

**STATISTICS AND DATA DIRECTORATE  
COMMITTEE ON STATISTICS AND STATISTICAL POLICY****Impact of COVID-19 crisis on official statistics: business continuity of official statistics**

**17th meeting of the Committee on Statistics and Statistical Policy  
24-26 June 2020**

**This meeting will take place in remote format.**

This issues note sets out some background information on the main themes that will be discussed under **Agenda Item 2**.

The discussion will be held in panel format and will take place during the Informal joint seminar organised with the UNECE-CES on the **Impact of COVID-19 crisis on official statistics**, taking place on 24<sup>th</sup> June 2020.

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## *Business continuity of official statistics*

*The Covid-19 crisis has made a significant impact on the compilation and dissemination of official statistics: lockdowns in many countries and teleworking have affected the ways surveys and censuses are carried out; related quality issues need to be addressed; methodological and conceptual questions have arisen, etc. At the same time, there is huge user demand for early estimates to enable assessment of the economic and social impact of the crisis. In trying to deal with these issues, many national experts have voiced the need to exchange practices and experiences at the international level.*

*The session will be organised as a panel discussion with a view to drawing the main lessons from the current crisis in terms of business continuity. For instance, what are the most innovative practices that have emerged to cope with non-available source data? How can resilience be built into operations of statistical agencies to be prepared for future crises? Which work practices that were adopted under pressure during the crisis are likely to stay? The session is supported by this issues paper, which draws on information gathered through digital workspaces and other initiatives (in particular the OECD-hosted digital workspace: <https://community.oecd.org/community/official-stats-workspace-covid19/overview> and websites with continuity guidance established by national statistical agencies and by other international agencies, e.g. Eurostat, ILO, IMF, UNECE, and UNSD).*

## 1. Introduction

1. During and after the COVID-19 pandemic, official statistics will have become vital tools for governments to design and target their responses. Indeed, the core statistics produced by national statistical systems are more important than ever as, on top of the public health challenges, countries must grapple with recessions and the looming social and economic impacts from the pandemic.

2. All statistics offices quickly responded to the pandemic by adapting to the sudden and unprecedented circumstances created by the pandemic and the social-distancing requirements. For example, statistics agencies have managed to move to teleworking arrangements, usually without major disruptions in the production of statistics. They have also responded to the outbreak of the pandemic with invigorated efforts to communicate with users. Statistical offices have clarified their continued commitments to the core values and objectives of official statistics, without compromising health and safety of civil servants or the public-at-large.

3. Looking forward, the need for adaptive measures will continue to evolve. There is an opportunity for countries to develop such methods collaboratively, thereby benefiting from international cooperation, sharing of solutions, and reinforcing comparability of official statistics for cross-country analyses. As first steps in this direction, it is useful to review the challenges that statistics offices have faced thus far and discuss potential priorities and practical guidance to support business continuity during and after the COVID-19 pandemic.

4. The impacts of the pandemic affected some areas of data collection more than others. Moreover, demands and interest of users for short-term statistical releases increased due the pandemic. Thus, for both these reasons, it could be strategically important to prioritize or focus international cooperation on these areas, at least in the short-run. The lessons learned from this crisis for statistical systems in the longer term could also merit further reflection and discussion.

5. A core objective for the response of official statistics during this pandemic should be resilience. Resilience of official statistics is assessed, as always, according to core quality characteristics of statistics, such as relevance; accuracy; timeliness and punctuality – all of which have faced new adaptive challenges due to the COVID-19 pandemic.

## 2. Adapting to the crisis: Key challenges for official statistics

6. In nearly all cases, statistical offices have closed physical offices. Physical meetings have been reduced to a minimum or, where feasible, converted to web-based video conferences. Many statistics agencies made the decision to suspend all face-to-face interviews in surveys and substitute, where applicable and feasible, with other means, such as phone or online-based interviewing and other potential sources of data, like web scraping.

7. Despite the major disruptions, statistics agencies have managed to continue core activities via teleworking. In addition to the above mentioned challenges in collecting source data, statistics agencies also faced methodological and conceptual challenges, for example the measurement of the impact of the crisis on seasonal adjustment, and the appropriate recording of certain new phenomena (e.g. massive government interventions to support the economy).

