OECD eXplorer – A new internet platform for visualising and analysing regional statistics

Mikael Jern, NCVA (Linköping University), Lars Thygesen (OECD Statistics Directorate) and Monica Brezzi (OECD Directorate for Public Governance and Territorial Development)

OECD has launched a powerful, interactive tool for visualising and analysing regional statistics. OECD eXplorer combines maps and other graphics via the internet, to increase the user's understanding of regional differences and structures across and within OECD countries. To try out the regional maps and statistics using OECD eXplorer, see: www.oecd.org/gov/regionaldevelopment/statisticsindicators/explorer. This development is part of the overall strategy to improve the accessibility and usability of OECD statistics.

Figure 1 overleaf is the user interface of the "OECD eXplorer" with three coordinated and linked views: Map, Scatter Plot and Parallel Coordinate Plot (PCP). The coloured indicator is "Elderly dependency rate %", defined as the ratio of the population aged 65 years and above to the population aged 15-64. Two regions, Berlin and Paris, are highlighted in black in all three views and their profiles (black line types) in PCP can be used for comparison including OECD EU mean values (green). Spatial patterns are quite evident. Most of the red (high rates) appears in countries such as Spain, Portugal, France, Germany and Italy and much of the blue appears in Ireland, The Netherlands and new EU countries.

The development of OECD eXplorer is the result of a fruitful cooperation between the OECD and the National Centre for Visual Analytics (NCVA, http://ncva.itn.liu.se/) at Linköping University, Sweden. In a seminar on generating knowledge from statistics, organised by Statistics Sweden and the OECD in Stockholm in May 2008, Professor Mikael Jern from NCVA presented a first version with some OECD statistics. Since then, the development team at NCVA has worked intensively on improving the tool and adapting it to all the needs expressed by the OECD.

An extended version of OECD eXplorer will illustrate the report on "Regions at a Glance" when it is published in March 2009. This version will include the entire OECD regional database and offer improved capacity to explore trends over time in areas ranging from health to education; from crime levels to voter turnout in elections. It will also provide new interactive functions to help explain what the statistics can tell us. OECD eXplorer will be linked directly to the OECD's data warehouse OECD.Stat, using the generic SDMX web service.
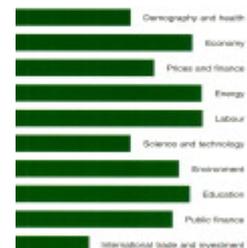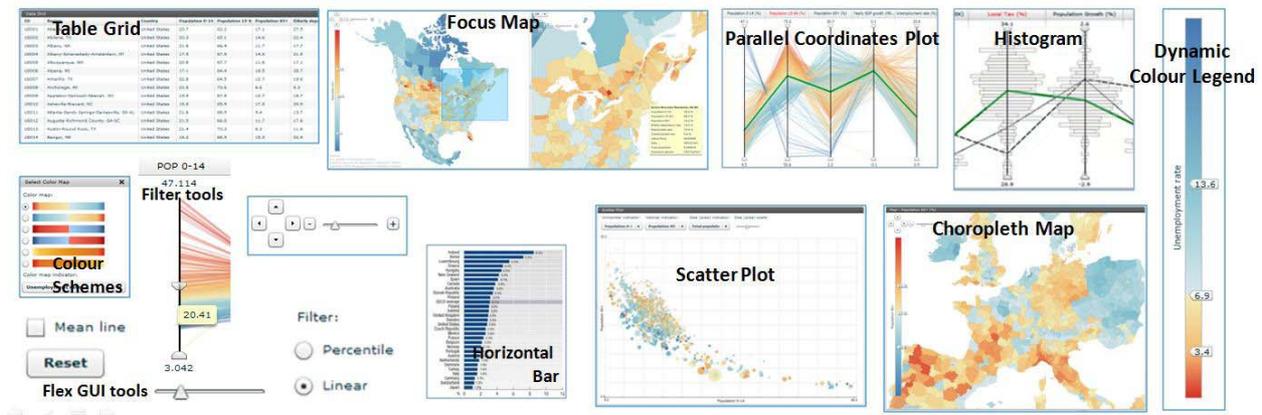
New Release!

Figure 1: User interface of the "OECD eXplorer"

Figure 2: Example of GAV Flash GeoAnalytics highly interactive components

The user perspective: The OECD wish-list

OECD countries have experienced a growing interest in regional development in recent years. The performance of regional economies and the effectiveness of regional policy help determine a nation's growth and shape the measure of well-being across countries. For the past years the OECD has been studying regional disparities and development patterns in its member countries in order to
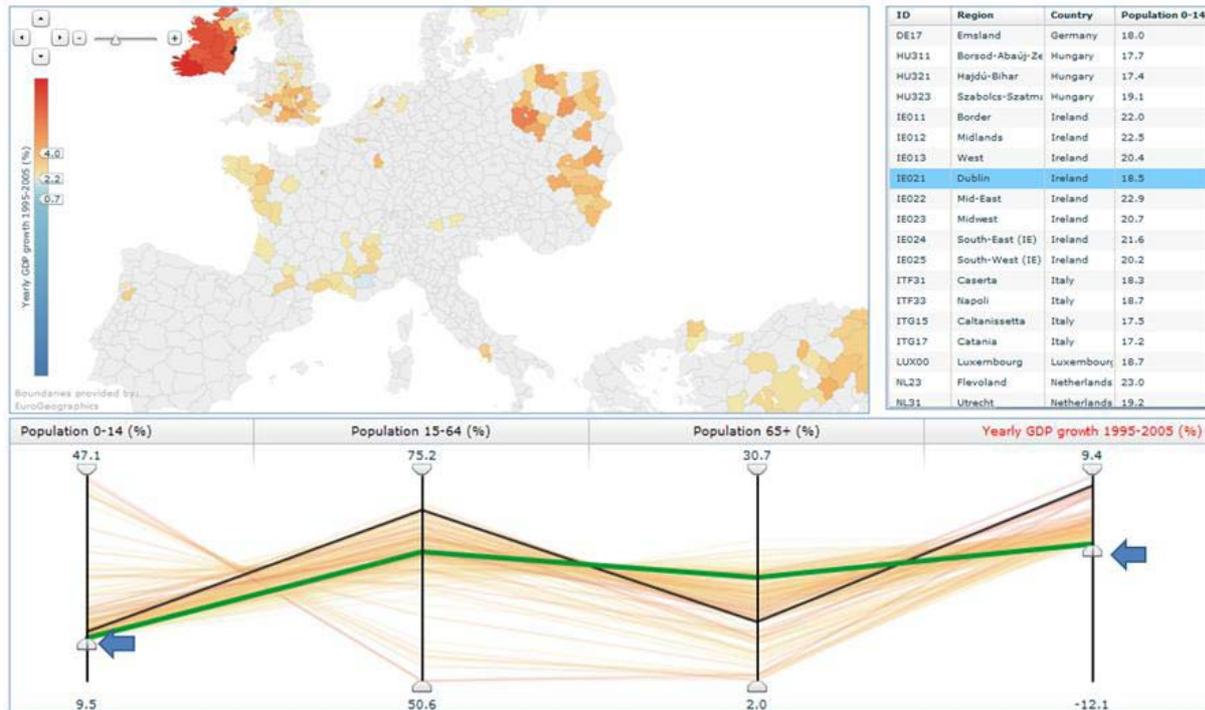
evaluate innovative strategies and diffuse successful policies.

