



Handling Revisions of Official Statistics

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Outline of the Presentation



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D. Revision Practices / Policies / Dealing with misuse and misinterpretation of data in the Philippines

E. Revisions / Correcting and Communicating Errors: Examples from Selected Countries

III. Way Forward





I. Introduction

- **Revision of official statistics may be defined broadly as any change in the value of a statistic released to the public by a statistical agency**
- **Revisions rewrite stories, rewrite histories**
- **Fundamental Principles of Official Statistics**





Fundamental Principles of Official Statistics Related to Revisions





I. Introduction

Fundamental Principle of Official Statistics No. 2

- *To retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage, and presentation of statistical data*





I. Introduction

Fundamental Principle of Official Statistics No. 3

- *To facilitate a correct interpretation of the data, the statistical agencies are to present information according to scientific standards on the sources, methods and procedures of the statistics*





I. Introduction

Fundamental Principle of Official Statistics No. 4

- *The statistical agencies are entitled to comment on erroneous interpretation and misuse of statistics.*





I. Introduction

- **Revisions, especially large, frequent, many revisions impact on the credibility and trust and confidence on**
 - **Official Statistics**
 - **Statisticians and the statistical profession**
 - **NSAs**
 - **NSS**
- **How should NSAs/NSS handle revisions of official statistics?**
 - **Silently vs transparently?**
 - **Controlled/sanitized vs As they are?**
 - **Do lower/smaller revisions automatically mean higher quality of estimates?**
 - **Do we handle revisions the way we would handle a prodigal child?**



II. Handling Revisions of Official Statistics



A. Revision of Official Statistics is Necessary and Desirable: Reasons for Revisions

1. Official statistics is an evolving science

- Improvements in methodologies
 - Need to backtrack to produce linked series needed by modelers, analysts
- Revision of international guidelines
 - M57 UN Series on Distributive Trade: exclusion of repair of household goods from distributive trade
 - Shift to chain volume measures from fixed base year constant price estimates (1993 SNA)



II. Handling Revisions of Official Statistics



A. Revision of Official Statistics is Necessary and Desirable: Reasons for Revisions

2. Revisions are inherent in some Statistical Tools

- for example, in the seasonal adjustment of time series, when forward seasonal factors are used, estimates are changed when new data points are added, even if there are no revisions in the other parts of the series;
- in constant price estimation, when the base year is changed, levels are automatically revised and growth rates may also be revised.



II. Handling Revisions of Official Statistics



A. Revision of Official Statistics is Necessary and Desirable: Reasons for Revisions

3. Striving for Timeliness Means Releasing Statistics with Incomplete Data Support

- As additional data support comes in, statistics previously released may need to be revised.
 - Quarterly national accounts are released within 1 quarter from the reference quarter
 - Monthly CPI released within 1 week after the reference month
- Imputations/Projections may have caused overestimation/underestimation



II. Handling Revisions of Official Statistics



A. Revision of Official Statistics is Necessary and Desirable: Reasons for Revisions

4. Errors

- errors may occur in the various steps of data production
 - In the source data, in processing, in estimation, in consolidation;
- human errors occur, especially with tight deadlines, tight manpower resources.





