

# Power from Statistics: data, information and knowledge

GUIDANCE REPORT

2018 edition



STATISTICAL  
REPORT

eurostat 



# **Power from Statistics: data, information and knowledge**

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**2018 edition**

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# Preface

Throughout Europe, decision-makers from both the public and private sectors are facing the opportunities and challenges of the digital revolution. They need solid evidence to design and monitor policies and be able to take informed decisions. Against this background, the official statistics community must uphold its reputation as a point of reference by delivering high quality and timely statistical information to meet real user requirements.

The 'Power from Statistics' initiative, jointly organised by Eurostat and the European Political Strategy Centre, aims to determine which topics will be relevant to decision-makers and citizens in the future and how official statistics could best deliver information about them.

As a first step, five individual thematic Round Table events were organised. Gathering expert participants from various stakeholder groups, the Round Tables covered trends in migration, globalisation, new economic and business models, sustainable development as well as statistics, science and society.

The Round Table participants wrote a total of 28 articles, setting out their personal reflections and ideas on the future of European statistics. Together, the articles form the 'Power from Statistics Outlook Report'.

The accompanying event — the high-level conference 'Power from Statistics: delivering the evidence of tomorrow' — brought together speakers and panellists from multidisciplinary backgrounds. Policymakers, journalists, business leaders, academics and official statisticians from all over Europe discussed the needs and challenges facing evidence-based policymaking.

This Guidance Report, inspired by the Outlook Report and the conference conclusions, aims to inform and feed into the agenda for European statistics in the years to come. It focuses in particular on how best to respond to constantly evolving user needs.

## EXECUTIVE SUMMARY

Economic, social, technological, climate and geopolitical changes are underway, and in this dynamic situation, policymakers need solid evidence more than ever to be able to take informed decisions. The official statistics community must continuously evolve to preserve its reputation as a point of reference. To this end, the 'Power from Statistics' initiative has provided a number of ideas to be explored:

- Improve **early-stage collaboration with policymakers** and other information requesters.
- Strengthen **cooperation** between official statistics and other disciplines.
- Acquire **new data sources** (administrative data, business system data, e-commerce data, various forms of 'big data'). This includes exploring the feasibility of common rules on access to **privately held** and machine-generated data for statistical purposes, in addition to contributing to **'upstream' standards** for exchanging digital information, as data collected for other purposes might end up being used as official statistics source data.

- **Invite multinational companies to help capture their multinational production and trade**, and provide tailored **support to small and medium-sized enterprises** to help them participate in the data collection system.
- Develop methods of **combining new data sources** with traditional official statistics data. This includes a more extensive use of **model based** approaches.
- Enhance **migration statistics** by collecting data on the characteristics of migrants, such as age, sex, level of education, occupation, duration of stay, etc.
- Develop **labour market statistics** to better cover subgroups of interest (such as migrants), and to capture new phenomena (such as new hybrid forms of employment).
- Explore ways to better understand **changes in business models** and to estimate the size, growth and impact of the **informal and collaborative economies**. This includes appropriate indicators for measuring the **sustainability** of evolving labour market models and new business models, together with their collateral effects.
- Refine the **indicators for measuring the externalities and embedded impacts of production and consumption**, in addition to improving the measurement of **resilience**.
- **Enhance access to statistics in open formats** and **enable the free use of data**, their interoperability and consumption in integrated ways.
- **Communicate uncertainty** to the general public — including scenarios — being transparent about all sources of uncertainty and employing modern didactic methods.
- Work towards **strengthening the brand of 'official statistics'**, compared to other data producers, by emphasising the quality aspects of official statistics.





# 1

## Opening session

WATCH  
VIDEO



### Hosts



#### Mariana Kotzeva

Director-General of Eurostat  
(European Commission)



#### Ann Mettler

Head of the European Political Strategy Centre  
(European Commission)

WATCH  
VIDEO



#### Keynote speech:

**Better data for better policy — opportunities and challenges**

#### Stefaan Verhulst

Chief Research and Development Officer (GovLab)

VIEW  
SLIDES



- Data can inform policy and transform the full policy life cycle
- New data sources can make the policy cycle more agile and informed
- Access to new data sources requires new partnerships

# 2

## Keeping up with the trends in migration

*International migration is on the increase against a background of economic, demographic, technological, climate and geopolitical change. As a result, new information needs on topics such as migrant integration are emerging, while new opportunities — in terms of information sources — are becoming available.*

