

Strengthening and Harmonization of Rebased and Linked National Accounts Series in Asia

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I. Introduction

National accounts aggregates at constant prices provide important indicators for measuring growth or movements of real output over a time period. In the Asian region, several countries have breaks in their national accounts series resulting from the changes in base year. These breaks in the series have brought about incomparability of the series thereby rendering it difficult for users to do meaningful analysis. A few reasons cited for not linking include the lack of technical expertise and suitable methodology, non-adoption of the proposed link series by the government, and the heavy data processing and computation involved.

In the Asian region, the countries that have been regularly compiling their national accounts series fall into three groups. The first group, comprised of Bangladesh, Cambodia, India, Indonesia, Nepal, Sri Lanka, and Vietnam, have rebased their series once or twice since the 1980s but have not linked the different series. The second group consists of countries that have linked their constant price GDP series, namely: Hong Kong, China; Republic of Korea; Philippines; Singapore; Taipei, China; and Thailand. The third group consists of those countries that have a long overdue need to rebase their series like Bhutan, Malaysia and Pakistan.

In cognizance of the need to produce a linked series based on a single base year, the Asian Development Bank (ADB) launched Regional Technical Assistance (RETA) 5874: Rebasing and Linking National Accounts Series in Selected Developing Member Countries of ADB. This will enable users to analyze trends and patterns of development of countries

II. RETA 5874: Rebasing and Linking National Accounts Series in Selected Developing Member Countries (DMCs) of ADB

Objectives

The main objectives of the RETA are: (a) to help the DMCs that have breaks (more than one base year) in their constant prices national accounts series compile a continuous linked series; and (b) to provide a forum for the DMCs to discuss ways and means to more frequently rebase their national accounts estimates.

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Scope and Participation of DMCs

Of the original nine countries envisaged to participate in the linking exercise, only six countries went through the process of linking. These countries include Bangladesh, India, Indonesia, Nepal, Sri Lanka and Viet Nam. The other countries like Rep. of Korea and Thailand already had available linked national accounts series (NAS). Cambodia, on the other hand, did not indicate any commitment towards this end. Apart from the nine countries, additional seven DMCs, namely People's Republic of China; Hong Kong, China; Macao, China; Pakistan; Philippines; Malaysia and Singapore participated in TA activities. In the inception workshop, they shared their experience in national accounts estimation and related problems and issues.

Accomplishments of the RETA

Inception Workshop

The workshop was held on March 21-24, 2000 in Bangkok, Thailand and organized jointly by ADB and ESCAP. It was attended by 46 participants from 17 countries. Resource persons from OECD, ADB, ESCAP and Australian Bureau of Statistics (ABS) presented technical papers.

The major accomplishments during the workshop are as follows:

- Apprised participants on the current status of NAS in selected ADB/ESCAP DMCs;
- Familiarized participants on various concepts, approaches and methodologies for rebasing and linking through the presentation of technical papers on: a) Basic Principles of Compilation at Constant Prices; b) Measuring Real Value Added in Service Activities: Experiences in OECD Countries; c) Price and Volume Measures for Constant Price Estimation; d) Hedonic Regression Modeling; e) Practices in Rebasing and Linking of NAS; f) Maintaining Consistent Time Series of National Accounts: Experience of OECD Countries; and g) Chain Volume Measures in the Australian National Accounts;
- Identified problems and issues concerning the production of a continuous and comparable NAS and in more frequent rebasing of the series;
- Shared experiences and expertise in constant price estimation, linking and rebasing of NAS including quarterly, annual and subnational accounts;
- Formulated strategies and recommendations to facilitate regular compilation and release of quality NAS; and
- Prepared individual country plan and budget for undertaking the linking exercise.

Table 1. Agreements Reached and Work Accomplished on Linking and Rebasing

<u>Country</u>	<u>Base Year</u>	<u>Link Series by</u>	<u>Accomplishment</u>
<i>RETA Countries :</i>			
Bangladesh	1995-96	Nov. 2000	Linked
Bhutan	1980	No plan	
Cambodia	1993	No Plan	
India	1993-94	Dec. 2000	Linked
Indonesia	1993	Nov. 2000	Linked by chain index for the period 1993-1999
Rep. of Korea	1995	Available	Linked
Nepal	1984-85	Nov. 2000	Linked using new base year 1994-1995
Sri Lanka	1990	Dec. 2000	Linked
Thailand	1988	Available	Linked
Viet Nam	1994	Oct. 2000	Linked
	<u>Current Base Year</u>	<u>Proposed Base Year</u>	<u>Accomplishment</u>
<i>Other Countries:</i>			
China (PRC)	1990	2000	
Hong Kong,China	1990	2000	
Macao,China	1996		
Malaysia	1987	2000	
Pakistan	1980-81	2000-2001	Rebased using new base year 1990-1991
Philippines	1985	2000	Rebased using new base year 1995
Singapore	1990	1995	
Thailand	1988	2000	

