

The use of non-official sources in official international economic and financial statistics

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Abstract

Policy-makers and professional users have an increasing demand for comparing economic and financial statistics across countries and regions. This is a trend that has been on the rise following globalisation and has been amplified by the financial crisis in connection with which new policy measures and actions have been established to safeguard the financial system and to re-enforce prudent fiscal and macroeconomic policies. This paper presents the use of non-official sources for official international statistics as part of supplying comparable international statistics fit for policy use. The paper calls for closer cooperation between national statistical institutes and international and supranational organisations with a view to converging towards common concepts and detailed methodological definitions, and demonstrates, via two cases, that international organisations, as a last resort, can use non-official sources to enhance the quality and comparability of international statistics.

Key Words: international statistics, methodology, quality, non-official statistical sources, comparability.

1 Common interests within the global statistical system

A feature common to many international and supranational organisations is the collection of statistics from official national sources and the production and release of comparable country-specific and regional statistics as part of serving the international policy-making community.

International and supranational organisations normally follow the “Principles Governing International Statistical Activities”¹, which are aligned with the “Fundamental Principles of Official Statistics”² that are widely applied by the national statistical authorities.

International and supranational organisations have well-established “international statistical standards” that specify the relevant concepts and definitions for collecting and releasing internationally comparable statistics. These are supported by “reporting templates”, which provide (detailed) guidelines on the methodology to be applied within a statistical field by each of the

¹ Available at: http://unstats.un.org/unsd/methods/statorg/Principles_stat_activities/principles_stat_activities.htm

² Available at: <http://unstats.un.org/unsd/dnss/gp/fundprinciples.aspx>

participating Member States. In cases where all participating Member States supply statistics in line with these international statistical standards and reporting templates, international and supranational organisations are enabled to produce and release “comparable” international statistics. The international reporting templates are similar to the national “reporting templates” that are used by national statistical authorities for producing and releasing national statistics. Although national statistics follow the national reporting templates, they are in many cases not adequately aligned with the international reporting templates. The effect of the mismatch is that international and supranational organisations are releasing less comparable international statistics, reflecting differences – both in coverage of instruments and in the methodology applied – for identical economic and financial concepts.

This often creates confusion at the national and international policy levels, requiring national and international statisticians to defend and explain methodological differences and – in the best case – to agree on their possible impact. This confusion and resource-intensive activity is a factor that contributes to the level of users’ trust both in national and international statistics and in the institutions responsible for releasing those statistics.

There are good arguments for enhancing cooperation within the global statistical system, focusing on alignments between international and national reporting templates and/or, where needed, either for national statistical authorities to significantly enhance their metadata descriptions or for international and supranational organisations to adjust the official statistics collected in view of the continuous and increasing policy-making needs (i) for benchmarking and comparing national statistics with those of neighbouring countries; (ii) for multilateral surveillance statistics and (iii) for regional statistics also in the field of economic and financial statistics.

Many international and supranational organisations are members of the Committee for the Coordination of Statistical Activities (CCSA). The CCSA promotes, among other things, cooperation on statistical programmes and consistency in statistical practices. Its members contribute actively to the development of a coordinated global statistical system that produces and releases high-quality statistics. The CCSA is composed of approximately 40 international and supranational organisations, and the secretariat is hosted by the United Nations Statistics Division (UNSD)³.

³ Available at: http://unstats.un.org/unsd/accespublic/workpartner_ccsa.htm

The CCSA has recently released its recommended practices on the use of non-official sources in international statistics⁴, which specify, first, the *raison d'être* of international statistics and their anchoring to the “Fundamental Principles of Official Statistics”, the “Principles Governing International Statistical Activities” and the “Quality Assurance Frameworks of international and supranational organisations” and, second, recommendations, conditions and a consultation process for the *use of non-official sources in international statistics*.

These recommendations specify, as a rule, that the primary source for international and supranational organisations’ statistics are normally official statistics that are typically supplied by national statistical authorities or other sources of authoritative data. These official national statistics feed into the production systems of international and supranational organisations, and the resulting statistics are released to serve the international policy agenda. Similarly, as is common practice among national statistical authorities, there are exceptional cases where the choice of data source is made exclusively on the basis of professional standards, in accordance with the general principles governing statistics. In particular, the recommendations specify that non-official sources can be used

1. to fill gaps when official statistics do not exist,
2. to improve quality and/or
3. to enhance the comparability of international statistics.