This work has generated demand for sound statistical information at the sub-national level on the source of regional competitiveness. The OECD Regional database is a unique source of statistical information at sub-national level for all the OECD member countries. It contains yearly time-series for around 40 indicators on demography, economy, labour market opportunities, environment, social issues and

innovation related activities for more than 1,700 regions of OECD countries.

Regions within each OECD country are classified on the basis of two territorial levels: the higher level (TL2) consists of 335 large regions while the lower level (TL3) is composed of 1,679 small regions. This classification, adopted in many countries in the design of regional policy, facilitates greater comparability of regions at the same territorial level. The OECD Regional

Figure 3: Filtering with PCP

ID	Region	Country	Population 0-14
DE17	Emsland	Germany	18.0
HU311	Borsod-Abaúj-Ze	Hungary	17.7
HU321	Hajdú-Bihar	Hungary	17.4
HU323	Szabolcs-Szatm	Hungary	19.1
IE011	Border	Ireland	22.0
IE012	Midlands	Ireland	22.5
IE013	West	Ireland	20.4
IE021	Dublin	Ireland	18.5
IE022	Mid-East	Ireland	22.9
IE023	Midwest	Ireland	20.7
IE024	South-East (IE)	Ireland	21.6
IE025	South-West (IE)	Ireland	20.2
ITF31	Caserta	Italy	18.3
ITF33	Napoli	Italy	18.7
ITG15	Caltanissetta	Italy	17.5
ITG17	Catania	Italy	17.2
LUX00	Luxembourg	Luxembourg	18.7
NL23	Flevoland	Netherlands	23.0
NL31	Utrecht	Netherlands	19.2

Yearly GDP growth 1995-2005 (%)

Boundaries provided by EuroGeographics

Population 0-14 (%) — 47.1 / 9.5
Population 15-64 (%) — 75.2 / 50.6
Population 65+ (%) — 30.7 / 2.0
Yearly GDP growth 1995-2005 (%) — 9.4 / -12.1

database is available on the Statistical Portal at the OECD website, allowing users to search and combine information on different sectors.

Since 2005 the analysis of regional economies has been summarized in the biannual publication 'OECD Regions at a Glance'. This publication illustrates, through graphs and maps, the use of regional indicators for the design and assessment of regional development policies. The focus is on the concentration of resources in a few regions within countries and the persistence of disparities among regions in the access to resources and in their performance.

While these activities have generated knowledge among experts, the OECD has long felt the need to make regional data more easily available on the web in an interactive and powerful way. In particular, to make more extensive use of maps which, more effectively than a graph, can convey the four dimensions included in the regional database: statistical indicator, time variable,

country value and regional value. Moreover, many users expressed wishes to be able to select subsets of the database and display the results in maps linked to analytical tools and export views of maps and charts for use in other contexts.

Target groups for such a knowledge-generating visualization tool are quite diverse. A primary target group is of course the OECD experts themselves and the country experts involved in the policy evaluations. Other audiences include regional planners in countries, regional policy makers in a broader sense, journalists looking for interesting stories about regional differences, as well as the informed citizen. Because of the different expertise and needs of the target-groups, the tool should be flexible and adaptable, so that different versions could be presented to different audiences.

Layered components architecture

OECD eXplorer is developed by the research team at NCVA,

Linköping University. The architecture fully supports the need for flexibility and adaptability just mentioned.

The GeoAnalytics Visualization (GAV) component toolkit developed by NCVA enables rapid deployment of customized and user-centric applications by combining low-level atomic and functional components, each one performing a small specific task in the overall GeoAnalytics process. The component way of thinking enables a shorter development time, scalability, extensibility, reusability and robustness of applications.

The applications are built from components on two levels, Atomic components that are combined into Functional components.

The **Application** is the level that is constituted by the combination of one or more functional components. This level is end-user accessible and typically implements one or more of the functionalities in a multiple-linked view environment.

Parallel coordinates plot – an innovation in statistics

The parallel coordinates plot PCP that is part of the eXplorer has never been used in statistics before, and it offers very useful features, although it has a long history within the visualisation research community. The technique provides the following features:

- Powerful dynamic range sliders and statistical methods for selecting regions with one or more variables within certain intervals or percentiles;
- Revealing correlation between indicators;
- Evaluating the degree of similarity between regions;
- Finding clusters and outliers;
- Picking and highlighting of interesting data items for profile and comparison;
- Comparison of individual characteristics of a region to the characteristics of all regions; and,
- Comparison of variations of values of different indicators;

Each region is represented by a string (polyline) that intersects the axes at the values of the attributes for that region. Each axis represents a single indicator (e.g. population share in age groups 0-14, 15-64 and 65+, etc.) in the statistical data set. Each indicator axis corresponds to a variable. The scaling of the individual axes typically ranges from the indicators minimum values at the bottom to their maximum values at the top. The string forms a visual representation of the characteristics of one regional area - see the highlighted thick black line representing Paris in the figure below.

Differences between selected regions can be seen by comparing the strings representing them and plotted with different line styles. The number of indicators that can be visualized is restricted only by

the horizontal resolution of the PCP view. This new PCP Flash version has been further extended with dynamic visual inquiries, thresholds and filter operations using range sliders and percentile statistics.

Filtering is here performed using range sliders positioned at the top and bottom of the indicator axes. The first filter condition represents "high percentage for age group 0-14 (above mean value)", followed by a second condition "high values for Yearly GDP growth 1995-2005 (above mean value)". The resulting map shows regions with potential future high economic growth based on a combination of both many younger people and a GDP growth pattern. The Data Grid provides a list of all regions that fulfil the condition.