WATCH  
VIDEO



### Highlights from the discussion of the conference panel



#### Jakub Bijak

Professor of  
Statistical  
Demography  
(University of  
Southampton)



#### Rainer Münz

Special Adviser  
at the European  
Political Strategy  
Centre (European  
Commission)

#### Susanne Melde

Senior analyst at the  
Global Migration  
Data Analysis Centre  
(International  
Organization for  
Migration)



#### Alice Petrén

Migration  
correspondent  
(Swedish Radio)



As well as producing accurate and timely statistics on migration, these figures must be communicated to citizens who may not be aware that such data exist or may not have sufficient background knowledge to understand the figures and their limitations. For example, the focus on irregular immigration can give the impression that irregular immigration is much more significant than regular immigration. Basic statistics, key indicators and storytelling have different roles. Basic statistics are needed for policymaking, but storytelling is better for attracting the attention of the general public. Data visualisations can help effectively communicate key indicators.

Many people migrate to a city rather than to a country, following other people. Thus, the pressures on some areas of a country are much higher than on others. Consequently, methods for estimating local migration are needed. While census data can provide information at local level, these data are not timely. Other kinds of data sources, such as mobile phone data or money transfers, could provide timely estimates but are prone to privacy and representativeness problems.

Models can help disaggregate survey statistics to generate estimates for smaller groups, although they have certain limitations. In particular, the reliability of model-based statistics depends on the accuracy of the underlying survey data and of the model adopted. Moreover, good data are needed to build and validate a model. Modelling could be used together with non-conventional statistics and big data. However, the opaque methodology and ever-changing algorithms used by companies often make it difficult to use big data.

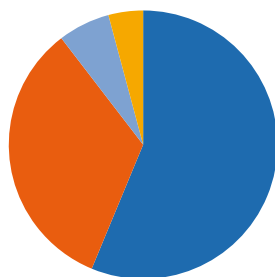
In addition to the number of migrants, the drivers for migration are important, as they determine the migrant category. They are also highly predictive of migrants' future activities, including labour market integration.

## IDEAS

- Strengthen **cooperation** between the various stakeholders to restructure and streamline migration data collection, to allow continuous and timely monitoring of the situation.
- Reflect on the usefulness of **improving definitions of irregular immigrants** and developing corresponding statistics.
- Explore approaches to **enhance migration statistics** by introducing data on the characteristics of migrants, such as age, sex, level of education, occupation, duration of stay etc.
- Explore approaches to **improve migrant-related labour market statistics** (for the immigrant subset) by adding characteristics such as language skills (crucial for integration) and other relevant skills, ensuring that the contractual situations faced by migrant workers are covered.
- Increase the use of **model-based approaches** to migration data — such as small domain (or small area) estimation.
- Explore the potential and limitations of combining survey data with **non-traditional migration data sources**, including ‘big data’.

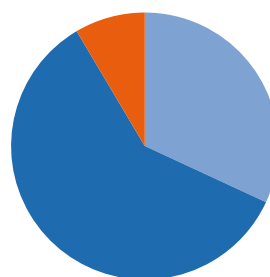
### WHAT DID THE AUDIENCE THINK?

What improvement do you consider to be most needed in the presentation of official migration statistics?



- Narratives/storytelling (27)
- Visualisation (16)
- Social media outreach (3)
- Other (2)

Should official migration statistics rely more on assumptions and modelling?



- Yes, it is good to make the most out of the information at hand (15)
- Maybe, but the models would have to be thoroughly evaluated first (28)
- No, only hard data should be used to produce official statistics (4)

### FURTHER READING IN THE POWER FROM STATISTICS OUTLOOK REPORT

#### Perspectives for model-based official migration statistics

*Jakub Bijak (University of Southampton)*

#### Managing the migration crisis: How statistics can help

*Rita Di Prospero and Luca Pappalardo (Directorate-General for Migration and Home Affairs; European Commission)*

#### Statistics on international migrants: Data quality issues for descriptive characteristics especially when using administrative registrations

*Eivind Hoffmann (International consultant)*

#### International standards for measuring international migration: Definitions, concepts, and terminology

*Jason Schachter (Net International Migration Branch; United States Census Bureau)*

#### Reason for migration statistics and policy research

*Madeleine Sumption (University of Oxford's Centre on Migration, Policy and Society; COMPAS)*

#### Statistics on the duration of migration: Evaluations of data availability and quality

*Filip Tanay (Directorate-General for Employment, Social Affairs and Inclusion; European Commission)*