Linking of National Accounts Series

The six countries who agreed to link their NAS were: Bangladesh; India; Indonesia; Nepal; Sri Lanka; and Viet Nam. The countries submitted their workplan and budget to ADB which were subsequently revised based on the comments from ADB. ADB assistance was provided to these countries, however, India opted not to utilize it. All the countries have successfully linked their series.

Nepal, Pakistan and Philippines, on the other hand, have rebased their series to a new base year 1994-1995, 1990-1991 and 1995 compared to their old base years of 1984-1985, 1980-1981 and 1985, respectively. However, Pakistan's rebased 1990-1991

series was not officially adopted due to seasonal abnormalities in the agriculture and industry sectors. Table 3 presents a comparative picture of the rebasing and linking in participating Asian countries (Appendix 1).

Concluding Workshop

In the workshop, the linked national accounts series of the six countries that were compiled under the RETA are to be presented together with a discussion of related problems and issues. Other countries that have available linked series are also expected to share their experience on linking and to participate in the discussions on problems and issues in linking. Nepal and Philippines will present their rebased series and the related problems and issues. The countries that have not yet linked their series will participate in the discussions and formulate their future plan for linking and rebasing.

The objectives of the concluding workshop are:

- 1) present the linked series (compiled under the RETA) and rebased series;
- 2) discuss comparative growth analysis based on the linked and original series as well as related problems and issues;
- 3) apprise participants on plans and status of 1993 SNA implementation in the region;
- 4) familiarize participants with various approaches to volume estimation with special emphasis on chain volume measures and its use in developed countries;
- 5) discuss the feasibility of implementing chain index measures in developing countries;
- 6) discuss strengthening and harmonization of rebased and linked NAS in Asia; and
- 7) provide recommendations and share the countries' future plans on rebasing, linking and 1993 SNA implementation.

III. Topics on Harmonization and Strengthening the Compilation of Rebased and Linked NAS:

A group discussion will be conducted in the concluding workshop to discuss and to identify the consensus recommendations of the workshop on harmonizing and further strengthening of rebasing and linking of NAS in Asia. The main objective of harmonization is to make the country data more regionally/internationally comparable.

Some topics to be taken up in the "Group Discussion" include the following:

1. Should countries plan on undertaking annual rebasing based on chain volume indices as recommended by 1993 SNA?
2. Should most of DMCs adopt chain indices for their annual national accounts (chain based linking) from fixed based volume measures by 2005-2007?
 - Should countries adopt Laspeyre's Chain Indices which require less data?

- Should countries accept the non-additivity of the chain index method, hence allowing a statistical discrepancy between the components and total?
 - Should countries make use/adopt standardized software for compilation of chain volume measures?
 - Should countries chain quarterly GDP?
 - What additional resources will be required to adopt annual chaining?
3. Can all countries explore on a trial basis, the use of chain volume measures at their earliest convenience? What are the major impediments/problems that prevent one from doing so?
 4. Should countries link quarterly GDP?
 5. Should countries produce subnational GDP in current and constant prices?
 6. For countries that will use fixed volume measures, should we choose a common base year for the region such as 2005 as new base year? Can one ensure that linking of series will be performed within a year from rebasing?
 7. At what disaggregated level should rebasing and linking exercise be done?
 8. Should we adopt a harmonized methodology for obtaining the constant price estimates on a per component basis (such as *price deflation*, revaluation, or volume extrapolation)?
 9. Should rebasing and benchmarking exercises be undertaken separately to allow more frequent rebasing?
 10. Can we adopt a minimum of three-year interval for rebasing?
 11. Can we disseminate rebased/linked national accounts series on a timely manner such as within a year after reference year?
 12. Should countries develop and maintain designated statistics plan including a calendar of statistics to ensure the timely release of national accounts?
 13. Can countries develop and improve some software to facilitate the compilation process?
 14. Can we form a regional forum or Association of National Accounts Compilers for the exchange of ideas and cooperation among countries?