II. Handling Revisions of Official Statistics

B. Measuring / Analysing Revisions

1. Revision Triangle

-tabular presentation of preliminary & revised estimates

HISTORY OF REVISIONS: GDP PHILIPPINES, GROWTH RATES IN PERCENT AT CONSTANT PRICES

	2004-2005				2005-2006				2006-2007				2007-2008				2008-2009	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
AS OF MAY 2005	4.6																	
AS OF AUGUST 2005	4.6	4.8																
AS OF NOVEMBER 2005	4.6	5.2	4.1															
AS OF JANUARY 2006	4.6	5.2	4.5	6.1														
AS OF MAY 2006	4.2	5.4	4.8	5.3	5.5													
AS OF AUGUST 2006	4.2	5.4	4.8	5.3	5.7	5.5												
AS OF NOVEMBER 2006	4.2	5.4	4.8	5.3	5.7	5.8	4.8											
AS OF JANUARY 2007	4.2	5.4	4.8	5.3	5.7	5.8	5.3	4.8										
AS OF MAY 2007	4.4	5.0	4.6	5.4	5.7	5.5	5.1	5.5	6.9									
AS OF AUGUST 2007	4.4	5.0	4.6	5.4	5.7	5.5	5.1	5.5	7.1	7.5								
AS OF NOVEMBER 2007	4.4	5.0	4.6	5.4	5.7	5.5	5.1	5.5	7.1	7.5	6.6							
AS OF JANUARY 2008	4.4	5.0	4.6	5.4	5.7	5.5	5.1	5.5	7.1	7.5	7.4	7.4						
AS OF MAY 2008	4.5	5.1	4.7	5.4	5.6	5.5	5.1	5.5	7.0	8.3	7.1	6.4	5.2					
AS OF AUGUST 2008	4.5	5.1	4.7	5.4	5.6	5.5	5.1	5.5	7.0	8.3	7.1	6.4	4.7	4.6				
AS OF NOVEMBER 2008	4.5	5.1	4.7	5.4	5.6	5.5	5.1	5.5	7.0	8.3	7.1	6.4	4.7	4.4	4.6			
AS OF JANUARY 2009	4.5	5.1	4.7	5.4	5.6	5.5	5.1	5.5	7.0	8.3	7.1	6.4	4.7	4.4	5.0	4.5		
AS OF MAY 2009	4.5	5.1	4.7	5.4	5.5	5.3	5.2	5.4	6.9	8.3	6.8	6.3	3.9	4.2	4.6	2.9	0.4	
AS OF AUGUST 2009	4.5	5.1	4.7	5.4	5.5	5.3	5.2	5.4	6.9	8.3	6.8	6.3	3.9	4.2	4.6	2.9	0.6	1.5

Source: National Statistical Coordination Board





II. Handling Revisions of Official Statistics

B. Measuring / Analysing Revisions

2. Summary Measures

> Mean Revisions

$$\bar{R} = \frac{1}{n} \sum_{t=1}^n (\text{Rev } v_t - \text{Pre } e_t)$$

Where:

Rev = Revised Estimates

Pre = Preliminary Estimates

> Mean Absolute Revisions

$$MAR = \frac{1}{n} \sum_{t=1}^n | \text{Rev } v_t - \text{Pre } e_t |$$





II. Handling Revisions of Official Statistics

B. Measuring / Analysing Revisions

2. Summary Measures

> Relative Mean Absolute Revisions

$$RMAR = \frac{\sum_{t=1}^n |Rev_t - Pre_t|}{\sum_{t=1}^n |Rev_t|}$$

> % of positive / negative Revisions

$$\% R(+ / -) = \left(\frac{count(+ / -)}{n} \right) \times 100$$





II. Handling Revisions of Official Statistics

B. Measuring / Analysing Revisions

2. Summary Measures

> Minimum Revision

$$\min R = \min[(Re v_1 - Pr e_1), (Re v_2 - Pr e_2), \dots, (Re v_n - Pr e_n)]$$

> Maximum Revision

$$\max R = \max[(Re v_1 - Pr e_1), (Re v_2 - Pr e_2), \dots, (Re v_n - Pr e_n)]$$