*Madeleine Sumption (University of Oxford's Centre on Migration, Policy and Society; COMPAS)*

*Laurent Aujean (Directorate-General for Migration and Home Affairs; European Commission)*

# 3 Delivering sustainable evidence for sustainable development

*New situations in areas related to sustainable development may emerge which call for information for policy responses. How can we ensure that official statistics are prepared to deal with as yet unforeseen demands?*

WATCH  
VIDEO



## Highlights from the discussion of the conference panel



**Malgosia Bartosik**

Deputy CEO  
(WindEurope)

**Arno Behrens**

Head of Sustainable  
Resources  
(Centre for European  
Policy Studies)



**Enrico Giovannini**

Professor  
(University of Rome  
Tor Vergata & LUISS  
Guido Carli University)

**Charlina Vitcheva**

Deputy Director-  
General of the  
Joint Research  
Centre (European  
Commission)



Policymakers need raw data, indicators and forecasts to measure the attainment of the sustainable development goals. Data timeliness is crucial. However, in many cases, policymakers have to take decisions based on data that are at least two years old.

Environmental and social resilience are important aspects of sustainable development. Sensors allow some aspects of environmental resilience to be measured, whereas social resilience is more complicated to measure. Models can assist in measuring and managing resilience. However, some resilience models cannot be evaluated empirically *ex ante* — a systemic shock cannot be generated for the purpose of testing the model.

Climate risk could become a component of enterprise statistics. The private sector might be perceived as part of the problem — but also as part of the solution. Companies might now be prepared to share more data — in fact, more and more companies are publishing indicators relating to their environmental impact. For such data to be useful, standards would have to be developed.

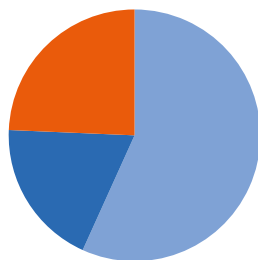
In addition to direct resource inputs, indicators should also incorporate the indirect material flows along the (global) supply chain of goods and services consumed in a country. In that way, they can better measure the environmental impact of consumption.

## IDEAS

- **Develop appropriate indicators** to measure the sustainability of evolving labour market and new business models and their collateral effects.
- **Provide a breakdown of resource productivity by sector** to facilitate assessment of the sustainability of business models in different sectors.
- **Complement input indicators with outcome indicators**, with particular reference to public investments, in order to assess the sustainability of public financial systems.
- **Improve the indicators for measuring externalities and embedded impacts of production and consumption** with harmonised methodologies and data requirements across national, regional and local levels, to ensure transparency and comparability.
- **Generate information for baseline pre-shock, shock and post-shock periods** to better understand resilience. For unanticipated shocks, this will require an agile statistical system capable of rapidly responding to new information needs.
- **Combine geospatial data, remote sensing data and trade data** to gain new insights on sustainability.

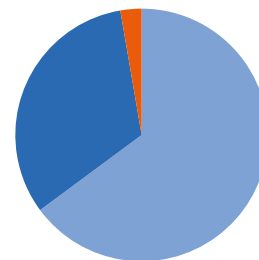
### WHAT DID THE AUDIENCE THINK?

Should statistical offices be more involved in estimating the long-term effect of social, economic and environmental developments?



- Yes, statistical offices should strive to move up the value chain (21)
- Yes, but only within a politically agreed framework (7)
- No, this falls outside the remit of statistical offices (9)

Should statistical offices invest in the collection of embodied environmental data?



- Yes, it is important that official statistics capture these data (24)
- Maybe, but this has to be weighed against other priorities (12)
- No, this is likely to be too complex an endeavour (1)

### FURTHER READING IN THE POWER FROM STATISTICS OUTLOOK REPORT

#### Sustainable indicators for a resource conscious Europe

Arno Behrens (Centre for European Policies Studies; CEPS)

#### Measuring resilience in the context of sustainable development

Franco Conzato (Directorate-General for International Cooperation and Development; European Commission)

#### Data and sustainable finance:

#### How data disclosure could redirect investment towards the economy of tomorrow

Saïd El Khadraoui (European Political Strategy Centre; European Commission)

#### What can foresight do for sustainability indicators and statistics?

Nikos Kastrinos (Directorate-General for Research and Innovation; European Commission)

#### Embedded environmental data in resource flows

Richard King, Felix Preston and Rob Bailey (Chatham House)

