out in the Ottoman Empire in 1326. However, more modern statistical methods started to be used in the early 1900s, when statistical offices opened in some provinces. Today's Turkish Statistical Institute (Turkstat) has its roots in the foundation of the Turkish Republic and was set up in 1926.

Ömer Toprak (left) is Acting President of the Turkish Statistical Institute (Turkstat) in Ankara. Ünal Gündoğan is the Vice-President of Turkstat.



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Turkstat's headquarters are situated in Ankara, in a tall modern building, on a wide boulevard next to the Prime Minister's Office. It is here that the work on statistics is lead, in a country which is more than twice the size of Germany with roughly 90 % of its population.

'The sheer size of Turkey and especially the difficult access to some of the many mountainous regions means that measuring, for example, socio-economic activities is challenging. However, in order to make realistic estimations about the country, remote places have also to be reached, which adds costs and time delays to our data collections,' said Ömer Toprak, Acting President of Turkstat, to *Sigma*.

'Around 1 000 people work here in Ankara and in the 26 regional offices there are around 2 000 employees, who are in charge of collecting and validating data from their area. They collect, compile, carry out quality checks, analyse and transfer data to head office,' he added.

EU negotiations

EU accession negotiations with Turkey began in 2005 and so far eight out of 33 chapters have opened. The chapters treat different areas, such as the free movement of goods or workers, financial services, agriculture, energy, enterprise and industrial policy, justice freedom and security as well as statistics. The statistics chapter was opened in June 2007 and Turkstat's overarching priority is to fully align the Turkish statistical system and legislation to the European one.

'There is steady progress,' said Anton Steurer, Head of the EU Enlargement Section and Desk officer for Turkey in Eurostat's Statistical Cooperation with European and Mediterranean Countries Unit. 'Many statistical areas, such as energy,

health, education, tourism and short-term statistics as well as the labour force survey, are already compliant with EU standards or developing well. However, more needs to be done in particular in agricultural, economic and monetary statistics, and in further developing the business register,' he said.

Statistical landmarks

A milestone was reached in 2008, when Turkstat finalised a major revision of the national accounts and published revised gross domestic product (GDP) data. The revision largely aligns the Turkish national accounts with the European system of accounts (ESA 95).

'The historic revision of the national accounts was a demanding job and we are happy with the results. The new standards provide a better base for measuring Turkey's economic and financial situation and make data more comparable with other countries,' said Vice-President Ünal Gündoğan to *Sigma*.

'We still need to do more though, such as establishing sector and financial accounts, improving timeliness and introducing a regular revision policy. Our aim is to be fully compliant with ESA 95 by 2011,' Mr Gündoğan continued.

Another landmark for the Turkish statistical system was the establishment of an address-based population register, which was used for the first time in the 2007 population census. The first figures were released at the beginning of 2008 and set the Turkish population at 70 586 256 people.

'The new register-based system has major advantages. It gives more accurate data, allows direct use by many ministries and we can release data every year without any time gaps. Therefore, all ministries using the system have comparable and accurate information for their plans and programmes. As a result, the system will decrease the cost and the time spent for producing the basic statistics and official registers on population needed by the ministries and Turkstat,' said Mr Gündoğan.

At the end of 2008, Turkstat, in cooperation with the Ministry of Agriculture, finalised a strategy for agriculture statistics for 2008–12. The strategy is an important part of the EU negotiations for Turkey, as it is a prerequisite for the opening of the agricultural chapter.

'One of our key priorities now is to set up a farm register at the Ministry of Agriculture and to make all involved in agricultural statistics use the same codes for farm holdings. Another challenge is to incorporate small family farms, which have big added value in Turkey, in the register. The bigger farms are already captured in the business register,' said Mr Gündoğan.

'We also need to introduce farm structure statistics and agromonetary and crop statistics need to be improved. However, statistics on milk, dairy products, meat and eggs are developing well and may comply with EU regulations within the next few years,' he added.

Planning a key priority

The 2008 Turkey progress report, which is issued by the European Commission each year, stated that Turkstat's 'administrative capacity has improved'. However, 'cooperation

with the main data providers and the coordinating role of Turkstat have to be further strengthened'.

The production of official statistics in Turkey is regulated in the Statistical Law from 2005 and annual and multiannual planning and reporting are fully developed at Turkstat.

'These tools, together with our strategic, performance, and activity and monitoring plans are very important. They help us set priorities, programme our activities and coordinate our output with other producers of statistics,' said Mr Gündoğan.

Each year the official statistics programme is updated. It defines standards, data compilation, methodologies and publication schedules for all official statistics providers. Statistics are either produced by Turkstat or by another institution.

'All data collections have to be specified one year in advance if they are to be released as official data. They also need to adhere to the same standards and classifications defined by Turkstat for the data to be rubberstamped as "official". It is a matter of quality,' said Mr Gündoğan.

'Turkstat is in charge of checking quality, classifications and methodology of all official data. It is recognised that our scientific knowledge is needed,' he added.

As in all European countries, reducing the burden for respondents is important in Turkey. Turkstat has regular meetings with the central bank, the treasury and other ministries to discuss questionnaires and surveys.