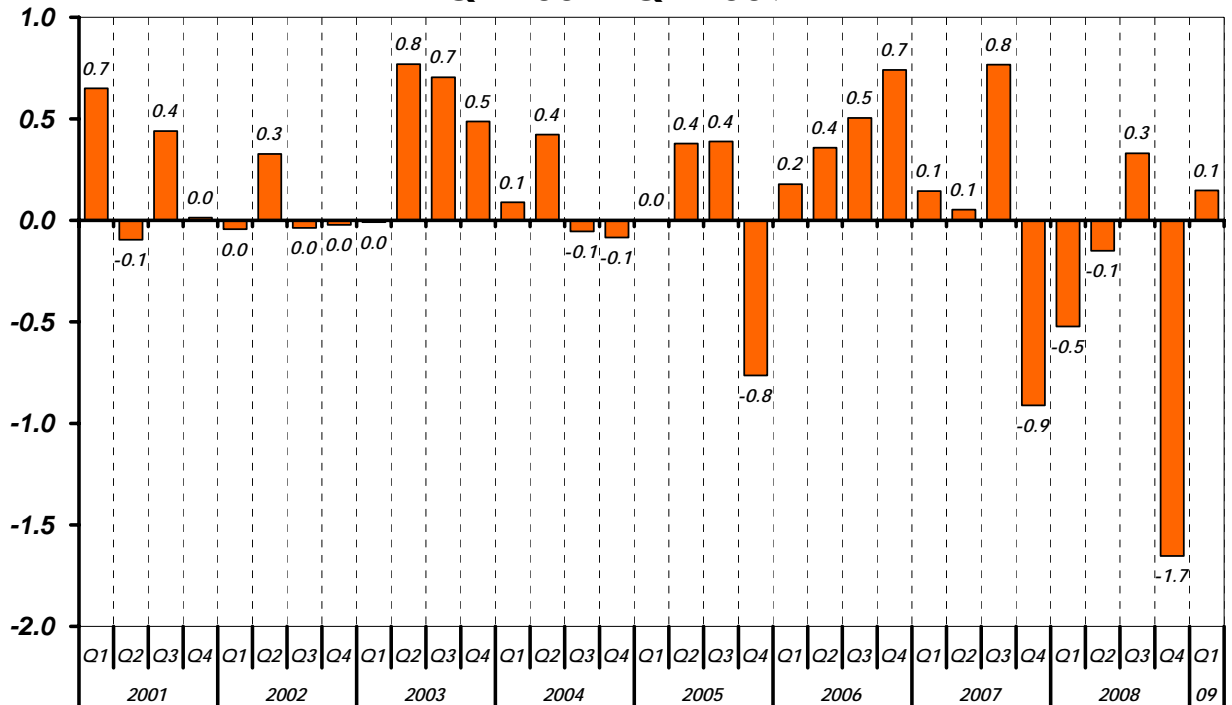


II. Handling Revisions of Official Statistics

B. Measuring / Analysing Revisions

2. Summary Measures

Philippine GDP Revision (In Percentage Points)
Q1 2001 - Q1 2009



Summary Statistics

Mean Revision	0.1
Mean Absolute Revision	0.4
Relative MAR	0.1
% Positive Revision	60.6%
% Negative Revision	36.4%
Minimum Revision	-1.7
Maximum Revision	0.8





II. Handling Revisions of Official Statistics

B. Measuring / Analysing Revisions

3. Contribution to Revision

- Quantifying the effect of revision by reason
- Can show how much of the revision was caused by data, by error, by change of methodology



II. Handling Revisions of Official Statistics



C. Good Practices in Handling Revisions of Official Statistics

1. Formulation of Revision Policies

- When & How often are revisions made (Revision Schedule)

2. Transparency and Strict Adherence to Revision Policies

- Disseminated/Communicated to the public
- Generation of Metadata/explanations
- Advance notice is given of major changes in concepts, definitions, and classification and in statistical methods

3. Periodic consultations with users, including the media to elicit views about revision practices/policies.



II. Handling Revisions of Official Statistics



C. Good Practices in Handling Revisions of Official Statistics

4. The revision cycle is relatively stable from year to year:

- The revisions are timed to incorporate new major source data/revisions of regular data sources
 - Release of census data
 - Release of final estimates of survey/administrative data



II. Handling Revisions of Official Statistics



C. Good Practices in Handling Revisions of Official Statistics

4. The revision cycle is relatively stable from year to year:

- The revision schedule takes into account
 - the timing for preparing important official economic policy documents
 - the possible politicization of the revisions
 - Start of a new government/administration



II. Handling Revisions of Official Statistics



C. Good Practices for Revision Policies (cont'd)

5. Revisions are carried back several years to give consistent time series;
6. Documentation on revisions is readily available to users:
 - Preliminary data and revised data are identified as such;
 - The sources and amount of revision are explained when the revisions are released ;
 - Breaks in a series are documented and communicated when consistent series cannot be constructed ;





II. Handling Revisions of Official Statistics

D. Revision Practices / Policies/ Dealing with Misuse and Misinterpretation of Data in the Philippines

- In the Philippines, a General Standards for Statistical Information Dissemination System (GSSID) was approved through NSCB Resolution No. 8, Series of 1999
- The GSSID basically serves two purposes:
 1. To promote accuracy, transparency and integrity of the Philippine Statistical System;
 - Provide all appropriate metadata;
 - Label statistics accordingly;
 - Appraise the accuracy of the data using statistical measures and;



II. Handling Revisions of Official Statistics



D. Revision Practices / Policies in the Philippines

- Keep the users informed of revisions, anticipated delays in release, and changes in methodology as well as on-going activities and plans for improvement
2. To improve timeliness and accessibility of Government Information;
- Keep the public informed and disseminate the data at the earliest time;
 - Promote the use of available data;
 - Reach out to more users using various media;
 - Provide the users with utmost service and opportunities to feedback; and
 - Develop and maintain a data archiving system.