#### Data for action; data & dissemination; data and decisions

Alexandra Silfverstolpe (Data Act Lab)

# 4

## Statistics in the digital era

*In the era of social media and political campaigning, when numbers are used as headlines, trustworthy sources and the possibility of fact-checking information has become a necessity. For this reason, post-truth societies can be seen as an opportunity for official statistics to cement their status as a trusted party providing objective figures.*

WATCH  
VIDEO



**Keynote speech:**  
**The pursuit of objectivity in science and public life**

**Ted Porter**

Distinguished Professor of History (UCLA)

VIEW  
SLIDES



- Does respect for data imply intellectual passivity, following rules? Is that objectivity?
- Cost-benefit analysis, which evolved in the United States in the 1930s and through the 1960s, was one of the more compelling expressions of the mechanical ideal of quantitative objectivity.
- If objectivity is supposed to be something mechanical, standing above interpretation, it may not be what we really want.
- When a measure becomes a target, it ceases to be a good measure.
- A public measurement is often already an action. It is necessary to consider in advance how people will react to it.

### Highlights from the discussion of the conference panel

Various societal actors might base their statements on data that are not produced following a transparent methodology. Official statistics should counter 'alternative facts' by providing reliable data in forms that are tailored to different kinds of users. However, the human mind is such that people tend to remember 'fake news' long after it has been disproven.

Official data are helpful to journalists, as they constitute a reliable data source and can help journalists assess the truthfulness of politicians. At the same time, journalists have to critically examine any published data. The journalistic profession cannot be treated as a monolithic whole; it comprises quite a heterogeneous group of statistics users. Due to either a lack of time or numerical skills, some journalists are turned off by raw data, preferring cut-and-dried statistics, accompanied by graphics and/or narratives, which they can easily use in their pieces. Others, such as data journalists, prefer to have access to raw data and analyse it themselves, presenting their own conclusions.

The best data stories are framed into human stories. It is very difficult to explain to people that there might be a discrepancy between their personal experience and what official statistics show. To arrive at the human story, more detailed data, broken down by geography or subgroups, might be helpful.

WATCH  
VIDEO

**Xaquín  
González Veira**

Visual editor  
(xocas)

**Natalia  
Hernández Rojo**

Fact checker for El  
Objetivo de Ana  
Pastor  
(La Sexta)



**Roger A. Pielke Jr.**

Director of the Sports  
Governance Center  
(University of  
Colorado)

**James E. Ridgway**

Emeritus Professor  
(Durham University)



**Aurel Schubert**

Director-General for  
Statistics  
(European Central  
Bank)

Improving the numerical and statistical literacy of citizens, journalists and policymakers will help to increase their awareness and ability to critically assess news, including fake news, and their participation in the democratic process. Many citizens are becoming increasingly data literate and easy-to-use tools can bring statistics closer to them. Sometimes, it is not a lack of numeracy among the general public, but rather among journalists, that prevents facts from reaching citizens.

Communication is not only important after statistics have been produced; the process must be democratic from the very beginning, with discussions on which new statistics to measure and how to measure them.

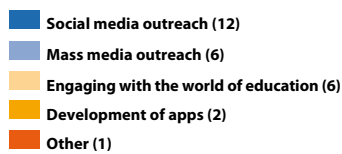
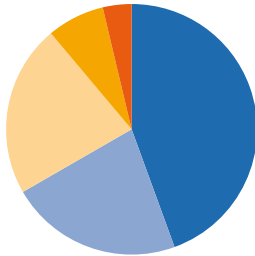
## IDEAS

- Improve the **early-stage collaboration with policymakers** and other information requesters.
- **Attract the attention** of policymakers and society, with emotional appeals, qualitative descriptions, storytelling and visualisation.
- **Adopt effective visualisation tools suitable for target audiences** to break through the information overload, and construct a storyline.
- **Enhance access to statistics in open formats and enable the free use of data**, their interoperability and consumption in integrated modalities.
- **Work towards strengthening the brand of 'official statistics'**, as compared to other data producers, by emphasising the quality aspects of official statistics and making appropriate use of marketing techniques.
- **Communicate uncertainty**, including scenarios, to the general public using modern methods of representing uncertainty in an understandable and transparent way.
- **Improve statistical literacy** by building on and supporting current programmes, initiatives and networks, with the aim of increasing awareness of and trust in statistics.

