

**Development Account Project on
Building Statistical Capacity in Low Income Countries of South East Asia**

**Workshop on the Methodological Review of Benchmarking, Rebasing
and Chain-Linking of Economic Indicators**

24-26 August 2011, Vientiane, Lao People's Democratic Republic

Final Report of the Workshop

New York, September 2011

I. Organization, Purpose, Objective and Participants of the Workshop

1. The Workshop on the Methodological Review of Benchmarking, Rebasing and Chain-Linking of Economic Indicators was jointly organised by the United Nations Statistics Division (UNSD) and the Department of Statistics, Ministry of Planning and Investment of Lao People's Democratic Republic (PDR) from 24 to 26 August 2011 in Vientiane. The workshop is part of the United Nations Department of Economic and Social Affairs/Statistics Division Development Account Project on Building Statistical Capacity in the Low Income Countries of South East Asia. It was attended by 25 participants from all South East Asian countries - Cambodia, Lao PDR, Myanmar, Timor-Leste, and Viet Nam, mostly responsible for compiling national accounts. The work of the workshop was covered in two local newspapers.

2. The objectives of the workshop were to review the methodological aspects of benchmarking, rebasing and chain-linking of economic indicators and to train representatives from the five participating countries on some of the most commonly used techniques. Particular attention during the training was given to issues of rebasing of national accounts so as to deal with structural changes in the economy and linking the old time series to the new series. The workshop also offered the opportunity to exchange experiences, discuss challenges and propose best practice approaches to countries in these fields.

3. Presentations on benchmarking and rebasing and linking of national accounts were made by the consultant for this workshop Mr. Viet Vu and UNSD representative Mr. Benson Sim. UNSD also gave a demonstration on how to rebase and link gross domestic product (GDP) using a hypothetical dataset. The last part of the workshop involved a practical exercise in which participants benchmarked and linked GDP data using actual data on the annual gross domestic product (GDP) of Lao PDR.

II. Summary of the Opening Statements

4. In her opening statement Ms. Phetsamone Sone, Deputy Director-General welcomed the participants and observed that emerging demands from policymakers, planners, researchers, and public users for official statistics have brought both opportunities and challenges. To improve the effective use of data, data producers would need to pursue and promote their production and dissemination according to international statistical standards and principles. To satisfy the needs of end users, statisticians must also incorporate in their work processes the improvement of data sources, development of indicators, compilation methodology, statistical data series and metadata to enhance and increase transparency and accessibility to support the monitoring and evaluation of the national social-economic development plan, the Millennium Development Goals and other national programmes. As data compilation is very much linked to changes in economic development in each time period, this may lead to a change in concept, scope, and data sources. Thus, the workshop would provide a good opportunity for statisticians

to learn and exchange information with international experts who have extensive experience in the given areas.

5. In his opening statement Mr. Benson Sim, Statistician, National Accounts Section of UNSD, thanked the Department of Statistics for their commitment and support in making the preparations for the Workshop. He noted that the Workshop is one element of the objectives of the development account project to assist countries improve and sustain the capacity to produce, analyse, and disseminate high-quality statistics, in this instance, national accounts and GDP, for the purpose of evidence-based socio-economic policies and for achieving internationally agreed goals. He noted that one headline GDP figure that is widely reported and commented upon in the media and widely monitored by various interested parties is the real GDP growth rate, i.e., the GDP growth rate which has the effects of price changes removed. The real GDP growth rate is needed for the proper assessment and analysis of economic growth. He noted that real GDP is calculated using the price structure of a particular year, which is known as the base year. Given the very important nature of volume measures of GDP, it is, therefore, very essential for statisticians who are responsible for compiling these estimates to ensure that they are compiled properly and with high quality. In particular, GDP statisticians should know how to apply the various techniques to calculate real GDP and be aware of the need to update the base year frequently to ensure that real GDP measures do not become unreliable. At the same time, he noted that GDP statisticians should also be aware of the techniques to link the various real GDP measures together so that they are consistent. Further, he observed that the Workshop will also discuss various benchmarking techniques to align quarterly and annual GDP estimates which are compiled from different data sources so as to derive a consistent time series which preserves the relative strengths of both series. He also hoped that the practical exercise component of the Workshop using an actual dataset on the annual GDP of Lao PDR will help participants to gain a better understanding of the rebasing and linking of GDP.

III. Evaluation

6. All participants expressed their appreciation of the good preparation of the workshop and valued very positively its outcome as confirmed by their answers to the questions posed in the evaluation form. They particularly acknowledged the importance for their offices of the topics discussed. Practical exercises were considered very useful for better understanding of benchmarking and rebasing. It was a shared feeling of the group that similar practical workshops should be conducted more frequently in the future.