II. Handling Revisions of Official Statistics

D. Revision Practices / Policies in the Philippines

1. Revision Policies

> National Accounts

- NSCB Resolution No. 8 Series of 1997 - “ Approving the Policy on Updating the National Accounts”

* Updating of the Quarterly NA to be limited to the immediately preceding quarter, and revisions for the past 12 quarters to be done only during the May round of estimation





II. Handling Revisions of Official Statistics

D. Revision Practices / Policies in the Philippines

1. Revision Policies

> National Accounts

- NSCB Resolution No. 7 Series of 2005 - “Approving the General Policy on Revising the Data on Agricultural Production, Prices and Related Statistics of the Bureau of Agricultural Statistics ”

* Updating of the Quarterly estimates to be limited to the immediately preceding quarter, and for the past three years to be done only during May of the current year – jibes with national accounts revisions





II. Handling Revisions of Official Statistics

D. Revision Practices / Policies in the Philippines

1. Revision Policies

> National Accounts

- NSCB Resolution No. 8 Series of 2005 - “Approving the Interim Methodology for the Revision of Electronics Import Statistics ”
- Confidence interval estimates for quarterly GDP growth rates are published





II. Handling Revisions of Official Statistics

D. Revision Practices / Policies in the Philippines

1. Revision Policies

> Classification System

- NSCB Resolution No. 1 Series of 2004 - "Approving and Adopting the Policy on the Revision and Amendment of the Philippine Standard Classification Systems "

Classification Systems	Revisions	Amendments
Philippine Standard Commodity Classification (PSCC)	Two (2) years after issuance of revisions to international classification	Within the year of issuance of Executive Order Amending the Tariff Nomenclature. To be presented to the Board at the start of the following year to capture all previous amendments.
Philippine Central Product Classification (PCPC)	One (1) year after issuance of revisions to international classification	One (1) year after issuance of amendments to international classification
Philippine Classification of Commodities by Broad Economic Categories (PCCBEC)	One (1) year after issuance of revisions to international classification	One (1) year after issuance of amendments to international classification
Philippine Standard Industrial Classification (PSIC)	One (1) year after issuance of revisions to international classification	One (1) year after issuance of amendments to international classification





II. Handling Revisions of Official Statistics

D. Revision Practices / Policies in the Philippines

1. Revision Policies

> Classification System cont....

Classification Systems	Revisions	Amendments
Philippine Standard Classification of Education (PSCED)	One (1) year after issuance of revisions to international classification	One (1) year after issuance of amendments to international classification
Philippine Standard Occupational Classification (PSOC)	One (1) year after issuance of revisions to international classification	One (1) year after issuance of amendments to international classification
Classification of Expenditures According to Purpose: COICOP, COFOG, COPNI & COPP	One (1) year after issuance of revisions to international classification	One (1) year after issuance of amendments to international classification
Philippine Standard Geographic Codes (PSGC)		Every quarter





II. Handling Revisions of Official Statistics

D. Revision Practices / Policies in the Philippines

1. Revision Policies

> Price Statistics

- NSCB Resolution No. 2 Series of 2009 - “Approving the Synchronized Rebasing of Price Indices to Base Year 2006”





II. Handling Revisions of Official Statistics

D. Revision Practices / Policies in the Philippines

2. Processes Followed in Implementing Revisions

- **Discussions in appropriate Interagency/ Technical Committees**

- **Consultative Forum**

- **Thru NSCB Board Resolutions**





II. Handling Revisions of Official Statistics

D. Revision Practices / Policies in the Philippines

3. Presenting the Revisions/Proposed Changes

> Thru Press Releases / Press Conference & Publications/Website

- Sources of Revision**
- Comparison of Preliminary and Revised Estimates**
- Contribution to Revisions**