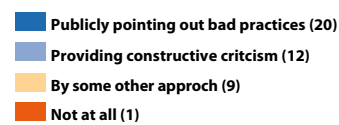
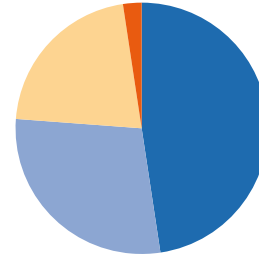


## WHAT DID THE AUDIENCE THINK?

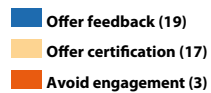
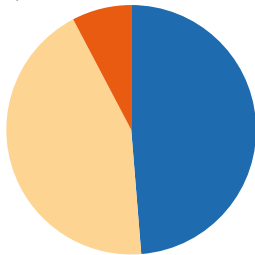
In which communication channels should statistical offices invest more?



How should official statistics engage with 'alternative facts'?



How should statistical offices engage with statistics produced outside the current official statistics system?



## FURTHER READING IN THE POWER FROM STATISTICS OUTLOOK REPORT

### Uncertainty and graphicacy: How should statisticians, journalists, and designers reveal uncertainty in graphics for public consumption?

*Alberto Cairo (University of Miami)*

### Stakeholder involvement in the statistical value chain: Bridging the gap between citizens and official statistics

*Corine Eyraud (Aix Marseille University, CNRS, LEST, Aix-en-Provence; Maison Française d'Oxford)*

### The future role of official statistics

*Walter J. Radermacher (Sapienza University of Rome)*

### New trends in communication: Branding and content marketing

*Sibylle von Oppeln-Bronikowski, Susanne Hagenkott-Rieger and Maria João Santos (German Federal Statistical Office; DESTATIS)*



# 5

## Unleashing the power from statistics

### Host



**Mariana Kotzeva**

Director-General of Eurostat  
(European Commission)

WATCH  
VIDEO



**Keynote speech:**  
**Unleashing the power from statistics**

**Ruth Paserman**

Deputy Head of Cabinet  
(Cabinet of Marianne Thyssen, European Commissioner  
for Employment, Social Affairs, Skills and Labour  
Mobility; European Commission)

- **Statistics are not just about numbers, they are about people.** We need precise, accurate and up-to-date data to provide answers to our questions and assess the impact of our policies. In the 'post truth' era, this is more urgent than ever before, so that statistics can inform policymakers.
- **Rapid integration of refugees and migrants is a moral, social and economic imperative.** To carry out our initiatives, we need reliable information; we already have indicators, but we need to know more.
- **Regarding globalisation, we are not naïve free traders.** This is because we know our numbers and thanks to statistics, we will not be short-changed.
- **Data not only tell us how to act — they also make clear that we must act in the first place.** For this, official statistics are essential.

# 6

## Dealing with ethical dilemmas

*How can the public be sure that the statistics held by statistical offices are safe? The unethical treatment of 1940s census data was still being cited as a reason not to participate in a census decades later. As ever more data are collected about citizens and enterprises, how can we avoid similar controversial disclosures?*

WATCH  
VIDEO



### Highlights from the discussion of the conference panel



**Margo Anderson**

Distinguished  
Professor  
(University of  
Wisconsin)

**Corinna Schulze**

Director, EU  
Government Relations  
(SAP)



**Pernille Tranberg**

Advisor in  
data ethics  
(Data Ethics Consulting)

Collecting sensitive data generates risks and opportunities. The risks are mainly related to profiling of individuals or data integration. However, there are positive examples of both profiling (in the case of uncovering credit card fraud), and of data integration (such as identifying 'food deserts', areas with little access to affordable and nutritious foods).

Profiling of individuals is not new — it was used by the Nazis as well as for the internment of Japanese Americans. However, citizens are becoming increasingly aware of the fact that they are exposed to privacy risks.

There is a risk that some public or private data collected for other reasons could be used for monitoring purposes. Increasingly, organisations are trying to be more specific in the scope of the data they collect or are purging unnecessary data.

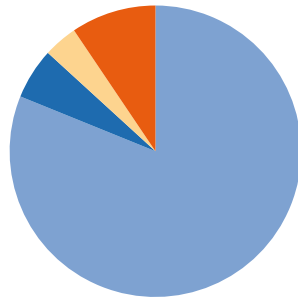
Access to sensitive data must be tracked and data protection must be guaranteed in order to avoid abuse. New technologies such as block chain, which links and secures records using cryptography, might offer ways to avoid abuse. However, the irreversibility of block chain transactions may mean that it is impossible to remove incorrect or sensitive data from the public domain.