7. Using a scale from 5 to 1 (where 5 = excellent, 4 = good, 3 = adequate, 2 = poor, 1 = very poor) participants judged the achievement of workshop objectives and its overall value as follows:

Overall value of the workshop	4.22
Overall planning and organization of the workshop	4.24

IV. Summary of the presentations

Benchmarking

8. The presentation provided reasons for why benchmarking is needed and what economic variables are normally benchmarked. An example of benchmarking annual data between two benchmark years was also provided. The merits and demerits of the various benchmarking techniques were also discussed. In addition, the presentation discussed the various short term indicators which are used for policy analysis and for compiling national accounts.

Rebasing and Linking of national accounts

9. The presentation explained what is rebasing and linking of national accounts. It also explained why rebasing and linking is needed and how they are carried out. The main effects of rebasing and linking were also explained. The presentation noted that the 2008 SNA recommends the calculation of annually-chained volume measures of GDP. However, given that this is a resource-intensive and computationally-demanding exercise, participating countries are only able to rebase their national accounts periodically now. The presentation recommended that countries should switch to calculating annually-chained volume measures of GDP at the earliest convenience. The presentation also explained that volume measures of GDP which are calculated using different base years should be linked so that they are expressed at the prices of a particular reference year. These linked volume measures of GDP are not additive, so countries should explain clearly in their metadata why they are not additive.

Demonstration on Rebasing and Linking of national accounts

10. The presentation involved a demonstration of the effects of rebasing and linking of national accounts using a hypothetical dataset comprising a 2-product economy. Extensive reference was made to an Excel spreadsheet with pre-entered formula on how to rebase and link national accounts. The presentation reinforced the conclusions of the prior presentation on the “Rebasing and Linking of National Accounts”. The Excel spreadsheet can serve as a useful guide to participants when they rebase and link their national accounts.

Practical Exercise

11. In the practical exercise, participants made use of an actual dataset on the annual gross domestic product (GDP) of Lao PDR to perform benchmarking and linking exercises. The new benchmark and base year for the GDP of Lao PDR is 2002, while the previous benchmark and base year is 1990. Also, the output measure in the Lao PDR GDP dataset is measured at producer’s price from 1990 to 2002 and basic price from 2002 onwards. In addition, financial intermediation services indirectly measured (FISIM) was not included in the GDP of Lao PDR before 2002. Further, the breakdown of GDP

by industry up till 2002 was different from that starting from 2002. Participants were taught how to reconcile the differences in the breakdown of GDP by industry, and adjust the GDP of Lao PDR to include FISIM and value output at basic price before 2002 so as to obtain a consistent GDP series for benchmarking and linking.

V. Conclusions and Recommendations

12. The 2008 SNA recommends that countries should compile annually-chained volume measures of GDP so that real economic growth is calculated using more representative weights. Unfortunately, none of the participating countries has attempted to compile annually-chained volume measures of GDP. Thus, it is essential for UNSD to continue its efforts to encourage and support countries to adopt this recommendation.

13. The computation of quarterly chained-linked volume measures of GDP was not addressed during the workshop as many participating countries do not compile quarterly GDP at the moment. In future, as more of these countries start to compile quarterly GDP, there may be a need for UNSD to consider organising a workshop on how to calculate annually-chained volume measures of quarterly GDP and how to link these volume measures in conjunction with benchmarking.

14. Where appropriate and if requested by the participating countries, UNSD should continue to provide conceptual and practical guidance on the benchmarking, rebasing, and linking of their national accounts. It should also monitor the progress made by them in benchmarking, rebasing and linking their national accounts through an assessment of their annual submission of the National Accounts Questionnaire (UN-NAQ). This is especially important as a number of participating countries appear to rebase their national accounts without linking them.

15. The format of the workshop was very useful, according to the feedback from participants, as it allowed them to apply the concepts which were presented through a hands-on exercise using actual data of a country, facilitating a more effective transfer of knowledge. Where appropriate, UNSD will consider organising training workshops of this nature using a similar format.

Workshop on the Methodological Review of Benchmarking, Rebasing and Chain-Linking of Economic Indicators

Jointly organized by:

**United Nations Statistics Division (UNSD) and
Lao Department of Statistics (DOS)**

*24 - 26 August 2011
Vientiane, Lao People's Democratic Republic*

Agenda

Wednesday, 24 August 2011

8:30 Registration

9:00 Opening ceremony

Opening remarks

Objectives and organization of the workshop

Administrative matters and introduction of participants

Adoption of the agenda

9:30 Benchmarking

- What is benchmarking?

- What are the main approaches to benchmarking time series?

Discussion

10:45 Coffee break

11:15 Rebasing and linking of national accounts

- Nominal vs. Volume measures of GDP

- What is rebasing?

- Why is rebasing needed?

- How is rebasing and linking done?

- What are the main effects of rebasing and linking?