Examples: Revisions on Imports, National Accounts, Poverty Statistics

- Thru Users' Forum**
 - Forum on migrating to the 1993 SNA**





II. Handling Revisions of Official Statistics

D. Revision Practices / Policies in the Philippines

3. Presenting the Revisions/Proposed Changes

- **Thru Discussions with/Presentations to Users**
 - **University of the Philippines School of Economics Faculty**
 - **Replies to letters asking for clarification (PIDS)**

4. Dealing with Misuse and Misinterpretation of Data

- **Preparation of “For The Record” clarification thru the website – has reduced frequency of misuses**





II. Handling Revisions of Official Statistics

E. Revisions/Correcting and Communicating Errors: Examples from Selected Countries

1. Revisions in Quarterly GDP of OECD Countries

- > Revisions in Q-on-Q GDP growth rates from Q1 1995 to Q4 2008 between estimates three years later and the first published estimates of 18 OECD Countries
- > 18 OECD Countries Includes Australia, Canada, Switzerland, Germany, Spain, France, United Kingdom, Italy, United States, Belgium, Finland, Korea, Netherlands, New Zealand, Denmark, Japan, Norway and Portugal
- > Compared GDP revisions in terms of Mean Revision, Mean Absolute Revision and Relative Mean Absolute Revision



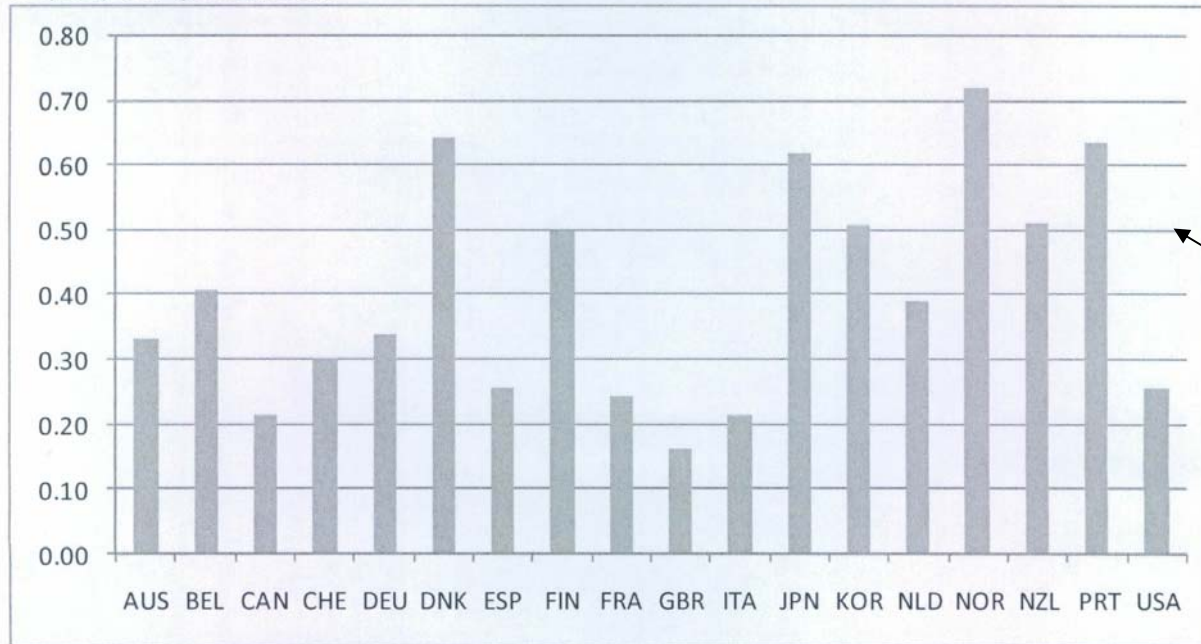


II. Handling Revisions of Official Statistics

Comparison of OECD Countries vs Philippines

Figure 1: Mean absolute revision: 1995.1-2008.4

Revisions between three years later estimates (Y3) and the first published estimates (P) of q-o-q GDP growth rates



Mean Absolute Revision
PHI SAGDP Growth Rates
Q1 2002 – Q2 2006

0.5

Source: Paper entitled "Revisions in Quarterly GDP of OECD Countries: An Update" originally prepared by Elena Tosetto and modified by David Brackfield both from OECD for the International Seminar on Timeliness, Methodology and Comparability of Rapid Estimates of Economic Trend held on 27-29 May 2009 at Ottawa Canada