## IDEAS

- **Foster standardisation and comparability** by developing a new regulatory framework and ensuring common European Union rules on access to privately held data and machine-generated data for statistical purposes.
- Strive for **public data to be available and free to use**, all the while ensuring confidentiality.
- Preserve the **trust, independence and relevance** of official statistics, by striking the right balance when taking the priorities of the governments into the account.
- Explore the potential of **new technologies**, such as block chain, to prevent abuse.

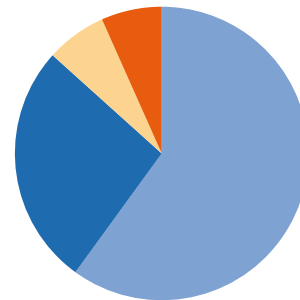
### WHAT DID THE AUDIENCE THINK?

*Is statistical confidentiality still justified in tomorrow's world?*



- Yes, society will change, but the principles will still apply (43)
- Yes, but only for individuals (3)
- Yes, but only for enterprises (2)
- No, everything is likely to already be in public domain anyway (5)

*Should free access to privately held big data for official statistics be guaranteed by law?*



- Yes, the public good outweighs private interest in this area (27)
- Yes, but only in duly justified exceptional cases (12)
- No, this would distort the market (3)
- No (for other reasons) (3)

### FURTHER READING IN THE POWER FROM STATISTICS OUTLOOK REPORT

#### Globalisation and trust

*William Hoffman (World Economic Forum)*

#### The future role of official statistics

*Walter J. Radermacher (Sapienza University of Rome)*

#### Paying for data

*Albrecht Wirthmann (Eurostat; European Commission) and Angelo Meuleman (Taxistop)*

# 7

## Depicting globalisation

*Do the current or planned concepts for globalisation statistics adequately capture the features and consequences of globalisation? Alternatively, will globalisation evolve in a way that requires a different form of measurement? Will it have consequences which would require new types of policy-relevant information?*

WATCH  
VIDEO



### Highlights from the discussion of the conference panel



**Ronald Jansen**

Assistant Director  
(United Nations  
Statistics Division)

**Tim Sturgeon**

Senior researcher  
(MIT Industrial  
Performance Center)



**Christoph Weiss**

Economist at  
the Economics  
Department  
(European  
Investment Bank)

Fragmentation of global value chains has greatly increased the degree of interconnectedness between companies in different countries. Much has been said about the consequences of this change, and several attempts have been made to identify the winners and losers of globalisation.

Data collection for specific countries has become increasingly complex, and multinational enterprises are often requested to deliver data several times. The European register of multinational enterprise groups is a prominent example of a way to facilitate the provision of data by multinational companies, to the mutual benefit of data subjects and official statistics.

The 'power' from statistics comes not only from how data are produced, but also from how they are communicated and the data generating process. Both micro- and macro-level data are needed to effectively communicate globalisation and explain its impact. This includes more detailed data on which positions are being made redundant and which are being created, and in which countries multinationals are paying taxes.

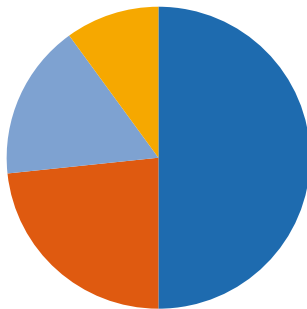
With the increasing digitalisation of the economy, e-commerce could become a highly relevant data source. The collection of e-commerce data is becoming increasingly common in some countries.

## IDEAS

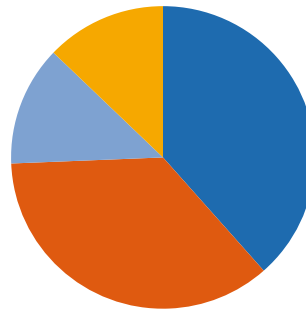
- **Invite multinational companies to help capture their multinational production and trade.** The first step could be asking big companies for cross-border data and perhaps apply innovative approaches to public/private data sharing.
- **Provide specific support to small and medium-sized enterprises (SMEs)** to facilitate their participation in the data collection system, as SMEs play a crucial role in international trade.
- **Contribute to ‘upstream’ standards for exchanging digital information,** as data collected for other purposes might end up as official statistics source data.
- Explore the feasibility of acquiring **business system data** from enterprises and combining them with traditional data sources.
- Further investigate the feasibility of acquiring **e-commerce data.**

## WHAT DID THE AUDIENCE THINK?

What are the priorities for improving globalisation statistics?