## 2.1. Adapting data collection instruments

8. The crisis obliged adjustments to data collection methodology in many cases. One of the obvious adjustments to data collection instruments taking place is transitioning from face-to-face interviews towards increased use of phone or online surveys in order to abide by social-distancing requirements.

9. The Consumer Price Index (CPI) is one of the key activities of statistical agencies affected, because CPI is updated on a monthly basis and has various operational challenges for maintaining the time series during the crisis. The challenges with respect to the CPI are twofold. First, there is the logistical challenge of collecting data from businesses during social-distancing measures. For example, the National Statistical Agency in France (INSEE) reported that about one fifth of monthly collected prices are missing for March 2020 due to inability to collect price data from physical outlets.<sup>1</sup> The second challenge faced by statistical agencies is to ensure the quality of the statistics that could be compiled given that a massive and unprecedented portion of relevant enterprises (such as restaurants and non-essential shops) were forced to suspend or drastically limit their operations during one or more of the data collection periods. International agencies such as the IMF have recommended<sup>2</sup> to attempt to utilize the online presence of businesses to collect data on transactions that remain in operation (such as food delivery and take-away) or, alternatively, to impute missing data following the normal imputation guidelines from the Consumer Price Index Manual. The Intersecretariat Working Group on Price Statistics (IWGPS) has agreed on some practical recommendations on data collection, calculation methods and publication. This includes guidance on collection of data from the web, imputation methods and recommendations to release information about number of collected and imputed prices and flag sub-indices with a significant share of imputed prices.<sup>3</sup>

10. Statistics offices have also needed to develop marginal adjustments to the content of certain data collection instruments to capture the current conditions and their effects on society more accurately. Household and labour force surveys need to consider whether and how to include special response categories to reflect reductions in employment or reduced working hours and income caused by COVID-19. The U.S. Bureau of Labour Statistics (BLS), for example, posted explanatory information regarding this issue.<sup>4</sup> If someone who usually works full time (35 hours or more per week) reports working 1 to 34 hours during the survey reference week, a question is included in the household survey that asks the main reason they worked less than 35 hours. The BLS noted two main COVID19-related response possibilities: (i) under quarantine or self-isolating due to health concerns, or (ii) people who were not ill or quarantined but said that their hours reduced “because of the coronavirus”.

11. In a technical note,<sup>5</sup> the International Labour Organisation (ILO) recommends labour force survey (LFS) interviewers training to clarify how the types of conditions that became more common during the pandemic (e.g. teleworking or reduced hours) affect classification of employment. Special attention is required, the ILO guidance suggests, for

<sup>1</sup> <https://community.oecd.org/docs/DOC-172352>.

<sup>2</sup> <https://community.oecd.org/docs/DOC-172597>.

<sup>3</sup> For more information on compilation of CPI during the covid-19 disaster, see: <https://statswiki.unece.org/display/CCD2/Compilation+of+CPI+in+times+of+COVID-19>.

<sup>4</sup> [www.bls.gov/cps/employment-situation-covid19-faq-march-2020.pdf](http://www.bls.gov/cps/employment-situation-covid19-faq-march-2020.pdf).

<sup>5</sup> <https://community.oecd.org/docs/DOC-172562>.

cases of individuals employed, but not currently at work. There is uncertainty regarding the expected duration of the temporary loss of work. The unprecedented effects on employment and status of work might merit consideration of some special provisions for employment statistics during this period to address uncertainty concerning temporary loss of work and to produce statistics that accurately reflect the impacts on employment in short and long terms.

12. Besides labour force statistics and the CPI, many other examples of methodological issues could be considered for discussion as new challenges affecting data collection or imputation, for instance how to quality adjust educational services in the national accounts in the context of home schooling.