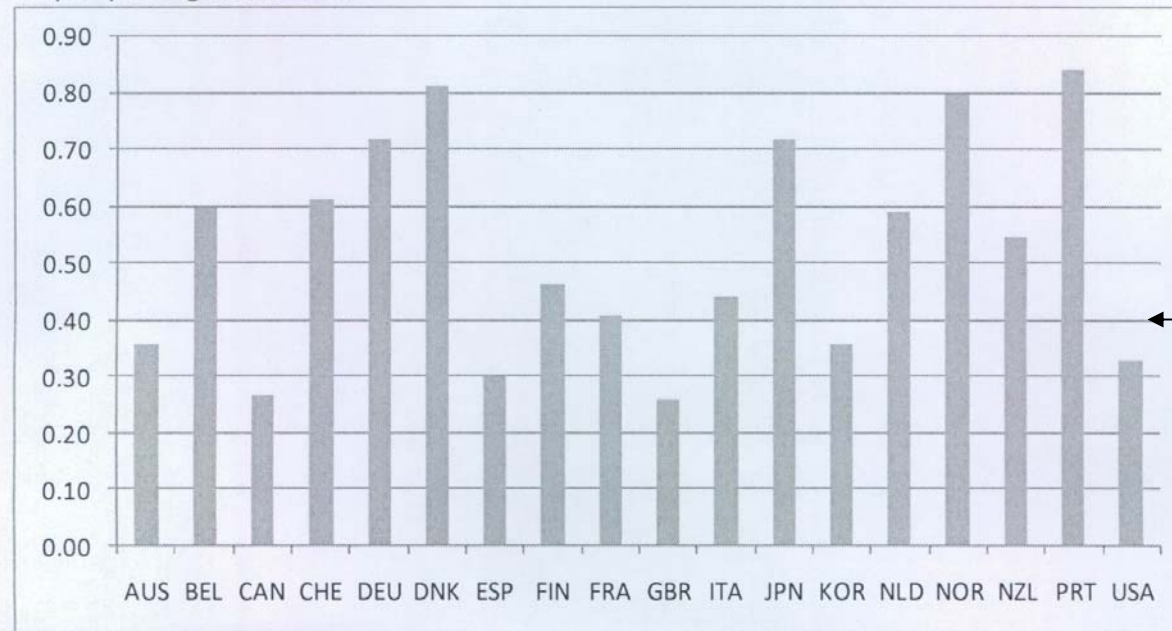


II. Handling Revisions of Official Statistics

Comparison of OECD Countries vs Philippines

Figure 2: Relative mean absolute revision: 1995.1-2008.4

Revisions between three years later estimates (Y3) and the first published estimates (P) of q-o-q GDP growth rates



Relative Mean Absolute Revision
PHI SAGDP Growth Rates
Q1 2002 – Q2 2006

0.4

Source: Paper entitled "Revisions in Quarterly GDP of OECD Countries: An Update" originally prepared by Elena Tosetto and modified by David Brackfield both from OECD for the International Seminar on Timeliness, Methodology and Comparability of Rapid Estimates of Economic Trend held on 27-29 May 2009 at Ottawa Canada