The recommendations also specify a prior and continuous consultation process with the respective national statistical authorities or relevant originator of authoritative data and international and supranational organisations’ obligations for documenting the non-official sources.

Before going into possible solutions for minimising the use of non-official sources within international statistics, the subsequent section will provide two case studies demonstrating the application of the CCSA’s published recommendations; The first case study covers instances where non-official sources are used to “fill gaps” (point 1 above) and the second case study highlights how the comparability of international statistics can be improved (point 3 above).

The 3rd case of “improving quality” deserves some more attention and elaboration, which is outside the scope and limitation of this conference paper. The case would raise the question of the quality level at which it would be warranted that international and supranational organisations replace official national statistics within statistics from non-official sources.

⁴ CCSA, “Recommended Practices on the Use of Non-Official Sources in International Statistics”, November 2013.

There may be cases where statistical methods and independent professional competence are required to ensure both a minimum standard of quality and a minimum level of comparability across countries. Such cases could relate to “politically biased statistics”, the figures of which deviate to an unreasonable extent from past and current levels and/or from statistics obtained from comparable private sources.

Within a tight statistical system – quality differences between countries can cause significant collateral damage that would not only affect the particular system involved, but would also spill over to other statistical systems, with reputational losses for all members of the statistical system.

Furthermore, this is amplified by the fact that laymen, users and citizens cannot always be expected to distinguish between good and bad statistics, irrespective of whether it is at national or international level, nor do they have sufficient time to understand and measure the impact of different statistical methodologies. What is clear is that the impact of, and the damage caused by, poor statistics occurs mainly at the national level. Trying to mislead national citizens and other stakeholders in order to prevent them from learning the true facts of democracy is not only likely to backfire at the next election, but it will impact negatively on the general trust in statistics, statistical offices, national governments and policies, with the associated costs that citizens usually incur when having to pay for corrective policy action at both the national and the international level.

2 Case studies on the use of non-official sources in official international statistics

The following section illustrates two case studies where non official sources are used in international statistics either to fill gaps where national statistics are missing or for adjustment purposes – with a view to increasing the comparability of international statistics.

2.1. Filling gaps – new industrial orders in the euro area

New industrial orders have shown empirically over time that they anticipate business cycle turning points and are monitored by policy-makers for precisely that reason. This indicator can therefore be viewed as a “leading indicator” for industrial production within an open economy.

Within the euro area, four Member States have ceased to release national statistics on new industrial orders, and have therefore placed in question the continuation of the production and release of monthly euro area statistics on new industrial orders, which are used as input for the array of statistics used for monetary policy analysis and assessment. Following an exploration and testing

phase, a model-based approach was developed to estimate, as far as possible, the missing national statistics as part of the process for producing euro area statistics on new industrial orders.⁵ This model uses a mix of qualitative and quantitative data from non-official sources such as the results of the business survey in manufacturing (as released by European Commission (DG-ECFIN)) and the Purchasing Managers' Index on new orders (PMI), as released by Markit, and lag variables related to month-on-month growth rates.

Since July 2013, statistics on industrial new orders in the euro area have been produced and released using a combination of official national sources and model-based estimations for missing national series based on data from non-official sources. The series are released monthly on the ECB's website.

Chart 1: New industrial orders in the euro area, released using official and non-official sources

Euro area industrial new orders
Manufacturing industries (Index levels, working day and seasonally adjusted)



Source: ECB, Statistical Data Warehouse.

Notes: Base year = 2010; May 2014. Red bar indicates the start of the inclusion of ECB estimations (April 2012). Series released as of July 2013.