First Meeting of the OECD Working Party on Trade in Goods and Trade in Services Statistics (WPTGS)
Andreas Lindner, OECD Statistics Directorate

The first meeting of the Working Party on International Trade in Goods and Trade in Services Statistics (WPTGS), continuing in a new format/status of the eight annual meetings of the previous expert groups, was a clear success, with 140 delegates from 50 countries/organisations attending.

The meeting benefitted from inputs from several OECD Directorates, users of trade statistics, namely: Trade and Agriculture; Science, Technology and Industry; and Financial and Enterprise Affairs.

Much attention was paid to user analysis and several papers on

trade/globalisation were presented. While the format of the meeting was considered adequate, the Secretariat will strive to achieve an even greater integration of issues relating to trade in goods and trade in services.

In terms of content:

- All accession countries attended and two Enhanced Engagement countries made presentations: China and Brazil. The OECD's enlargement strategy, and the need for it, was explained and well understood.

- Answers to the OECD questionnaire provided a lot of interesting information on developments in OECD member, accession, and enhanced engagement countries. The Secretariat is considering preparing a working paper summarizing the key findings from the questionnaire.

- Inter-Agency co-operation was once again strong and highlighted. The OECD paper triggered constructive discussion. Several delegates shared the OECD's plea for going beyond the status quo. A new Memorandum of Understanding with USND, including trade in services, will be worked out without delay. A proposal from IMF and Germany invited the OECD to think about a framework for a harmonized inter-agency questionnaire and (resources permitting) a guidebook for users.

- Work on trade by enterprise characteristics was given high priority, including possible extension to cover services. There was general recognition of the need to link Input-Output tables to trade statistics, and to further develop work in this area.

- The report OECD Economic Globalisation Indicators 2008 was discussed at the meeting. Participants recognized the OECD lead in statistical work on Globalisation.

- The OECD scoping paper on a unified classification of trade in goods and trade in services was well received. This issue will be followed up, also with National Accounts.

- The implications of SNA2008/BPM6 on trade compilers – in particular the issue of goods for processing, merchanting, software – were discussed in some detail. This area of work could justify further analysis and recommendations by WGTGS.

- Participants stressed the importance of better integrating Business Registers information in the work of WPTGS. The Secretariat drew the attention of Delegates to the forthcoming meeting of the Wiesbaden City Group on Business Registers, to be held at the OECD in November 2008.

The Secretariat, together with the WPTGS Chair and Bureau, will assess the outcomes of the meeting in more detail in order to identify priorities for further work. This will lead to the preparation of a roadmap identifying concrete deliverables.

Detailed information about the meeting, including papers and presentations, can be found at: www.oecd.org/std/its/wptgs2008

For further information, please contact: andreas.lindner@oecd.org

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Launch of ComStat

The Commission for Communication Regulation's (ComReg) ComStat website was launched in January 2008, providing a one stop shop for up to date statistical information on the communications market in Ireland.

Comstat was developed in order to act as a central portal for presentation of statistical data and analytical research on the Irish communications market and facilitates personalised downloads of statistics. The information and statistics stored on the site are derived from a variety of sources, but are mostly reliant on data obtained from authorised electronic communications operators, as well as surveys of consumers commissioned by ComReg.

ComStat is aimed at providing information to the widest audience including users from industry, analysts, students and journalists.

There are two key areas to this website:

- Statistical data files extracted from quarterly reports.

- End-user survey data covering areas such as broadband, and fixed and mobile communications.

Users can extract and manipulate data in a number of formats such as CSV and HTML files. Links to other useful sources of data on electronic communications are also provided including the OECD's Broadband Portal, data published by the European Commission, the International Telecommunications Union (ITU) and the CSO's annual Information Society surveys among others.

ComStat can be accessed at www.comstat.ie

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The ECB Inflation Dashboard
Xavier Sosnovsky and Gérard Salou, European Central Bank

The ECB has just released a new Inflation Dashboard on its web site. This is an interactive dashboard designed to visually analyse the development of inflation in the euro area. The aim of this tool is to enhance the understanding of inflation statistics, as compiled and published by Eurostat and EU National Statistical Institutes.

The new ECB inflation dashboard allows users to:

The ECB Inflation Dashboard

Source: Eurostat and ECB
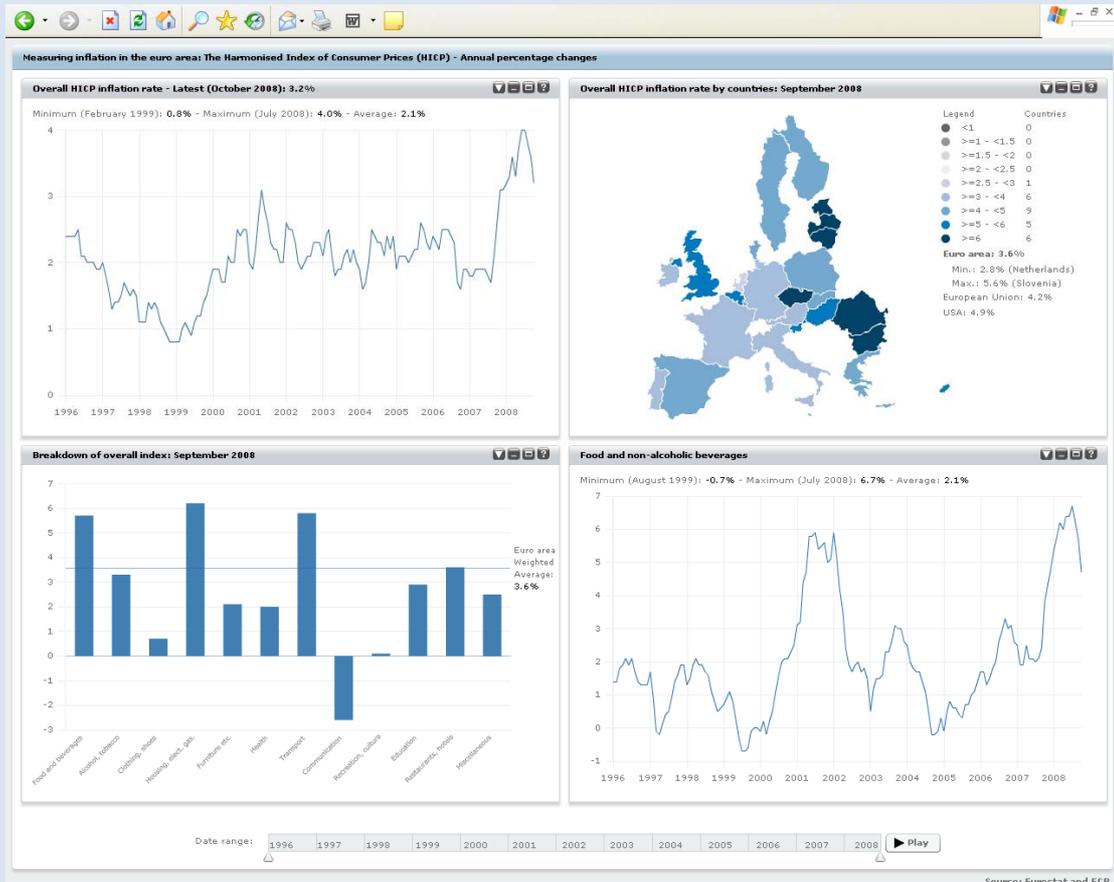
- Easily see both recent and longer-term inflation developments in the euro area, including the breakdown by category of goods and services and by country.