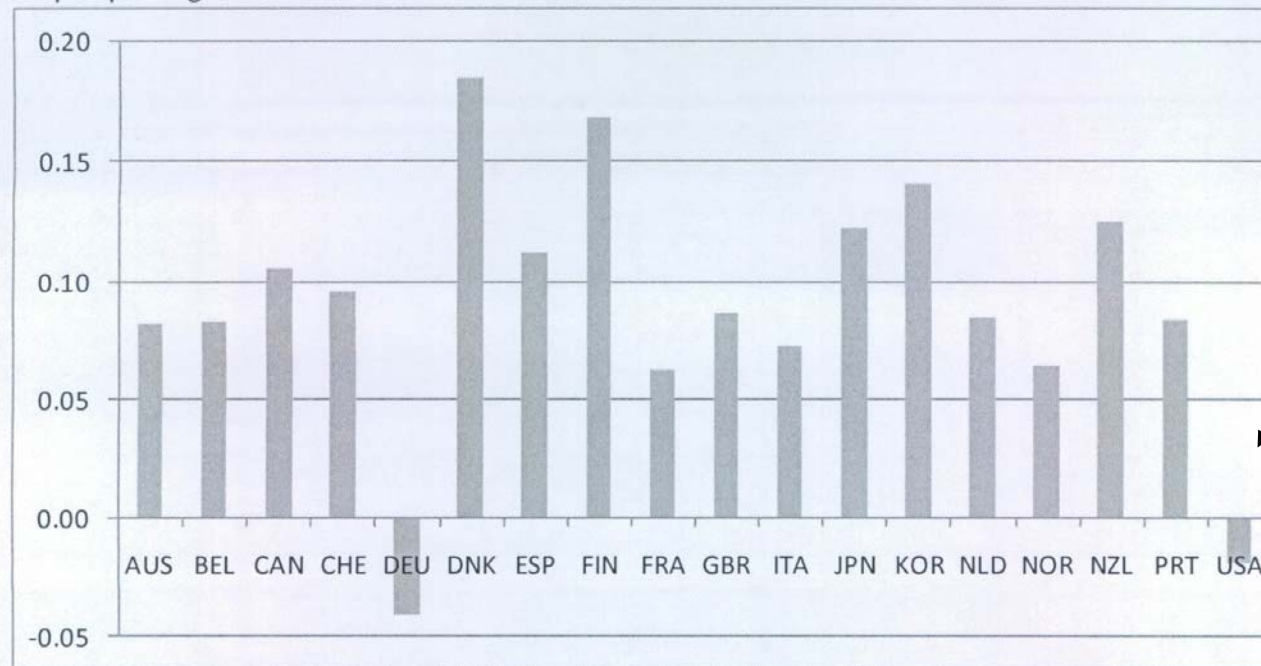


II. Handling Revisions of Official Statistics

Comparison of OECD Countries vs Philippines

Figure 3: Mean revision (Rbar): 1995.1-2008.4

Revisions between three years later estimates (Y3) and the first published estimates (P) of q-o-q GDP growth rates



Mean Revision
PHI SAGDP Growth Rates
Q1 2002 – Q2 2006

0.03

Source: Paper entitled "Revisions in Quarterly GDP of OECD Countries: An Update" originally prepared by Elena Tosetto and modified by David Brackfield both from OECD for the International Seminar on Timeliness, Methodology and Comparability of Rapid Estimates of Economic Trend held on 27-29 May 2009 at Ottawa Canada



II. Handling Revisions of Official Statistics



E. . Revision/ Correcting and Communicating Error made by Selected Countries

2. 1998 Revision of the US Consumer Price Index

- Findings from the 1996 Boskin's Report of the Advisory Commission to Study the CPI appointed by the U.S. Senate Finance Committee

Advisory Commission to Study the Consumer Price Index (The Boskin Commission Report) 1996





II. Handling Revisions of Official Statistics

E. . Revision/ Correcting and Communicating Error made by Selected Countries

2. 1998 Revision of the US Consumer Price Index

- The Commission's Final Report was issued on December 4, 1996
- Concluded that the US CPI overstated inflation by 1.1 percent per year for the time period 1995-1996
- Report suggested that the CPI might have been larger before 1995
- Predicted that it would be lower after 1997





II. Handling Revisions of Official Statistics

E. . Revision/ Correcting and Communicating Error made by Selected Countries

2. 1998 Revision of the US Consumer Price Index

- Contains not only the technical background but also its estimates of the vast amount by which the bias had increased the Federal budget deficit
- Calculated that the 1.1 percent point bias would contribute \$1.07 trillion to the US national debt over the period 1997-2008
- Suggested that the bias had caused excessive growth in Social Security and other benefits



II. Handling Revisions of Official Statistics



E. . Revision/ Correcting and Communicating Error made by Selected Countries

2. 1998 Revision of the US Consumer Price Index (cont'd)

- the 1998 revision of the US CPI encompasses changes ranging from reselecting areas, items and outlets to new systems for data collecting and processing;
- most basic aspect is the incorporation of a new set of expenditure weights which includes:
 - geographic sample selection process uses stratified sampling to represent the US urban population;
 - market basket needs to be updated to represent current consumption pattern;
 - as a result of above, number and mix of published CPI series will change;