How should statistical offices improve data on MNEs?



- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>■ Improved measurement of global value chains (15)</li> <li>■ Move from national to European/global accounts (7)</li> <li>■ Improved statistics on MNEs (5)</li> <li>■ Improved statistics on SMEs (3)</li> </ul> | <ul style="list-style-type: none"> <li>■ Offer incentives for MNEs to provide data (15)</li> <li>■ Collect data at European level (14)</li> <li>■ Share more and better integrate existing data (5)</li> <li>■ Other (5)</li> </ul> |
|--|---|

## FURTHER READING IN THE POWER FROM STATISTICS OUTLOOK REPORT

### New data sources and the integration of existing data

Jyrki Ali-Yrkkö (Research Institute of the Finnish Economy)

### Perspectives on the future of globalisation: How can official statistics keep up with changing global value chains?

Ricardo Borges de Castro (European Political Strategy Centre; European Commission) and Kristel Van der Elst (The Global Foresight Group)

### Beyond international trade in services

Lucian Cernat and Zornitsa Kutlina-Dimitrova (Directorate-General for Trade; European Commission)

### Globalisation and trust

William Hoffman (World Economic Forum)

### Measuring the ‘new’ digital economy

Timothy J. Sturgeon (MIT Industrial Performance Center)

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## Capturing emerging phenomena

*New economic and business models are emerging, with shared platforms increasingly used in sectors such as local transport and short-term accommodation. Regardless of whether these developments are desirable or not, these new economic activities tend not to be captured by official statistics. As a result, they may not be part of the traditional measurement of GDP and production.*

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**Keynote speech:  
The potential and limitations of foresight**

**Kerstin Cuhls**

Project Manager (Fraunhofer Institute for Systems and Innovation Research)

VIEW  
SLIDES



- **Foresight is the structured debate about complex futures.**
- **In statistics, we tend to extrapolate, forgetting that every curve can break.** The future is not what we think it will be — it is always something different. Even when we believe that we see the whole picture, we do not.
- **The discussion about post-privacy versus privacy protection is still ongoing,** and there are quite different scenarios that may unfold.
- **Data-intensive governance is on the increase,** and decision-making by algorithms is a possibility.
- **Foresight might be combined with statistics to the benefit of both disciplines.**

### Highlights from the discussion of the conference panel

Citizens share more and more information online, generating millions of terabytes of data. These data help some companies in their decision-making and marketing. However, it is difficult to extract good information from these data, since they are often very unstructured and 'noisy'.

Official statistics that are based on new types of data might increase the risks of 'feedback loops', with trends resulting merely from the fact that data are being put online by data subjects, rather than the result of real change in the underlying phenomenon to be measured.

The current regulatory landscape is neither clear nor simple. Although there is a discussion about the abundance of data potentially available, statistical institutes cannot access most of them, in particular privately held data. For private enterprises, these data are a commodity and represent a competitive advantage. These companies invest money in gathering, storing and analysing the data and are often reluctant to share them with statistical offices. Confidentiality is also an issue making enterprises reluctant to share data.

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VIDEO**

**Kamil Kiljański**  
 Chief Economist  
 at the Directorate-  
 General for Internal  
 Market, Industry,  
 Entrepreneurship  
 and SMEs (European  
 Commission)

**Ana Peleteiro  
 Ramallo**

Senior data scientist  
 (Zalando)



**Jon Steinberg**  
 EMEA Public Policy  
 and Government  
 Relations Manager  
 (Google)

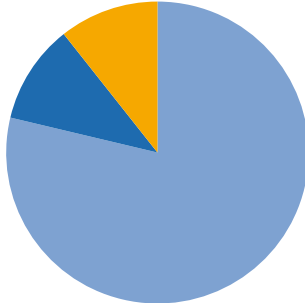
New forms of employment are increasingly prevalent, with full-time employment decreasing and self-employment increasing. Tracking employment is therefore becoming more difficult. While new data sources (such as LinkedIn) may contain relevant data, these are typically biased. The skills required by the labour market are also changing, with the creation of new jobs such as data scientist, while other job types disappear.