- Compare the evolution of components of inflation over time and across countries on a single screen, in the form of graphs or tables.

- Select the period of interest and play a movie showing the evolution of inflation over time.

- Show, on one screen, key information about inflation in the euro area broken by purpose of consumption or following the classification used at the ECB for economic analysis.

- Find further information on detailed inflation developments.

This ECB inflation dashboard is available at:
http://www.ecb.europa.eu/stats/prices/hicp/html/inflation.en.html

SDMX concepts such as code lists, concepts, dimensions, data sets, time-series, metadata and observations have been developed within the language of the visualisation tool (Adobe FLEX) so as to be able to use it as a statistical package, i.e. the objects that can be controlled and visualised using the visualisation package.

The ECB will continue this development and intends to add more economic variables to this dashboard, which has been developed as part of ECB's

efforts to further improve its communication on statistical matters with the public.

ISIC Rev. 4 officially released
Ralf Becker, UNSD

The fourth revision of the International Standard Industrial Classification of All Economic Activities (ISIC) was released by the United Nations Statistics Division (UNSD) in August 2008. This release concluded a revision process that spanned several years and resulted in a substantially changed classification that will form the basis for collecting, disseminating

and analyzing economic data for years to come.

Main objectives of the revision

Since the release of the third revision of ISIC in 1989, a number of technological innovations have led to the creation of new activities (industries), new products have entered the markets and globalization has reshaped existing production organization around the world. Therefore ISIC needed to be further revised to remain relevant for the newly emerging production structures.

Some of these new activities were difficult to identify in ISIC Rev. 3, while others were virtually impossible to classify or were grouped with other activities, not reflecting their own importance. This was widely perceived as an inadequacy of the ISIC Rev. 3 structure. In addition, the increasing influence of globalization of production has led to questions on whether and how this form of production organization should be reflected in the classification structure and rules. These efforts represented the need for relevance of the classification in today's economy.

A second important objective of the revision was to harmonize existing activity classifications around the world by improving the comparability, in particular, between ISIC, the Activity Classification of the European Communities (NACE) and the North American Industry Classification System (NAICS). While the relationship between ISIC and NACE has already been very close (at least since the 1989 revision of both classifications), a better link between ISIC and NAICS, which was first published in 1997, emerged as desirable goal that was supported by many users of the classifications. In addition, some conceptual elements introduced in NAICS had received wide attention and

Table 1. Simple comparison of categories in ISIC Rev. 3, ISIC Rev. 3.1 and ISIC Rev. 4

	ISIC Rev. 3 (1990)	ISIC Rev. 3.1 (2002)	ISIC Rev. 4 (2008)
Sections	17	17	21
Divisions	60	62	88
Groups	159	161	238
Classes	292	298	419

recommended as possible improvements to ISIC.

The strong desire for improved relevance and comparability of ISIC was countered by an equally strong desire for continuity of the classification, i.e. to minimize the changes to the classification in order to retain time series and facilitate analysis. It was clear however that these three objectives could not be easily achieved simultaneously and the strategy for the revision process was defined as "improving relevance and comparability under the constraints of continuity". This strategy essentially translated into an approach where changes to the previous version of ISIC were made only if they constituted a real improvement of ISIC, especially in terms of relevance that would outweigh concerns of breaking of time series.

It should be noted that in many cases requests for changes to the previous version of ISIC pertained to identifying new, specialized industries, which in turn resulted in a more detailed version of the classification. This introduction of detail, however, has been a major obstacle to ensuring continuity in long time series, but the need for more relevant, detailed information clearly outweighed these concerns.
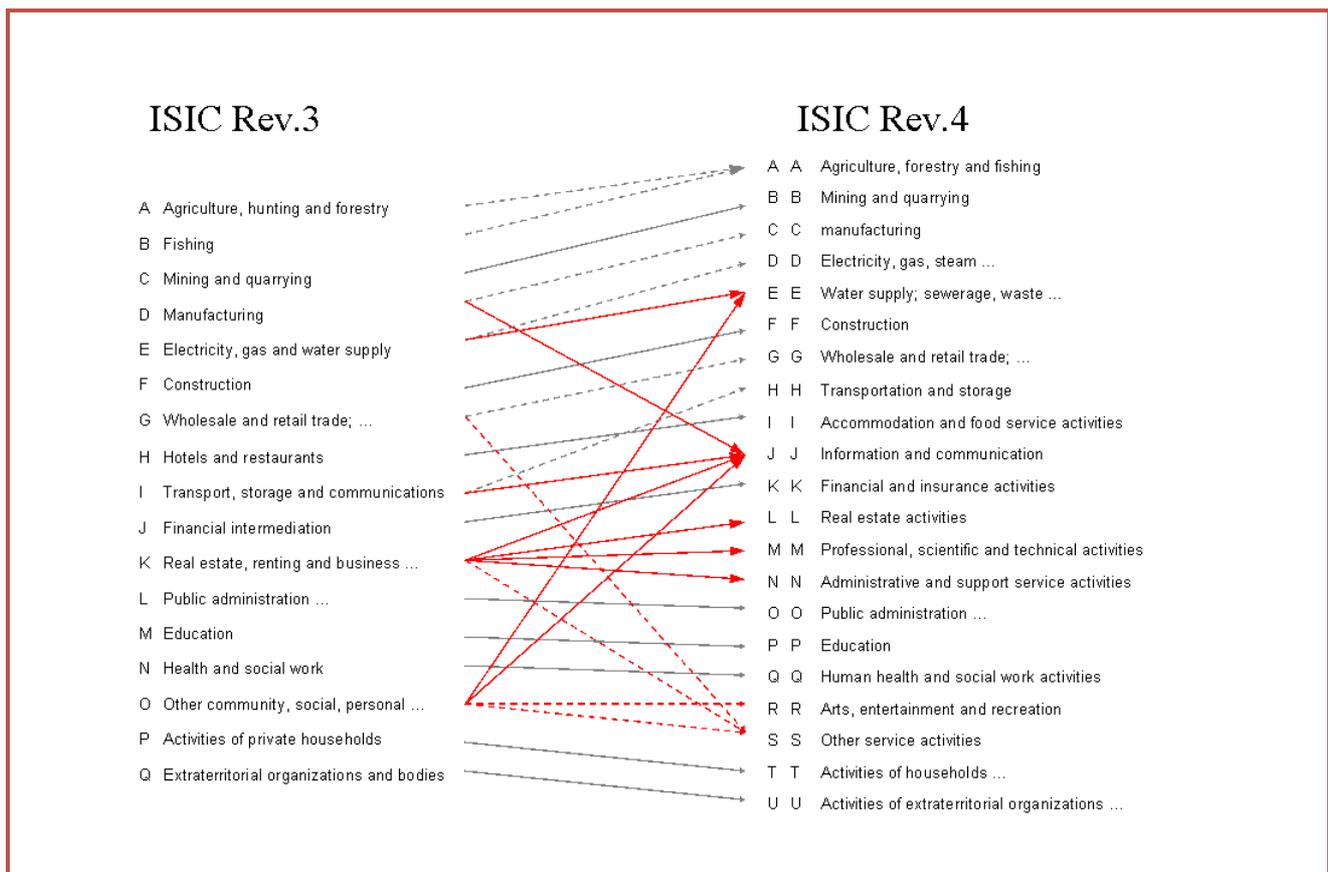
Governance of the revision