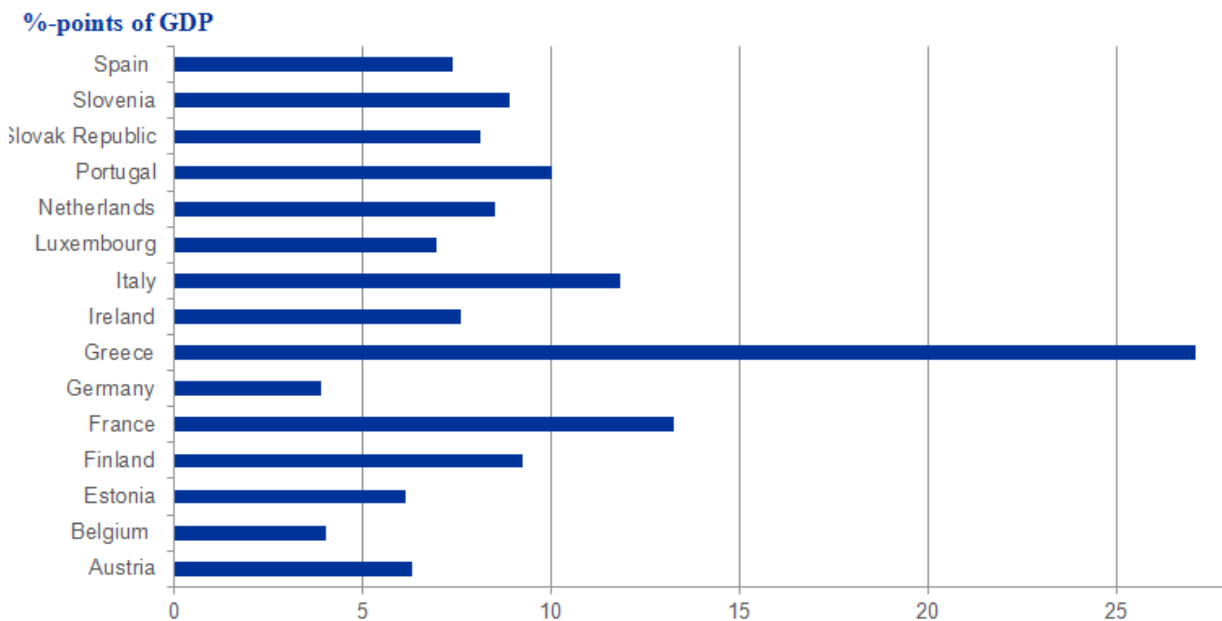
2.2. General Government debt – improving comparability of international statistics.

The second case is more nuanced and relates to the comparability of General Government Debt as percentage of GDP. General Government debt and deficit are core and fundamental indicators used frequently at national and international level and likewise, within Europe, as part of convergence and Treaty procedures and obligations. These indicators have significant policy attention and therefore needs to meet high quality and comparability standards both at national and international level.

⁵ Gabe J. de Bondt, Heinz C. Dieden, Sona Muzikarova and Istvan Vince, “Modelling industrial new orders”, *Occasional Paper Series*, No 149, ECB, June 2013 (available at: <http://www.ecb.europa.eu/pub/pdf/scpops/ecbocp149.pdf>).

According to an OECD study, the General Government Debt figures released by International and supranational organisations vary considerable. The study compares six renowned sources and reveals that, despite of presenting the same concept, several quality improvements in the comparability of statistics are needed.

Chart 2: Government Debt/GDP for selected euro area Member States, expressed by the most marked differences between six official sources per country, in percentage points of GDP



Source: OECD calculations; end-2010.

Notes: The sources are data from Eurostat (Government Finance Statistics), IMF (Government Finance Statistics and World Economic Outlook) and the OECD (Economic Outlook and National Accounts at a Glance). The difference for Greece is due mainly to the different evaluation methods applied (market and nominal values).

There are several causes for these results, the **resolution of which can only be found through close cooperation within and among national statistical authorities and international and supranational organisations.**

The study reveals that there are significant discrepancies between official statistics published by international and supranational organisations.

These relate mainly to differences in

- A. the international definition of concept (government debt and/or GDP) and instrument coverage (inclusion and exclusion of certain instruments such as trade credits);
- B. international methodological guidelines;
- C. national methodological guidelines; and

D. completeness of applied national methodologies in accordance with the international reporting templates and their quantitative impact.

Closer coordination and action – on the part of both international and supranational organisations and national statistical authorities – are needed to resolve these discrepancies.

The most intuitive and flexible solution would be for national statistical authorities, as the official sources, to make national statistics available as **building blocks**, whereby each international and/or supranational organisation can select the applicable instruments and associated methodology in line with its respective international reporting template. In this way, each international and/or supranational organisation will publish one set of comparable international statistics that fits its purposes and policy use best.

For instance, within the national building block, the international organisations could take “government debt” per country (i) to include loans and securities; or (ii) to mean (i) plus securities and others accounts payable; or (iii) to incorporate (ii) plus pension liabilities. Furthermore, the international and supranational organisations could define “debt securities” in terms of the “nominal value” or the “market value” and on the basis of, as applicable, the “exchange rate” method⁶ – according to their respective policy use.

This “slice-and-dice” solution would serve users well, as each international and/or supranational organisation could select those relevant concepts and the methodology that is the best fit for presenting comparable international statistics.