II. Handling Revisions of Official Statistics



E. . Revision/ Correcting and Communicating Error made by Selected Countries

2. 1998 Revision of the US Consumer Price Index (cont'd)

- The conclusion of the revision does not mean the end of the CPI improvement process;
- BLS will continue to enhance its program of experimental indexes and research on CPI measurement issues;
- Expect that the recommendations of the Senate Finance Committee's Advisory Commission, as well as other studies of the CPI by outside researchers, will lead to additions in the list of CPI improvements outside the revision context;





II. Handling Revisions of Official Statistics

E. Revision/Correcting and Communicating Error made by Selected Countries

3. Revision of Seasonally Adjusted US Labor Force Series

- > Official seasonal adjustment procedure used is the X-12-ARIMA
- > Seasonally Adjusted estimates are produced using “concurrent” adjustment wherein monthly rerun of seasonal adjustment program are made as the latest Current Population Survey (CPS) data become available.
- > However, BLS policy is not to revise previous month’s official seasonally adjusted estimates. Instead, revisions are introduced for the most recent 5 years data at the end of each year.



II. Handling Revisions of Official Statistics



E. . Revision/ Correcting and Communicating Error made by Selected Countries

4. UK Experience on CPI

- 1986 RPI (CPI) Advisory Committee recommendation is to continue not to revise estimates once published
- But published headline inflation rate for March and May 1995 was found to be understated by 0.1% (inflation around 3.5%);
- Minor error only. Due to
 - Processing in a spreadsheet
 - Use of seasonally adjusted housing price index instead of the unadjusted
- Discovered 10 days before July release date



II. Handling Revisions of Official Statistics



E. . Revision/ Correcting and Communicating Error made by Selected Countries

4. UK Experience on CPI

- Potential impact includes undercompensated or understated
 - holders of index-linked gilts,
 - holders of national savings certificates,
 - individual capital gains taxation computations and
 - taxation assessments relating to income from share trading;



II. Handling Revisions of Official Statistics



E. . Revision/ Correcting and Communicating Error made by Selected Countries

4. UK Experience on CPI (cont'd)

➤ Action taken

- Immediate presentation was done, user reaction and press coverage sympathetic;
- Consistent with revision policy, CPI not revised between Jan and May, but June figures were corrected;
- Strong points about presentation: confident and professional – not apologetic, and audit/review announced immediately;



II. Handling Revisions of Official Statistics



E. . Revision/ Correcting and Communicating Error made by Selected Countries

4. UK Experience on CPI (cont'd)

➤ Action taken

- Within a few weeks, a Data Quality Seminar held for all staff in division, to involve staff and maintain team spirit, and gather information and suggestions;
- Not about public blame but about generating positive learning experience out of mistakes



II. Handling Revisions of Official Statistics



E. . Revision/ Correcting and Communicating Error made by Selected Countries

4. UK Experience on CPI (cont'd)

➤ Action taken

- Redesign of local price collection;
- Reengineering of (decentralized/heterogeneous) processing of centrally collected price data
- The “error” was used as a powerful tool for attracting funds for improvements;



III. Way Forward



What National Statistical Systems (NSS)/ National Statistical Agencies (NSA) should do towards better handling of revisions?

- **Revision policies/practices that work well in some countries may not work in other countries. Can depend on**
 - **Credibility of and respect for NSA/NSS**
 - **Maturity of stakeholders of statistics**

- **But there are principles that should or ought to work for all**



III. Way Forward



What National Statistical System (NSS)/ National Statistical Agencies (NSA) should do towards better handling of revisions?

- **Revision policy is a must for those who do not have one**
- **Disseminate/communicate adopted revision policy**
 - **The use of the website must be optimized**
- **Produce/disseminate metadata**
- **Produce confidence interval estimates for official statistics, whenever possible**



III. Way Forward



What National Statistical System (NSS)/ National Statistical Agencies (NSA) should do towards better handling of revisions?

- **Continue to conduct/increase frequency of consultative forum/meetings to solicit comments of users**
- **Discuss methodologies with mature users of statistics who can become champions/defenders of the NSA/NSS**
- **Share statistical products and services for free with key, if not all stakeholders**
- **Be sympathetic to information needs of the media**





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Maraming Salamat po!

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