The development of ISIC Rev. 4 was initiated by UNSD after receiving the mandate from the

United Nations Statistical Commission in 1999. At that point the Commission recommended undertaking the revision of ISIC in two distinct steps. The first step was to result in the preparation of the ISC Rev. 3.1, which was limited to the improvement of the explanatory notes, introductory text and minor structural changes at the four digit level, while the second step was to result in a comprehensive review and revision of ISIC to be submitted in 2006 to the Statistical Commission.

Main changes in ISIC Rev. 4

The changes introduced in the new version of the classification range from fundamental changes, visible at the highest level of the classification, to minor adjustments to the scope of individual classes (it is not possible to list or discuss all changes in this article). The changes can be roughly summarized in three categories: (a) introduction of new concepts at higher levels (e.g., "information and communication" or "waste management and remediation activities"); (b) regrouping of activities that are residuals of the previous type of changes; and (c) smaller adjustments and clarifications of concepts at lower levels, typically driven by efforts to enhance comparability.

ISIC continues to be built on a production-oriented or supply-based conceptual framework

ISIC Rev.3

A   Agriculture, hunting and forestry

B   Fishing

C   Mining and quarrying

D   Manufacturing

E   Electricity, gas and water supply

F   Construction

G   Wholesale and retail trade; ...

H   Hotels and restaurants

I   Transport, storage and communications

J   Financial intermediation

K   Real estate, renting and business ...

L   Public administration ...

M   Education

N   Health and social work

O   Other community, social, personal ...

P   Activities of private households

Q   Extraterritorial organizations and bodies

ISIC Rev.4

A A   Agriculture, forestry and fishing

B B   Mining and quarrying

C C   manufacturing

D D   Electricity, gas, steam ...

E E   Water supply; sewerage, waste ...

F F   Construction

G G   Wholesale and retail trade; ...

H H   Transportation and storage

I I   Accommodation and food service activities

J J   Information and communication

K K   Financial and insurance activities

L L   Real estate activities

M M   Professional, scientific and technical activities

N N   Administrative and support service activities

O O   Public administration ...

P P   Education

Q Q   Human health and social work activities

R R   Arts, entertainment and recreation

S S   Other service activities

T T   Activities of households ...

U U   Activities of extraterritorial organizations ...

that groups producing units into detailed industries based on similarities in the economic activity. In general, ISIC Rev. 4 has tried to apply a more consistent approach, namely the use of the production process to define categories at the most detailed level. Therefore, activities that share a common organizational process in producing goods or services and use similar technologies are grouped together. As mentioned above, however, the strong need for continuity, i.e., comparability with previous versions of the classification, has sometimes overridden changes in the classification that could have been made from the viewpoint of a consistent application of such a rule. It should be noted that at higher levels of the classification the similarity in production process becomes less relevant and other factors, such as general analytical usefulness, determine the scope of individual categories.

Overall, ISIC Rev. 4 provides more detail at all levels of the classification.

The figure above shows the changes at the highest level of the classification. The changes at this level were driven by the introduction of new concepts and subsequent necessary adjustments of remaining categories.

Shown in solid red lines are the three major conceptual changes in ISIC Rev. 4, namely, (a) the creation of a new section for Information and Communication, which draws elements from previous manufacturing, communications, business activities and other services sections, (b) the creation of an "environment-related" section for water supply, sewerage and waste treatment and remediation, and (c) the breaking up of the previous section for real estate, renting and business activities into three distinct sections.

Shown in dotted red lines are secondary changes made, taking into account the now changed scope of the "other services" category, that (a) separated arts, entertainment and recreation as an important group of activities in their own right, and (b) grouped a number of repair activities together. It should be noted that originally a complete grouping of all repair activities was considered, which was however not supported by all countries. A compromise solution agreed to by the Expert Group in 2003 resulted in the current setup that includes 1) the repair of motor vehicles in section G, similar to the treatment in ISIC Rev. 3, 2) the repair of machinery in manufacturing, although now separately identified, and 3) the repair of computers and household goods in section S.

The links shown in dotted grey lines represent the default links for items not covered by the changes described above, which

can in some cases, e.g. for manufacturing, account for the majority of those sections.

The remaining links shown in solid grey lines cover sections whose scope has not been changed in this revision.

The newly created sections also feature expanded detail that was not available in previous versions of the classification, further responding to the need for more descriptive data about these growing industries. For instance, the activities related to sewerage, waste management and remediation, which are now covered in 8 classes in section E of ISIC Rev. 4, were all combined in a single class in ISIC Rev. 3, which in addition covered other activities as well.

The newly introduced high-level concepts now allow the grouping of activities that are considered together for most analytical purposes. The section for Information and Communication covers the activities concerned with the production and distribution of information and cultural products; the provision of the means to transmit or distribute these products, data or communications; information technology activities; the processing of data and other information service activities. This addresses changes brought on by the increasing use of electronic forms of communication that have changed the way content products are being created and distributed. The historical anchoring of publishing activities within manufacturing did no longer reflect the nature of this type of activity, in which not a physical product, but rather information is the key output of production and key object of marketing and distribution.