Even though this solution may serve best the international and supranational organisations, *it may be considered to be too costly* by national statistical authorities, so that its implementation would not be realistic in practice and a more pragmatic and operational solution would be necessary. The following approach might be envisaged with respect to resolving the four reasons for differences mentioned above, each of which would require significant enhancements to cooperation between and among national statistical authorities and International and supranational organisations.

A. International and supranational organisations could enhance international statistical standards by converging to one **common international definition** of concepts. This would require improved coordination among international organisations.

⁶ Monthly average, end of month, date of transaction, as applicable.

- B. International and supranational organisations could enhance the international reporting templates, by ensuring that the methodological guidelines **sufficiently clarify the methodological choices**, thereby avoiding ambiguity in national compliance.

The Inter-Agency Group (IAG) was established with this purpose in mind, in which senior managers from the respective organisations are represented with a view to contributing to resolving points A and B above.

- C. National statistical authorities could bring their **national reporting templates** into line with international reporting templates. This is important in order to ensure the consistency of national and international publications.
- D. National statistical authorities could **document any inconsistency** between national and international reporting templates. Each deviation should be clearly documented, justified and explained, with the national statistical authorities applying their statistical expertise and professionalism to quantify the impact of methodological differences in accordance with international reporting templates.

In the meantime, and until points A, B, C and D have been addressed; there remain cases where there is justification for international and supranational organisations to adjust national statistics by using best-estimations and/or non-official sources as part of their efforts to improve the comparability of international statistics.

3 Conclusion

There is an increasing policy need for comparing economic and financial statistics across countries and regions which has been amplified by the financial crisis and the need to safeguard the financial system and to re-enforce prudent fiscal and macroeconomic policies within Europe.

International and supranational organisations are responsible for releasing internationally comparable statistics, and use predominantly official national statistics, as provided by national statistical authorities and by other administrative sources, as input within their production processes.

This paper demonstrates that **national statistics, despite being of high quality and in compliance with national concepts and methodologies**, may deviate significantly from one another when used for cross-country and regional comparisons. This is due mainly to inconsistencies in (i) the definitions of international statistical concepts; (ii) the methodological specifications of international reporting

templates and (iii) differences in national and international reporting templates, with deviations and impacts being documented and assessed to an only limited extent at the national level.

This paper provides two practical case studies, where international and supranational organisations are required to use non-official sources either (i) to fill gaps in national statistics or (ii) to improve the comparability of national statistics in the context of producing and releasing official international statistics. With respect to the latter, the paper identifies four main causes of differences, using core government debt statistics as an example, and calls for closer cooperation between national statistics institutes and international and/or supranational organisations in converging towards common concepts and detailed methodological definitions. Two of these differences can be resolved by the international and/or supranational organisations, while the others can be dealt with by the national statistical authorities.

The mismatches across national and international statistics often create confusion at the national and international policy levels, requiring both national and international statisticians to defend, explain and quantify methodological differences and – in the best case – to agree on their impact. This confusion and the resource-intensive resolution activity contribute to users' reduced trust in both national and international statistics, in statisticians and also in the institutions responsible for releasing the statistics.

Though the case of “improving quality” deserves elaborations it is outside the scope of this conference paper. The case raises the question of the quality level at which it would be warranted that international and supranational organisations replace official national statistics within statistics from non-official sources. There may be cases where independent statistical competences are required to ensure a minimum standard of quality. Such cases could relate to “politically biased statistics”. Within a tight statistical system – quality differences between countries can cause significant collateral damage that would not only affect the particular system involved, but would also spill over to other statistical systems, with reputational losses for all members of the statistical system. What is clear is that the impact of, and the damage caused by, poor statistics occurs mainly at the national level. Trying to mislead national citizens and other stakeholders in order to prevent them from learning the true facts of democracy is not only likely to backfire at the next election, but it will impact negatively on the general trust in statistics, statistical offices, national governments and policies, with the associated costs that citizens usually incur when having to pay for corrective policy action at both the national and the international level.

The common factor is that international and supranational organisations and national statistical authorities are all in the same boat and that the enhancement of the quality and comparability should be undertaken by the statisticians themselves, using statistical methods and professional competence for the benefits of both national and international and supranational organisations. If this is not done, policy-makers and advisers or other private sector service providers will adapt and apply their own adjustments, often at the expense of statistical quality, principles and the reputation of statisticians. It is time to align the compass and to look beyond the past.