'We coordinate our work to avoid duplication of questions and to simplify questionnaires. Today, there is, for example, one questionnaire for tax purposes collected by the tax authorities, which is also used by Turkstat. This is possible thanks to a harmonisation of the business and person identification numbers,' said Mr Gündoğan. 'However, despite this and other actions to reduce the burden, perceptions unfortunately remain the same.'

Mr Toprak explained that the size of Turkey and the difficult access to its mountainous regions often meant that data collection was a challenge. 'In order to make realistic estimations about the country, remote places have also to be reached, which adds to costs and causes time delays to our data collections,' said Mr Toprak. Pictured are the Cappadocian mountains in eastern Turkey.





Mr Gündoğan said that the revision of the national accounts was a demanding job for the Turkish institute. 'We are happy with the results. The new standards provide a better base for measuring Turkey's economic and financial situation and make data more comparable with other countries,' he explained. Pictured are Turkstat's offices in Ankara.

Key figures on teletext and on mobile phones

Turkstat uses many tools to disseminate data, but the Internet is the main dissemination channel. Currently 750 tables and 28 databases in different subjects with time series and metadata in standard (SDDS) format are available free of charge. A classification server also helps users find codes used by public organisations, private companies and research institutions. Furthermore, all contents are translated and available on the English version of the website.

'Besides putting most of the information on the website, Turkstat is trying to improve other dissemination channels as we know that not all users have Internet access. In this context, SMS and teletext channels have been developed,' said Mr Toprak.

The main headlines of press releases are published on a teletext page on the national television broadcast (beginning on page 590). Users can also reach certain headlines depending on their interest via mobile phones through agreements with all service providers. Short messages can be sent to users on the general data of the press releases. Currently there are 1 300 active subscribers.

Data are released according to a release calendar which is published at the end of each calendar year for the following year. It includes all official data released by the Turkish statistical system — including data from the central bank and many ministries.

'The release calendar is a success story, which we are proud of. So far we have not had to change the publication date of any indicators during the course of the year,' said Mr Toprak.

Mr Toprak confirms that Turkstat has a good public image and good relations with the press. 'We organise regular press conferences and briefings on technical issues for the press, as well as training courses for journalists. We held at least five special briefings when we revised the national accounts. The aim is to help journalists understand our data better, which increases the quality of their articles and makes our data more useful to them,' said Mr Toprak.

To enhance internal and external communication, 9 May has been celebrated as 'Statistics Day' in Turkey since 1990. The aim is to increase the awareness of the usefulness of statistics in society.

'On 9 May we organise seminars, panels and events both centrally and regionally and invite the media, private institutions, academia and researchers. Both sides provide experts on certain topics and the event is very much a mutual learning experience for all participants,' said Mr Toprak.

Strategically placed

Turkey is strategically placed between Europe, Asia and the Middle East and has an active cooperation on statistics with its neighbours and beyond.

'We provide training, experts and do studies in countries such as Kazakhstan, Kyrgyzstan and Turkmenistan, as well as Palestine, Saudi Arabia, Sudan and Yemen,' said Turkstat's Head of Foreign Relations Department, Şennur Onur, to *Sigma*.

The statistical areas vary from population statistics and the labour force survey, to national accounts and price statistics.

'The aim is to help our partners align their data collections and methods with those of the United Nations or the European Union. Many of the actions focus on training, which takes place either here in Turkey or in our partner countries,' said Ms Onur.

Successful EU–Turkstat project

However, the most important cooperation partner is the European Union. As a candidate country Turkey receives around EUR 10 million for the period 2007–10 in EU assistance to develop the Turkish statistical system through the upgrading of the statistical system of Turkey phase II programme (USST II) and the multi-beneficiary statistical cooperation programmes.

When *Sigma* visited Turkstat, a conference about USST II (the biggest EU–Turkstat assistance projects) was taking place. The aim of the USST II is to align the Turkish statistical system with EU standards of methodology, quality of compiling and processing statistical information. Other aims are to ensure the efficient coordination by Turkstat, build institutional capacity and harmonise data collection and processing. The project is implemented by a consortium that includes the German Statistical Office, Destatis, as well as a number of

other European national statistical institutes. Both Destatis, as well as the European Commission, are very satisfied with the progress and results of the USST project. In fact, in an external evaluation requested by the European Commission, the project is quoted as being one of the most successful assistance projects ever.

'The USST project is one of the most successful statistical cooperation projects Destatis has ever coordinated,' said Waltraud Moore who is the Head of the Cooperation with Other Countries and Language Service Section at Destatis. 'The implementation of the project runs very well. The monitoring is good and professional relations with staff and management are excellent.'

By Annika Östergren Pofantis, Eurostat Communication Unit

The Turkish statistical system and the production of statistics have been governed by the Statistical Law since 2005. Turkstat is based in Ankara and is an independent public institution linked to the Prime Minister's Office. The president of Turkstat is appointed by the Council of Ministers for five years. Turkstat is run by a president and three vice-presidents.

There are around 3 175 staff in Turkstat and half work on permanent contracts. All permanent staff need to know a foreign language (English, French or German) to be recruited. In total, 47 % of all staff are women, 70 % hold a university degree and the average age is 35.





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