It should be noted that the section for Information and Communication is not the same concept as "information economy" or "ICT industry", developed for other analytical purposes. That concept includes elements of manufacturing, trade and service industries, which could not be combined in the classification structure without major disruptions to other established concepts, such as manufacturing, and could consequently not be justified on a conceptual basis. The issue of providing a definition of the "information economy" has been addressed in a special alternate aggregation for ISIC, which is shown in the official publication and encourages the use of a consistent definition of the "information economy" in terms of ISIC Rev. 4 categories.

As countries have been requested to conform with ISIC at least at the two-digit level, some of the categories of interest have been elevated to two-digit categories, rather than leaving them at three-digit levels. For developed countries it is however assumed that most will follow ISIC to a much more detailed level, ideally even the 4-digit level. European countries applying NACE would automatically fall in this group.

Apart from the usually noted changes in the classifications structure, the classification of any particular unit may also change due to revisions of the application rules that govern the use of the classification. In the case of ISIC Rev. 4, one particular change concerns the treatment of vertically integrated activities.

It should be noted that existing rules for the application of the top-down method and for the classification of statistical units engaged in outsourcing have been more clearly elaborated. In particular the treatment of outsourcing in the classification has not been without controversy. However, the present rule is also consistent with other statistical frameworks that measure goods for processing and is also consistent with the definition of appropriate products in the Central Product Classification. It should also be noted that the current treatment is not a change to previous versions of the classification. However, the text of previous rules was rather short and interpreted differently leading to inconsistent application of the classification in some cases. As with all changes in classification structures or classification rules, the classification of individual companies may change, possibly resulting in shifts in the industry structure (as statistically presented) for individual countries. The more precisely elaborated rules in ISIC Rev. 4 should lead to a more consistent application, more comparable data and a better description of actual production patterns around the world.

Comparability with other activity classifications used in OECD member countries

Many OECD member countries have a long history of using activity classifications that have been developed specifically for national purposes and have evolved over time. More recently, issues of comparability with other classifications have received more widespread attention and efforts are being made to harmonize these classifications with the international standard.

NACE Rev. 2 is now being used as the standard classification by all member states of the European Community, as well as by numerous other countries that either follow EU statistical standards or receive technical assistance from EU members. The previous versions of NACE and ISIC were fully aligned and experiences of NACE users have greatly contributed to the ISIC revision process and the parallel conducted NACE revision process. The resulting revised classifications are again fully aligned. At the 1- and 2-digit

level of the classifications, both are in fact identical, while at the 3- and 4-digit level NACE introduces additional detail in a way that can be fully aggregated into ISIC 3- and 4-digit categories. As such, comparability of data at the ISIC level is fully ensured.

NAICS was developed in 1997 and subsequently updated in 2002 and 2007. Some of the new concepts introduced in NAICS have been adopted for ISIC as well and have in fact driven some of the changes for service activities in the classification. The comparability between NAICS and ISIC has greatly improved in this revision of ISIC. While the top-level structures are different in both classifications, it is possible to aggregate the more detailed NAICS categories into ISIC categories with minimal losses. A complete detailed correspondence table between NAICS and ISIC is being completed. The better alignment between the classifications is clearly visible in the services sections and for the revised manufacturing areas in ISIC. Discrepancies at detailed levels still exist in some manufacturing areas due to the fact that these are rather stable, historically grown areas of the classification that serve their purposes well in the applicable economies and none can be considered conceptually superior than the other. A full alignment of both classifications would require major changes to the structure (possibly in both classifications) in manufacturing, which was considered impossible to justify at this point in time. It should be noted that NAICS is being maintained by three countries (US, Canada and Mexico) that use slightly different versions of the classification, with differences appearing typically at the detailed level. Efforts are underway to reduce these differences.

The Australian and New Zealand Standard Industrial Classification (ANZSIC) was revised in 2006. Although the revision of ISIC was not fully completed at that time, the overall structure of ISIC was finalized and ANZSIC was developed with the latest knowledge about the ISIC revision at that time. While differences at the most detailed level may exist, efforts have been made to align definitions in a way that allow for data reporting at least at the 2-digit level of ISIC.

The Japan Standard Industrial Classification (JSIC) has also been revised while the ISIC revision process was ongoing and has taken on some of the new features of ISIC in the process, resulting in a very similar structure (see http://unstats.un.org/unsd/class/intercop/expertgroup/2007/AC124-21.PDF).

Implementation

After the completion of the revision process and the publication of the final version of ISIC Rev. 4, the focus will now shift to assist countries in implementing the new classification.

At its meeting in April 2007, the Expert Group agreed to a timeline that encourages countries to set up their own national classification based on, or compatible to, ISIC Rev. 4 by 2009. After implementing the revised classification in their business registers and statistical programmes, countries should be able to report data in terms of ISIC Rev.4, either to international agencies or for other comparative purposes, by 2012.

UNSD is working on a number of tools that will help countries in this process and will use these tools also in regional workshops aimed at the assisting countries in the implementation. This set of tools includes: (a) a detailed correspondence table between ISIC Rev. 4 and the previous version, (b) an ISIC Rev. 4 index and (c) an Implementation Guide outlining steps for a successful adaptation of the international classification to specific national needs, the implementation of the new classification in business registers and surveys, as well as aspects of backcasting of statistical series.

Although ISIC Rev. 4 was officially released in August 2008, the final classification structure has been publicly available since November 2006. Many countries have already made use of that information and have started, or even completed, the development of their own national classification based on ISIC Rev.4. These efforts are known for a number of Latin American countries, member countries of the Association of South East Asian Nations (ASEAN) and others. In addition, countries using the revised European activity classification NACE Rev. 2 are fully compatible with ISIC Rev. 4. With these efforts it is expected that the acceptance of ISIC Rev. 4 will be greater than that of its predecessor and that by 2012, as recommended by the Expert group, the majority of countries will be ready to provide compatible data according to the new classification.

For more information about ISIC and related documents, see: http://unstats.un.org/unsd/cr/registry/isic-4.asp

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The OECD Statistics Directorate wishes all readers...

A HAPPY FESTIVE SEASON AND GOOD HEALTH FOR 2009

Human Capital: From "Counting" to "Accounting"

Marco Mira d'Ercole, OECD Statistics Directorate

Beyond physical and financial assets, on one side, and natural and environmental resources, on the other, another type of capital plays a key role in sustaining economic growth and societal well-being: human capital. Adam Smith talked about human capital more than three centuries ago, arguing that economic activity is fuelled not by workers as a collective mass but by "the acquired and useful abilities of all the inhabitants or members of the society" and that these abilities, once attained, stand as "a capital fixed and realised, as it were, in his person". Since the second half of the XXth century, human capital has played an increasingly visible role in discussions on the determinants of economic growth and, more generally, of the progress of societies.