- Conclusion

Discussion

12:30 Lunch break

14:00 Exercise on rebasing and linking of national accounts

Demonstration on rebasing and linking of national accounts using hypothetical dataset

Discussion

15:30 Coffee break

16:00 Exercise on rebasing and linking of national accounts (continued)

Demonstration on rebasing and linking of rebased national accounts using hypothetical dataset

Discussion

17:00 Close

Thursday, 25 August 2011

9:30 Practical exercise on rebasing and linking of national accounts

Participants will be divided into groups for a hands-on exercise to rebase and link national accounts using a real dataset from Lao People's Democratic Republic

11:00 Coffee break

11:30 Practical exercise on rebasing and linking of national accounts (continued)

13:00 Lunch break

14:30 Practical exercise on rebasing and linking of national accounts (continued)

15:30 Coffee break

16:00 Practical exercise on rebasing and linking of national accounts (continued)

Discussion and summary of the results

17:30 Close

Friday, 26 August 2011

9:30 Practical exercise on rebasing and linking of national accounts (continued)

Participants will continue with the hands-on exercise to rebase and link national accounts using a real dataset from Lao People's Democratic Republic

11:00 *Coffee break*

11:30 Practical exercise on rebasing and linking of national accounts (continued)

13:00 *Lunch break*

14:30 Practical exercise on rebasing and linking of national accounts (continued)

15:30 *Coffee break*

16:00 Practical exercise on rebasing and linking of national accounts (continued)

Discussion and summary of the results

17:00 Conclusions and the way forward

17:30 Close

List of Participants

Cambodia

1. **Mr. Sovyl Vy**
Deputy Director of Department of National Accounts, National Institute of Statistics, Ministry of Planning
E-mail: sovyl_vy@yahoo.com
2. **Mr. Vanndy Nor**
Deputy Director of Department, National Institute of Statistics, Ministry of Planning
E-mail: norvanndy@gmail.com
3. **Mr. Sophal Oeur**
Deputy Director of Department, National Institute of Statistics, Ministry of Planning
E-mail: sophal_our@yahoo.com
4. **Phetsamone Sone**
Deputy Director General, Department of Statistics, Ministry of Planning and Investment
5. **Mr. Xaybandith Thadavong**
Technical officer, Department of Planning, Ministry of Agriculture and forestry
6. **Mr. Oula Somchanmavong**
Deputy Chief of Economic Planning Division, Department of Planning, Ministry of Planning and Investment
7. **Mr. Chanhsy Samavong**
Research assistant, National Economic Research Institution, Ministry of Planning and Investment
8. **Mr. Vixay Santivong**
Director Division, Economic Statistics Division, Department of Statistics, Ministry of Planning and Investment
9. **Mr. Phousavanh Chanthasombath**
Economist, Economic Statistics Division, Department of Statistics, Ministry of Planning and Investment
10. **Mr. Kanika Xayyasan**
Technical staff, Economic Statistics Division, Department of Statistics, Ministry of Planning and Investment
11. **Mr. Dalika Manipoun**
Technical staff, Economic Statistics Division, Department of Statistics, Ministry of Planning and Investment
12. **Mr. Sypaseut Navognsa**
Technical staff, Economic Statistics Division, Department of Statistics, Ministry of Planning and Investment
13. **Ms. Manisone Lachanthaboun**
Technical staff, Economic Statistics Division, Department of Statistics, Ministry of Planning and Investment
14. **Mr. Yanxiong**
Technical staff, Methodology division, Department of Statistics, Ministry of Planning and Investment
15. **Ms. Souphaphone Sesavath**
Technical staff, Social Statistics division, Department of Statistics, Ministry of Planning and Investment

Lao People's Democratic Republic

Myanmar

16. Mr. Khin Maung Latt

Director of National Accounts, Central
Statistical Organisation, Ministry of
National Planning and Economic
Development
E-mail: pddg@mptmail.net.mm

17. Ms. Mya Mya Aye

Assistant Director of National Accounts,
Central Statistical Organisation, Ministry
of National Planning and Economic
Development
E-mail: pddg@mptmail.net.mm

18. Ms. Hla Kay Thi

Staff Officer, Central Statistical
Organisation, Ministry of National
Planning and Economic Development
E-mail: kaythiyusan@gmail.com

Timor Leste

19. Mr. Rodolfo Soares

Chief of Economic Statistics Department
National Statistics Directorate
E-mail: rdsoares@mof.gov.tl,

20. Mr. Boravio Joaquim Alves

Coordinator of CPI Section
National Statistics Directorate
E-mail: bjalves@mof.gov.tl

21. Mr. Lourenco Soares

Data Processing Manager and Trainer in
National Accounts Section
National Statistics Directorate
E-mail: losoares@mof.gov.tl

Vietnam

22. Mr. Ha Quang Hai

Statistician
General Statistics of Vietnam
E-mail: hqhai@gso.gov.vn

23. Mr. Le Vu Thanh Nhan

Statistician
General Statistics of Vietnam
E-mail: lvtuhan@gso.gov.vn

24. Mr. Ha Vu Quang

Statistician
General Statistics of Vietnam
E-mail: vqha@gso.gov.vn

United Nations Statistics Division

25. Mr. Viet Vu

Consultant
United Nations Statistics Division
E-mail: viet.vuquang@gmail.com

26. Mr. Benson Sim

Statistician, Economic Statistics Branch
United Nations Statistics Division
E-mail: simb@un.org