13. In some cases, countries have developed entirely new data collection instruments for statistics on the impacts of the COVID-19 pandemic. For example, an exceptional weekly survey of enterprises was developed to boost the data collection in Portugal.<sup>6</sup>

## 2.2. Accelerating timeliness and maintaining time series

14. The pandemic created an unprecedented situation in which the health status of the population, along with social and economic outlooks, faced significant changes on at least a daily basis. Even well tested short-term indicators and some of the most responsive outputs of national statistical systems could not keep pace with the extreme dynamics and rapidity of the evolution of this disaster. The disruptive effects of the crisis to data collection instruments exasperate the situation.

15. The severe and global impacts of COVID-19 on economies are unusual in that they can be characterised with a relatively specific, well-defined, and sudden turning point, corresponding with the outbreak of the pandemic in each country. These sudden and dramatic changes are likely to create outliers, if not a level shift in the time series, which affects interpretation of temporal trends. In theory, the outlier statistics during the pandemic should generally not affect usual procedures for seasonal adjustment of time series.<sup>7</sup> The statistics office of the European Union (Eurostat) produced recommendations<sup>8</sup> for metadata on correct use of time series statistics in the context of COVID-19. For most OECD countries, one or both of the first two quarters of 2020 will likely need to treat as outliers for many of the economic data series.

16. For data collections conducted less frequently, like household surveys or censuses, some statistics agencies are considering, or already decided, to postpone operations. Again, this is not only a logistical challenge because the quality of the outputs, including timeliness and time referencing, will be affected by the timing of the data collection. An interesting precedent comes from the originally scheduled 2011 Census of Population and Dwellings of New Zealand, which was disrupted by the 2011 Christchurch Earthquake disaster. The rescheduled version of the census, which took place in 2013, ultimately was used as one of the key sources of information for understanding the impacts of that disaster.<sup>9</sup>

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<sup>6</sup> [www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine\\_destaquas&DESTAQUESdest\\_boui=428282840&DESTAQUESmodo=2](http://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_destaquas&DESTAQUESdest_boui=428282840&DESTAQUESmodo=2).

<sup>7</sup> At the moment, the crisis should be treated as a single event as there is no reason to expect that the crisis will become a regular seasonal phenomena.

<sup>8</sup> <https://community.oecd.org/docs/DOC-171801>.

<sup>9</sup> <http://archive.stats.govt.nz/~media/Statistics/browse-categories/people-and-communities/housing/housing-chch-after-earthquakes/housing-chch-after-earthquakes.pdf>.

## 2.3. Maintaining trust

17. COVID-19 has, in many cases, raised acceptance and interest by the public in scientific advice and expert opinions, which may have a positive impact on the use of official statistics. Trust in official statistics is vital for an evidence-based response to the COVID-19 pandemic. However, the current pandemic poses several challenges for statistics agencies regarding maintaining the trust of the public during difficult times. The first is to continue communicating with users, especially on the potential impacts on the reliability of statistics and the measures that agencies are implementing to address these challenges. In cases where interpretation of statistics is affected by the pandemic, for example in the analyses of time series, advice and information should be provided to users to proactively counteract potential inappropriate uses of statistics, which could lead to misinformed predictions for the impacts of the virus or other potentially damaging misuses of statistics.

18. Statistical agencies' ability to assess the quality of their statistics, and make adaptive decisions where necessary, is greatly strengthened where clearly defined quality assurance standards and protocols are in place. Therefore, the crisis can also be perceived as an opportunity to emphasize and, if needed, re-examine, boost or adjust quality control mechanisms.

19. Another issue is the opportunity of the pandemic to reassure respondents, and the public-at-large, of the commitments of statistical agencies to the protection of confidentiality of individual identities. Whereas disasters typically create special emergency demands for disaggregated data, modern technologies and statistical techniques exist that make it possible to extract information from aggregated statistics or from microdata without compromising confidentiality of businesses or households.

20. The pandemic also highlighted potential advantages and limitations of modern technologies for monitoring the movements and interactions of individuals as a tool for gathering data and reducing infections. Experiences from this crisis can provide important lessons on methodologies for leveraging modern technologies, such as GPS tracking, or other big data during an emergency without compromising confidentiality of individuals. The pandemic is also an opportunity for statistical systems to adapt and boost development of applications of new data sources and methods for producing statistics of relevance to the crisis. For example, scanner data or data from credit card transactions are important new data sources that can help to substitute for the gaps in in-person surveys for tracking economic impacts of the crisis.