Human capital is a short-name for the skills and knowledge that each person gains through formal education and other types of training and that – in combination with their innate talents – determine his or her ability to perform different types of productive activities. Human capital is not limited to the competencies learned at school or university: what really counts is the capacity to apply this knowledge to everyday's tasks, to interpret new phenomena, to identify innovative solutions, and to interact with other people.

From an economic perspective, investment in human capital is a critical factor for economic growth, for the simple reason that this growth is, more than ever, based on technical advances that demand workers are always more skilled and qualified. In the long run, higher investment in human capital leads to stronger growth in economic production, sometimes more than proportional. This process has occurred in the United States and, in recent years, in emerging economies such as China, which has recorded some of the strongest increases in human capital investments, in particular in formal education. At the individual level, the returns to education have increased strongly over the past decades in the United States and many other OECD member countries, contributing to wider income inequalities between people with different educational attainment.

Investments in human capital also have social returns, such as improvements in health outcomes and life-expectancy of better educated people, lower undesired fertility in less developed countries, and more active participation in civic and social life. These social returns improve the quality of life of both the person involved as well as of the community of which they are part. Because of these range of pay-offs, and of its links to a variety of other fields (such as health, paid-work, and caring), the concept of human capital enters contemporary debates in a variety of forms: as a driver of economic growth and innovation; as an investment to secure greater access to jobs, higher income and lower poverty; and as one of the assets that we need to preserve and develop – on par with natural capital – to secure sustainable development.

Despite its importance, however, the measurement of human capital remains elusive. Although some estimates suggest that, for the world as whole, its value far exceeds that of physical capital, the scientific community, national statistical offices and international organisations are still struggling to identify comprehensive and shared criteria to measure the level and distribution of human capital in today's societies. Of course, physical proxies (such as average years of schooling for the population of working age) exist, but these measures have important limits. For example, they ignore differences in competencies among people with the same years of schooling; they disregard what people learn outside schools, both on the job and through exposure to information flows that have become more accessible and extensive; and they neglect the amount of resources (in terms of both time and money) that feeds these learning processes.

Despite these limits, a shared consensus exists today on the importance of developing more comprehensive and reliable statistics on human capital. The importance of developing measures in this field is made forcefully by the recent report of the joint UNECE/Eurostat/OECD working group on statistics for sustainable development, which argues that sustainability should be assessed by looking at whether per capita stocks of different types of capital (including human capital) are on a non-declining path. Measures of human capital could also play an important role in orienting public policies, increasing government's accountability for their own decisions, and in favouring a dialogue among the many agencies that share responsibilities in human capital investments. A similar consensus, twenty years ago, was at the origin of the OECD's Programme for International Student Assessment to measure the competencies of students aged 15, whose results have been so important in guiding several important reforms of educational systems in OECD member countries. The comprehensive measurement of human capital needs today a similar co-ordinated effort.

To address these challenges, the OECD Statistics Directorate – in

the context of the "Global Project on Measuring the Progress of Societies", undertaken in co-operation with the United Nations, the World Bank, the European Community and a long list of other partners – organised on 3 and 4 November 2008 an international workshop in Turin, Italy. The basic goal of the workshop (organised in co-operation with the Fondazione Giovanni Agnelli, an Italian institution with an intense research programme on educational and training systems) was to see whether a consensus could be reached on how to proceed, in practical terms, to extend standard accounting principles to the measurement of human capital. Such a step – which could only be achieved through the involvement of national accountants in individual countries – would allow to integrate in a comprehensive accounting framework monetary measures of both the inputs into education (from parents, students, firms and public institutions) and of the outputs produced (in terms of higher income for persons with higher education). Practical guidance in the construction of this and other types of non-market accounts was provided in 2005 by a report prepared by a panel of the US National Academy of Sciences (Beyond the Market), which stressed the importance of separately measuring both the inputs to and the outputs from a range of non-market activities (such as home production, education, health, the public and non-profit sectors, and natural resources), and of measuring both values and volumes of each of the two sides of these accounts

The workshop gathered some of the leading international specialists in this field and practitioners from 15 OECD member countries, Chile, Israel and Slovenia, as well as Eurostat and the UNECE. A number of elements and conclusions emerged from the discussion,

which seemed to be widely shared by participants to the workshop:

• First, there was agreement that the approach based on incremental earnings and discounted life-time income provided the best conceptual basis for measuring the output of the education sector.

• Second, it appears that variants of the approach based on discounted life-time income pioneered by Dale Jorgenson and Barbara Fraumeni for the United States have been applied by countries such as Australia, Canada, Norway, Sweden and the United Kingdom.

• Third, these empirical applications allow measuring both the total value of the stock of human capital and to assess the importance of various drivers in its accumulation, such as population ageing and migration. Estimates of human capital based on these applications far exceed those of more conventional forms of capital, and their robustness can be tested for their sensitivity to changed assumptions.

• Last, there was agreement that an approach based on discounted life-time income could be extended to a larger number of countries using a streamlined approach based on grouped data, and that this approach could be incrementally expanded to other dimensions of human capital (such as on-the-job training and early childhood education).

These conclusions provide the OECD with a road-map for future work in this area. The OECD Statistics Directorate intends to pursue this work, and is seeking to mobilise resources to further this goal. One possible format of

future work in this area could be that of a consortium of countries, with central coordination provided by the OECD Secretariat. This consortium would develop methodological guidelines on how to construct human capital accounts, and implement them in a number of countries. It was agreed that, should the efforts to mobilise additional resources materialise, the OECD and the Fondazione Agnelli could convene another meeting in 12 to 18 months to review progress.

A final consideration needs to be made. Anchoring firmly human capital measurement in the statistical agenda of national and international organisations has, today, a political significance that should not be ignored. More than ever, in today's context characterised by the financial turmoil and by its impact on firms and households, statistical work needs to focus on the fundamental factors that drive economic growth and the well-being of people, and first among these factors is investments in human capital. Higher and better investment in knowledge and skills are basic requirements to restore economic growth and the well-being of people, and first among these factors is investments in human capital. Higher and better investment in knowledge and skills are basic requirements to restore economic growth that is more sound, equitable and sustainable over time.

NEWS IN BRIEF

Large Statistics New Zealand database now online

A large time series database, which was previously only available to paying customers, is now available free of charge on the Statistics New Zealand website.