IV. Technical Assistance (TA) of ADB in Strengthening the Capability of DMCs in Compiling Quality and Timely National Accounts Estimates

ADB's principal tools in carrying out its goals and objectives are through the provision of loans and technical assistance. While loans and project financing result to physical outputs like school buildings, roads, telecommunication facility, technical assistance is geared more towards harnessing of skills, provision of additional knowledge and assimilation of technology by a recipient country's human resources. It is

within this purview of goals that the ADB is continuing its task of implementing technical assistance aimed at strengthening the capability of statistics offices, central banks and other data producing agencies, and at the same time, improving the statistical systems and databases in DMCs.

The Statistics and Data Systems Division of the Bank has administered 22 TAs aimed at improving the compilation of national accounts. Benefitting from these TAs are some 20 countries with more assistance expected to be provided in line with the move to adhere to the concepts and guidelines prescribed in the 1993 UN SNA.

The following table presents a list of technical assistance undertaken by the Statistics and Data Systems Division in the recent past.

Table 2. Strengthening the Capability of DMCs in Compiling NAS

Country	TA No.	Project Name	Implementation period
Bangladesh	3582	Strengthening National Accounts and Poverty Monitoring System	Dec 2000 – Mar 2004
	2682	Improving National Accounts	Nov 1996 – Oct 99 extended to Sep 2000
Bhutan	2860	Strengthening the Central Statistical Office	Oct 1997 – Nov 1999 extended to 2002
Cambodia	3293	Statistical System Development (Phase 3)	Dec 1999 – Jan 2003
	2261	Statistical System Development	1995 – 2 nd Qtr. 1997 extended to Dec 1998
	1694	Strengthening Macroeconomic Management	Jun 1992 – Apr 1994
DMCs (Selected)	5874	Rebasing and Linking of National Accounts Series	Dec 1999 – 1 st Qtr. 2001
DMCs (Selected)	5576	Seminars on 1993 System of National Accounts	Sep 1994 Two week seminars held in Bangkok and another in Canberra, Australia
Indonesia	781	Construction of Quarterly National Accounts	Jun 1986 – May 1991
Lao PDR	5432	Statistical Improvement of Selected Asian Developing Economies	Apr 1991 – Jun 1993
Micronesia, Fed. States of	3258	Strengthening the National Statistical System	Sep 1999 – Aug 2001
Mongolia	1811	Improving and Strengthening the Statistical System	Mar 1993 – Feb 1996 extended to Sep 1998
Nepal	3451	Strengthening the National Statistical System	Jun 2000 – Jun 2003
Papua New Guinea	1261	Improvement of National Accounts	Apr 1990 – Dec 1992
Philippines	2875	Institutional Strengthening of the System of National Accounts	Oct 1997 – Sep 1999 extended to 2001
China, People's Rep. of	1566	Improvement of National Accounts	Mar 1992 – Sep 1994
Samoa	680	Development of National Accounts	Apr 1985 – Dec 1988
South Pacific DMCs (SPDMCs)	5532	Statistical Improvement in SPDMCs: Cook Islands, Fiji, Kiribati, Solomon Islands, Tonga, Vanuatu and Western Samoa	Aug 1993 – Sep 1996
South Pacific DMCs (SPDMCs)	5220	Improvement of National Accounts in 4 SPDMCs: Cook Islands, Kiribati Solomon Islands, Tonga	Oct 1986 – Dec 1991
Vanuatu	613	Development of National Accounts	Nov 1984 – Dec 1987
Viet Nam	3330	Improving National Accounts (Phase II)	Dec 1999 – Dec 2002
	2084	Improving National Accounts	3 rd Qtr. 1994 – 2 nd Qtr. 1996 – 1995 – 1998

V. Conclusion

This small scale RETA project was highly successful in achieving its objectives as all the participating countries were able to link their national accounts series in the allotted time frame. Indonesian experience in adopting chain indices in their national accounts will be very useful for other developing countries that are planning to adopt annual chaining. The project has also gained lessons/insights on the compilation of National Accounts as a result of recommendations raised during the Inception Workshop. Furthermore, Nepal, Pakistan and Philippines have undertaken the long outstanding task of rebasing their series.

This workshop is not the end of the activities. ADB has created a website for this TA and it will feature the linked NAS data updates and a discussion forum. All participating countries are welcome to provide their country updates for inclusion in the website. These new linked series and updates will be made accessible to DMCs and ADB's statistical database, websites and publications. The website will provide a convenient venue for countries to share their experience in improving the rebasing and linking exercise as well as exchange ideas on improving the quality and coverage of National Accounts and implementation of 1993 SNA.