## IDEAS

- Develop new methods and extend capacity to take advantage of **new technology and new data sources**, to increase accuracy, reduce costs and cover emerging topics.
- Revise the statistical **definitions of labour**, in particular what to measure (productivity, use of time, employment, etc.) and how to measure it.
- Better capture the **'grey area' of employment relationships** (hybrid forms of work such as being employed and self-employed at the same time, quasi self-employment and quasi employment) in official statistics.
- Improve the **measurement of skills**, in particular with regard to the demand for new skills.
- Explore ways to better capture **changes in business models** and estimate the size, growth and impact of the **informal and collaborative economies**.
- Stimulate further research to address the challenges related to measuring and integrating **new digital services** in national accounts and price statistics.

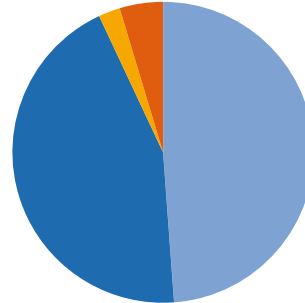
## WHAT DID THE AUDIENCE THINK?

Should official statistics do more to capture new forms of employment and entrepreneurship?



- Yes, current concepts will not capture the labor market of the future (37)
- Maybe, but this might lead to breaks in time series (5)
- Maybe, but there are other labour market statistics priorities (5)

Should statistical offices step up their efforts concerning web scraping?



- Yes, this has a huge untapped potential (21)
- Yes, but it is unlikely to lead to reliable statistics in the short run (19)
- No, its too invasive (1)
- No (for other reasons) (2)

## FURTHER READING IN THE POWER FROM STATISTICS OUTLOOK REPORT

### Is digitalisation changing labour markets? And what statistics are needed to help policy makers?

Neil Kay and Werner Vanborren (Directorate-General for the Internal Market, Industry, Entrepreneurship and SMEs; European Commission)

### The 'grey area' between employment and self-employment

Teemu Kautonen and Ewald Kibler (Aalto University School of Business)

### Addressing gaps in data on investment

Debora Revoltella and Christoph Weiss (European Investment Bank)

### Getting skills right

Vincenzo Spiezia (Organisation for Economic Co-operation and Development; OECD)

### New digital services: getting the price right

John Verrinder and Paul Konijn (Eurostat; European Commission)

### Certification of data producers

Albrecht Wirthmann (Eurostat; European Commission)

### Paying for data

Albrecht Wirthmann (Eurostat; European Commission) and Angelo Meuleman (Taxistop)



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## Closing session: Official statistics — fit for the future?

*How can official statistics become more agile and responsive to the needs of citizens and policymakers? How can technological opportunities be used and statistics stay relevant in times of change? How can the communication of official statistics be improved in the face of competition from other information suppliers?*

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### Hosts



**Mariana Kotzeva**  
Director-General  
of Eurostat  
(European  
Commission)

**Paweł Świeboda**  
Deputy Head of the  
European Political  
Strategy Centre  
(European  
Commission)



### Highlights from the discussion of the closing panel



**Martine Durand**  
Chief Statistician and  
Director of Statistics  
Directorate  
(OECD)

**Mark Hansen**  
Professor of  
Journalism  
(Columbia Journalism  
School)



- **Big data (or 'smart data') have great potential.** They could be combined with traditional data sources to increase the timeliness and granularity of official statistics. They could also help to capture new phenomena.
- **We have to deliver evidence where people are and where they need it,** be it in Parliament, on Twitter or on Facebook.
- **Journalism is changing in the sense that its core artefacts are becoming digitised.** Journalists have to think about data, computation — even about coding.
- **An increasing number of fundamental issues facing official statistics are cross-sectional.** We need to step out of our comfort zone and work across domains.
- **It is important that the official statistics community prioritises interaction with other disciplines.**
- **The conference will be followed up with a Guidance Report with actionable recommendations, helping official statistics to deliver the evidence of tomorrow.**



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# Power from Statistics: data, information and knowledge

## GUIDANCE REPORT

PDF: KS-FT-18-006-EN-N  
Print: KS-FT-18-006-EN-C

The 'Power from Statistics' initiative, jointly organised by Eurostat and the European Political Strategy Centre, aims to determine which topics will be relevant to decision-makers and citizens in the future and how official statistics could best deliver information about them.

This Guidance Report is inspired by the 'Power from Statistics Outlook Report' (in which experts from various stakeholder groups set out their personal reflections and ideas on the future of European statistics) as well as by the high-level conference 'Power from Statistics: delivering the evidence of tomorrow', at which policymakers, journalists, business leaders, academics and official statisticians from all over Europe discussed the needs and challenges facing evidence-based policymaking.

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