## 2.4. Boosting relevance in the short-term and long-term.

### 2.4.1. Short-term challenges

21. As already mentioned, the COVID-19 pandemic has increased the importance and visibility for many of official statistics combined with a need for increased agility to the new methodological challenges described above. One approach for responding to these urgent challenges is to focus on the key data collection instruments or topics affected the most directly. For example, the Federal Statistical Office of Germany (Destatis) announced priorities for COVID-19 response on their website, concentrating on the timely provision of statistics that reflect short-term economic activity. "These are above all gross domestic

product (GDP), the consumer price index and several other important short-term indicators used for calculating GDP.”<sup>10</sup>

22. Many statistical agencies published new web pages, COVID-19 FAQ sheets, or press releases providing information to the public on impacts on official statistics activities and the responses and coping mechanisms organised to ensure business continuity. Statistical agencies have given special attention to their release calendars and notifications to users of (potential) delays and possible quality concerns.

23. Many countries launched new or adapted programmes aimed at measuring the impacts of the crisis on the population and economy. An example is a map-based application to provide access to Coronavirus-related statistics by Statistics Lithuania.<sup>11</sup> The national statistics offices of the United Kingdom and the Netherlands developed dedicated webpages for users interested in accessing statistics specifically for studying effects and associated risks from the pandemic.

24. ILO guidance (ibid) identified six examples of variables to prioritize as important indicators of impacts of COVID-19: labour force participation rate, employment to population ratio, labour underutilization measures covering rates of unemployment, time-related underemployment, and the potential labour force. Likewise, labour force surveys should aim to measure shares of selected special groups whose numbers are affected by the crisis, such as persons employed but not at work, persons working more hours than usual, persons working less hours than usual, discouraged job seekers, and recent job losers. The ILO guidance also recommends pursuing “deeper disaggregation and analysis to identify groups particularly affected and inform targeted policy actions.”

25. Another important topical area of emphasis in the context of COVID-19 is the measurement of government interventions to protect employment and to counteract severe losses of income of workers during the crisis. The Inter-Secretariat Working Group on the System of National Accounts (ISWGNA) developed, amongst others, a guidance note<sup>12</sup> for recording government support for employers, self-employed and households. Further work on measurement of these interventions will continue as responses to the pandemic unfold.

#### *2.4.2. Lessons for the longer term challenges*

26. The impacts of COVID-19 crisis will continue to evolve and will have lasting effects on economies and on future preparedness of health systems. Official statistics are highly relevant to risk assessment for the next phases in this pandemic and for developing preparedness and targeted responses to protect those who are most vulnerable to long-term economic and social impacts. However, statistical systems lack a common framework for leveraging the existing statistics for informing proactive responses to future disasters. This is an important moment to demonstrate the resilience of official statistics and the crucial importance of statistics for responding to this pandemic.

27. An existing framework from the disaster statistics domain, which is broadly applicable to all kinds of hazards, is the risk assessment framework. Originally developed by the insurance industry, the risk assessment framework is regularly applied by governments in disaster-prone countries as a systematic tool for organising compilations of official statistics that are potentially relevant for assessing risk and developing strategies to build resilience against impacts from the pandemic. Key advantages of the risk assessment

<sup>10</sup> [www.destatis.de/EN/Press/2020/03/PE20\\_108\\_p001.html;jsessionid=68390D223360C54FF203C01A9B55BB66.internet8731](http://www.destatis.de/EN/Press/2020/03/PE20_108_p001.html;jsessionid=68390D223360C54FF203C01A9B55BB66.internet8731).

<sup>11</sup> <https://osp.maps.arcgis.com/apps/MapSeries/index.html?appid=f390a988f56844a587bc7a30e3f6e68a>.