The database, called Infoshare, contains a large range of information about New Zealand that is useful to businesses, community groups, researchers, schools, and the general public. It will be added to virtually every weekday and within five minutes of new data being officially released.

This tool carries information about New Zealand that people can tailor to their individual information needs, such as:

• Economic information (e.g. price indexes, gross domestic product, balance of payments…).

• Demographic measures (e.g. births, deaths, life expectancy…).

• Industry information (e.g. retail sales, number of businesses…).

• Production data.

• Income and work data (e.g. average earnings…).

• Travel and migration data.

• International trade.

• Building consents data.

With Infoshare, users can also:

• Find tables by searching or browsing through a list.

• Download customised tables in Excel or comma separated variable (CSV) format.

• Print tables.

Infoshare will be enhanced in the future to include detailed international trade data.

To access Infoshare, go to the Statistics New Zealand website: www.stats.govt.nz

Infoshare is part of a wider initiative to progressively make a large range of Statistics New Zealand's data and products available for free.

A summary of all products and data to be made available for free can be viewed at: www.stats.govt.nz/about-us/making-more-information-free/default.htm

RECENT PUBLICATIONS

All OECD publications can be ordered on line at: www.oecd.org/bookshop

▲Bank Profitability, Financial Statements of Banks
▲Bank Profitability, Methodological Country Notes (2007 edition)
The statistical volume provides statistics on the income statements and balance sheets of banks in 27 OECD member countries. It also includes data relating to the structure of the financial system and to the share of domestic/foreign currencies and resident/non-resident assets in the total assets/liabilities of banks. Furthermore, a number of ratios in percentage of a selection of aggregates are presented to meet the analytical requirements of users such as policy makers, banking experts and market analysts. Statistics are presented according to a comprehensive standard framework to allow comparisons. The methodological volumes provide detailed information on the institutional coverage, the geographical coverage and degree of consolidation, the structure of the banking system as well as a brief description of the activities of banks in each country and explanations on individual items. They aim at facilitating the comprehension and the interpretation of the statistics.

▲Labour Force Statistics 2008
This annual edition of Labour Force Statistics provides detailed statistics on population, labour force, employment and unemployment, broken down by sex, as well as unemployment duration, employment status, employment by sector of activity and part-time employment.

OUT SOON

▲OECD Statistics on International Trade in Services: Volume I (Detailed tables by service category) 2008
This publication, which is jointly produced by the OECD and Eurostat, includes statistics by detailed type of service on international trade in services for the 30 OECD countries*, the European Union and the euro area as well as analysis, definitions and methodological notes. The data are reported within the framework of the fifth edition of the IMF's Balance of Payments Manual and the Extended Balance of Payments Services Classification (EBOPS), which is consistent with the balance of payments classification but is more detailed.
This book includes summary tables by country and by service category and zone totals for the European Union, Euro area, G7, NAFTA, OECD - Asia and Pacific, OECD - Europe and total OECD which are comparable.

Forthcoming OECD Meetings

N.B. Unless otherwise indicated attendance at OECD meetings and Working Parties is by invitation only

2009	
19-21 January	SDMX Global Conference, Paris France www.oecd.org/std/sdmxconference2009
12-13 February	OECD Workshop on Food Prices, Development Assistance Committee, DCD
5-6 March	STD Task Force on Data Dissemination, Statistics Directorate (STD), Paris, France
25-27 March	Working Group on International Investment Statistics (WGIIS), Investment Committee, Directorate for Financial and Enterprise Affairs (DAF), Paris, France

Other Statistics Meetings

2009	
21-22 January	Data, Analysis and Policy: the Three Faces of Energy Efficiency Indicators, International Energy Agency (IEA), Paris, France. Jointly organised by the International Energy Agency and the EU ODYSSEE-MURE project
26-28 January	Global Forum on Gender Statistics and Inter-Agency and Expert Group Meeting on Gender Statistics, Accra, Ghana (http://unstats.un.org/unsd/demographic/meetings/wshops/Ghana_Jan2009/default.htm)
23(p.m)-24 March	Research Centre: IRTAD. Meeting of the International Traffic Safety Data and Analysis Group, Paris, France

Measuring the Progress of Societies

Training Course on
Measuring the Progress of Societies

"Statistics, Knowledge and Policy: Understanding Societal Change"

March 25th to 27th 2009, Kyoto (Japan)

Target Audience: 25 high flying leaders of the future from around the world including statisticians, economists, policy makers, and people from the private and civil society sectors.

Main focus: The importance of statistics for democracy and democratic decision-making; measures of progress that go "beyond GDP"; tools to transform statistics into knowledge; evidence, civic engagement and policy making; the role of National Statistical Offices in the 21st Century.

Scope: Is life getting better? Are our societies making progress? How many of us have the evidence to answer these questions? The world is changing and there is a global need, in this 'information age', to better understand social change.

To accompany the international conference on "Measuring and Fostering the Progress of Societies: Key Issues for the Asia and Pacific regions", to be held in Kyoto on March 23-24, 2009, the OECD in collaboration with the University of Kyoto and the Nissan Leadership Program for Innovative Engineers (LPIE) have developed a training course on "Statistics, Knowledge and Policy: Understanding Societal Change". The training will be run directly after the conference. The course has been designed to provide assistance to those wanting to understand the progress of their societies and promote evidence-based debate and policy making. Organised in the context of the Global Project on "Measuring the Progress of Societies" (see www.oecd.org/progress).

Teachers: The emphasis will be on interactive learning, through peer learning, rather than formal teaching. It will be a place to exchange ideas and best practices, to improve collective understanding of global and local progress. Outstanding experts from international organisations and academic institutions will present including: Jon Hall and Barbara Iasiello (Global Project on Measuring the Progress of Societies, OECD); Sawako Takeuchi (Nissan Leadership Program for Innovative Engineers – LPIE and University of Kyoto); Kazuo Ueda (University of Tokyo).

Practical information: The training course will be held at the University of Kyoto. The course will be in English. The course will begin at 9am on 25th March and finish at 5pm on the 27th. The participation fee is 1,200 euros and includes:

- the training course and material
- accommodation (3 nights)
- breakfast and lunches (3 days)
- coffee breaks

Participants will need to be able to cover their own travel expenses to and from Kyoto.

Registration: Space is limited to just 25 applicants. Participants will be selected according to their role and experience in order to achieve a good balance for peer to peer learning. Applicants should write to Ms Barbara Iasiello barbara.iasiello@oecd.org (or contact her at +33 (0) 145249436), attaching a CV. We will let you know as quickly as possible whether your application has been accepted. The deadline for registration is **16th February 2009**.

For more information, see: www.oecd.org/progress/training