<sup>12</sup> <https://community.oecd.org/docs/DOC-172350>.

framework are its simplicity and that it can be applied coherently at flexible scales (e.g. community, regional, national, and international scales), limited only by the resolution of the input data. The framework is summarised by this simple equation:

$$\text{Risk} = f(\text{Exposure, Vulnerability, Coping Capacity})$$

28. The risk assessment framework is useful for official statistics in the long term because it can be used as a tool for identifying new and vital applications of existing statistics as well as newly relevant indicators from existing data sources, all within the context of a defined international framework.

29. For example, whereas the entire global population is potentially exposed to the coronavirus, the degrees of exposure vary by population groups (e.g. essential workers). Certainly, some groups are more vulnerable. It is well known that the elderly population and people with certain underlying health conditions are particularly vulnerable to the virus. Economic vulnerability depends on the structure of the economy and the security of employment before and after the pandemic. This topic of economic vulnerability to impacts is already emerging as an important application of economic statistics. The capacities of health care and other social systems to respond to the pandemic varies significantly across countries and regions within countries. For each domain of official statistics, an assessment of applicable data for measuring exposure, vulnerability and capacities could reveal many new and unexpected applications of official statistics, with the potential of providing evidence for mitigating the long-term effects from COVID-19, or from future disasters.

30. Official statistics are the main source of information for conducting risk assessments, especially at the macroeconomic scale, which will be important to improve preparedness as well as to develop comparable analyses of the differences in the impacts of the pandemic across countries. These assessments will help governments develop a comprehensive and evidence-based understanding of the pandemic.

31. In the long term, the COVID-19 pandemic is a test of the resilience of each country's economic and governance systems. A strong basis of comprehensive official statistics is crucial for making informed assessments for how a countries' preparedness can be strengthened for the next phases or for future disasters.

### 3. Conclusions and questions for the panel

32. The purpose of summary descriptions of methodological challenges faced by national statistical agencies in this paper is to help stimulate discussions on international cooperation and priorities for developing further guidance in response to COVID-19. Those challenges include methodological and conceptual problems raised by the pandemic and its consequences on society, new ways of addressing user demands, impact on the timeliness of statistics, and so on. A more detailed and comprehensive collection of the various challenges, including guidance on how to deal with them, can be found at the Digital Workspace for National Statisticians.<sup>13</sup> The Digital Workspace was launched by a partnership of international agencies as a forum to allow national statistical agencies, both statistical offices and central banks, to exchange best practices and share their challenges and experiences in the present crisis. The Digital Workspace provides an entry point for following the new initiatives and new guidance under development at national and international levels. The impressive profusion of innumerable initiatives from national and

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<sup>13</sup> <https://community.oecd.org/community/official-stats-workspace-covid19>.



international statistical agencies highlights the importance of international coordination and standard setting.

33. From a business continuity-perspective, official statistics remains strong. Experts from the various affected domains of official statistics rapidly became active to analyse and develop guidance on methodological adjustments in reaction to the pandemic. Many national statistics agencies have already developed dedicated web pages and statistical applications for analyses of COVID-19. Further study of the examples from member states and discussion on their relative merits from an international perspective is a useful way forward towards developing global advice and an internationally coordinated official statistics response to the pandemic.

34. However, a lot is still to be learned from this disaster as it continues to evolve. The responses to new demands related to maintaining the quality of our existing programmes during a crisis, measuring the impacts of the COVID-19 pandemic, and measuring and assessing risks and resilience are still under development in most countries. International cooperation will reduce the burden on individual national agencies to respond to these challenges and limit duplication of efforts across our institutions. The objective from these discussions and from continued international cooperation on these issues should be to continue to build capacities of statistics agencies to react and respond to the pandemic and its consequences, thus building and demonstrating the resilience of official statistics overall.

35. In the context of the above, the following questions could be raised:

1. What are the critical ways that core official statistics were disrupted by this crisis, and how are national statistical systems adapting? Which of these adaptive and innovative practices will continue in the longer term, beyond the current emergency period?
2. What are some of the ways in which your statistical outputs have been adapted or re-oriented to remain timely and relevant to the dynamic conditions faced by official statistics during the Pandemic?
3. What do you consider the main priorities for international coordination and cooperation in the context of COVID-19?
4. What are some lessons learned for official statistics from the pandemic that will be relevant and useful for extreme events and disasters of the future?